



HLPE Inquiry

Critical and Emerging Issues on Food Security and Nutrition

Proceedings

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Knowledge Organizations' Inputs

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

K1A



Enquête du Groupe d'experts de haut niveau (HLPE) Questions cruciales et émergentes pour la sécurité alimentaire et la nutrition

Questionnaire

Renseignements concernant le contributeur

Nom, prénom et institution	PRADERE Jean-Paul – Organisation mondiale de la santé animale (OIE)	
Répondez-vous au nom de votre institution ou à titre privé?	Au nom de l'OIE	
Acceptez-vous que cette contribution soit mise à la disposition du public dans le cadre des actes de la consultation?	Oui	
Pays de la personne ou de l'institution qui répond. Veuillez mentionner, le cas échéant, «international» ou «régional».	International	

1. Aperçu de la question/du phénomène

Énoncé <i>en 2 lignes</i> .	Impacts des maladies animales sur la production, l'économie et la santé des ménages vulnérables.	
Description <i>en moins de 5 lignes</i> .	Dans les pays à faible revenu les maladies animales provoquent la perte de 35% à 50% du volume des productions animales (par mortalité et morbidité). Elles affectent gravement l'économie et la santé des ménages vulnérables.	
La question/le phénomène est-il un <i>défi</i> et/ou une <i>opportunité</i> pour la sécurité alimentaire et la nutrition? <i>Veuillez cocher la case appropriée.</i>	<input checked="" type="checkbox"/> Défi	<input type="checkbox"/> Opportunité <input type="checkbox"/> Autre (veuillez préciser)
Méthode et approche utilisées pour déterminer la question/le phénomène et évaluer son importance pour la sécurité et la nutrition. <i>En moins de 10 lignes.</i> Des informations complémentaires ou descriptives (publications, rapports, rapports d'experts, analyses, etc.) peuvent être fournies dans la section 5 ci-dessous.	<u>Evaluation des pertes de productions animales consommables</u> : méta-analyse combinant les résultats de statistiques nationales et de publications scientifiques. <u>Evaluation des pertes de productions animales non-consommables</u> (labour, transport, fumure organique, impacts sur le patrimoine et la santé des ménages vulnérables, etc.) <u>et des impacts sur l'environnement</u> : analyse de publications.	
Principale action proposée pour résoudre le problème (ou saisir l'opportunité).	Renforcement des capacités des services vétérinaires nationaux, des infrastructures vétérinaires et des réseaux de vétérinaires privés (voir questionnaire sur « Les risques de maladies animales », para. 6, Conditions de l'amélioration de la santé animale et processus PVS de l'OIE). Actions conjointes pour l'amélioration de la	

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	productivité de l'élevage et de l'accès des agriculteurs pauvres à des soins vétérinaires.
Principal(aux) acteur(s) concerné(s) ou participant à l'action proposée.	Financements : Gouvernements des pays à faible revenu et Agences d'aide internationale, Mise en œuvre : Services vétérinaires nationaux, Acteurs du Processus PVS de l'OIE, Vétérinaires privés, Organisations professionnelles d'agriculteurs, Agriculteurs/éleveurs.

Les champs suivants sont facultatifs pour l'enquête publique

2. Typologie élargie de la question/du phénomène

(*)	Facteur déterminant externe	Interne aux systèmes alimentaires	Les deux
Le phénomène est-il l'un, l'autre ou les deux?	Il y a des liens directs entre la situation économique et sociale et le niveau de la santé animale d'un pays.	Les maladies animales représentent un risque systémique (identique pour tous les élevages d'une même région).	Le contrôle de la santé animale et des zoonoses dépend d'interventions publiques et privées (y compris au niveau des agriculteurs).

(*)	Économique (et productive)	Sociale et culturelle	Gouvernance (institutions, droits, etc.)	Environnemental (ressources, etc.)	Autre PRÉCISER
Nature du phénomène	*	*	*	*	
Nature de l'impact du phénomène sur la sécurité alimentaire et la nutrition	Pertes de productions, de revenus, de patrimoine. Aggravation de la pauvreté	Pertes de protéines et de nutriments. Impact des zoonoses sur la santé.	Communautés d'éleveurs souvent marginalisées et bénéficiant peu d'appuis publics.	Les maladies sont un obstacle à l'amélioration de la productivité. Ce qui aggrave la pression sur les ressources naturelles.	

(*) Veuillez cocher les cases. Des informations complémentaires ou descriptives (publications, rapports, rapports d'experts, analyses, etc.) peuvent être fournies dans la section 6 ci-dessous.

3. Attributs du phénomène

	Classification (**)	
1. Étendue: Est-il pertinent pour les systèmes alimentaires et nutritionnels dans leur ensemble ou pour des parties spécifiques de ces systèmes?	Point critique	**
2. Portée: Combien de personnes touche-t-il?	Peu	800 millions d'agriculteurs pauvres et consommateurs des pays à faible revenu
3. Échelle: locale/régionale/mondiale?	Locale	Régionale
	Indiquez ici le lieu exact	66 pays à faible revenu
		Mondiale
Pour les points 4 à 11 ci-dessous, veuillez utiliser l'échelle [— — , — , 0, +, ++]: Impact très négatif (— —) / négatif (—) / faible (0) / positif (+) / très positif (++)		
4. Impact sur la disponibilité		— —

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5. Impact sur l'accès	-- --		
6. Impact sur l'utilisation/la nutrition	-- --		
7. Impact sur la stabilité	-- --		
8. Impact sur les personnes les plus vulnérables	-- -- Les agriculteurs et consommateurs pauvres sont les plus touchés.		
9. Impact sur les femmes	-- --		
10. Impact sur les enfants	-- --		
11. Impact sur les populations marginalisées	-- -- Communautés d'éleveurs souvent marginalisées, sans accès aux soins vétérinaires		
12. Coût de la résolution du problème (ou pour saisir l'opportunité)	Faible	Moyen	Élevé

(**) Veuillez cocher les cases ou classer les impacts et fournir des données synthétiques si besoin est. Des informations complémentaires ou descriptives peuvent être fournies dans la section 6 ci-dessous.

4. Période

<i>Horizon (*)</i>	<i>Actuellement/ À court terme (1-5 ans)</i>	<i>À moyen terme (5-10 ans)</i>	<i>À long terme (10-20 ans ou plus)</i>
Moment où le phénomène aura un impact	*	*	*
Moment où il faudra intervenir pour traiter la question	*	*	*

(*) Veuillez cocher les cases. Des informations complémentaires ou descriptives (publications, rapports, rapports d'experts, analyses, etc.) peuvent être fournies dans la section 6 ci-dessous.

5. Degré de confiance

Solidité de la base de connaissances actuellement disponible	Faible	Moyenne	Élevée
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6. Informations complémentaires

Informations complémentaires

Importance de l'élevage dans l'économie et dans les stratégies de réduction du risque des ménages d'agriculteurs pauvres

70% des ménages d'agriculteurs pauvres, ce qui représente 800 millions de personnes dans le monde, possèdent quelques animaux. 300 millions d'éleveurs, souvent très pauvres et marginalisés, sont relégués dans des régions défavorisées où les cultures sont impossibles en raison de la déclivité, de la sécheresse ou du froid et que seul l'élevage peut valoriser.

Pour les agriculteurs pauvres, l'élevage représente le plus souvent la principale source de revenus monétaires et la principale source de fertilisation du sol. L'élevage offre de nombreux avantages indirects aux agriculteurs pauvres : amélioration de la qualité du travail et de la productivité des sols, amélioration de l'accès des produits au marché, apport de nutriments essentiels, support de l'épargne et de l'accumulation du capital des ménages. Ces avantages indirects jouent des rôles très importants pour la réduction de la pauvreté, la résistance aux crises agricoles et la croissance économique.

Pour les agriculteurs pauvres, l'élevage s'inscrit à la fois dans des stratégies de recherche de revenus réguliers, d'accumulation du capital et d'atténuation des effets des risques agricoles. En raison de la

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nature différente des risques qui pèsent sur les productions végétales et animales, les agriculteurs peuvent gérer une mauvaise crise sur l'une des productions grâce aux revenus ou produits des autres.

Impacts des maladies animales sur les volumes des productions :

Une méta-analyse effectuée à partir de statistiques nationales et de nombreuses publications (voir bibliographie) montrent que, dans les pays à faible revenu (66 pays étudiés), les maladies animales tuent chaque année environ 20% des veaux, 7% des bovins, 20% des agneaux et des cabris, 40% des porcelets et de 40 à 60% des volailles avant l'âge de commercialisation (5 à 6 mois).

Ces taux de mortalités sont environ 3 à 10 fois plus élevés que ceux observés dans les pays développés.

En moyenne, les agriculteurs pauvres perdent autant de bovins qu'ils en vendent. La situation moyenne est un peu moins défavorable pour les producteurs de petits ruminants (1 animal perdu pour 2 vendus) et pour les producteurs de porcs (environ 1 animal perdu pour 3 vendus).

Les mortalités ne représentent qu'une partie des pertes dues aux maladies car toutes les maladies ne tuent pas mais toutes sont responsables de pertes de production qui affectent les revenus, le bien-être des animaux et des hommes et l'économie des pays. Dans les pays à faible revenu, les pertes de production (mortalité et morbidité) que les maladies entraînent peuvent atteindre 50% de la valeur totale des productions animales dans les zones de répartition de la trypanosomose, qui s'étendent sur 37 pays, particulièrement en Afrique.

Influence des maladies animales sur la courbe de l'offre et de la demande de produits animaux

Les maladies animales ont des effets défavorables pour les producteurs (en raison de la baisse du volume et de qualité des productions) et pour les consommateurs (en raison de la hausse des prix).

Au niveau des producteurs : lorsqu'ils ne meurent pas, les animaux malades transforment moins bien les aliments qu'ils reçoivent et produisent moins. En outre les traitements entraînent des frais complémentaires. En conséquence, au niveau des producteurs, les maladies animales peuvent détruire une partie (voire la totalité) du capital productif, elles réduisent les volumes de produits alimentaires et augmentent les coûts de productions.

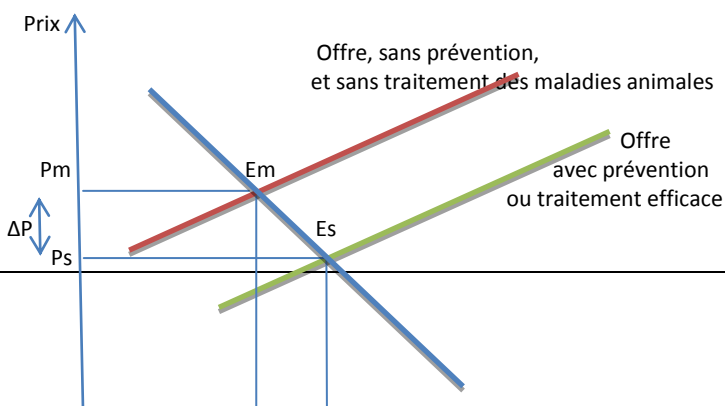
Au niveau des consommateurs, les maladies augmentent les prix d'achat et réduisent les quantités achetées.

Pour les deux catégories d'acteurs (producteurs et consommateurs) les pertes sont aggravées en l'absence d'accès à des soins vétérinaires de qualité.

Le graphique 1 contient une représentation schématique des effets des maladies et des traitements (préventifs ou curatifs), sur l'offre et sur la demande de protéines animales, dans un marché où les producteurs sont en concurrence :

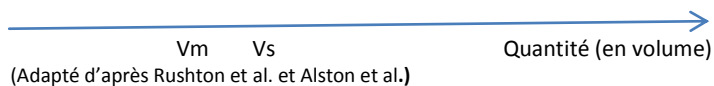
- sans mesure de prévention et de traitement efficaces, les pertes provoquées par les maladies réduisent les volumes de produits animaux commercialisés (V_m). Le point d'ajustement de l'offre et de la demande s'établit au point E_m , qui correspond au prix d'équilibre P_m (prix élevé).
- en favorisant l'augmentation des volumes de production, les mesures de prévention et de traitement efficaces des maladies provoquent une baisse du prix d'équilibre. Le nouveau prix d'équilibre (P_s) est inférieur à P_m .
- l'écart de prix ΔP , correspond au gain que l'amélioration de la santé animale offre aux consommateurs.

Graphique 1 : effet des mesures de prévention et de traitement sur l'équilibre de l'offre et de la demande



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Demande



Impact des zoonoses sur les populations défavorisées :

Lorsqu'ils sont atteints de zoonoses, les animaux malades et mal soignés peuvent être un facteur de risque pour la santé des populations et notamment des populations les plus pauvres, qui sont les plus exposées.

Grace notamment aux progrès de la santé publique vétérinaire et de l'amélioration de l'hygiène, les zoonoses sont de mieux en mieux contrôlées dans les pays développées mais elles sont encore très présentes dans les régions pauvres du monde. Ces maladies, que Margaret Chan, Directrice générale de l'OMS a qualifié de « maladies anciennes de la pauvreté » sont encore endémiques dans 149 pays (OMS 2010) où elles affectent en particulier les populations les plus vulnérables.

Quelques exemples de l'impact des zoonoses :

Les zoonoses alimentaires à *Campylobacter* et à *Salmonella*, sont fréquentes partout dans le monde mais leurs impacts sont beaucoup plus graves dans les pays à faible revenu. A titre d'exemple, selon le CDC (2013), aux Etats-Unis, les infections à *Campylobacter* sont la principale cause de maladies diarrhéiques mais elles ne sont généralement pas létales. Le CDC estime qu'aux Etats-Unis environ 76 personnes meurent chaque année de cette infection. En revanche, au niveau des populations pauvres, l'impact pathologique des zoonoses d'origine alimentaire est particulièrement grave. L'OMS estime que dans les pays les moins avancés, 2,2 millions de personnes, en majorité de jeunes enfants de 0 à 1 an, meurent chaque année de maladies diarrhéiques, le plus souvent d'origine zoonotique (à *Campylobacter* et à *Salmonella*)

Suivant des estimations de l'OMS (2010) et de différents chercheurs, l'échinococcose provoquerait la perte de 2 à 5 millions de DALYs, la cysticercose de 2 millions de DALYs, la Toxoplasmose 2 à 5 millions de DALYs. La rage tuerait 55.000 personnes par an, la cysticercose 50.000 et les trématodoses 10.000 personnes par an. Ensemble, les zoonoses auraient un impact plus grave que la malaria sur les populations défavorisées (Coleman 2002 ; Torgerson et al 2011).

Les maladies animales entraînent une augmentation de la pression sur les ressources naturelles :

La pression permanente exercée par les maladies animales s'oppose à l'amélioration de la productivité de l'élevage. En conséquence, pour répondre à une demande croissante, les éleveurs entretiennent de plus en plus d'animaux résistants aux maladies mais peu productifs (croissance extensive de l'élevage). La multiplication du nombre d'animaux entraîne une pression de plus en plus forte sur les ressources naturelles. Ce point est développé dans le questionnaire rempli par l'OIE et traitant des effets du risque de maladies animales sur la productivité.

Les conditions de l'amélioration de la santé animale

Pour des centaines de millions d'éleveurs pauvres la situation actuelle n'est plus tenable. Sans de solides politiques de santé animale, ils ne pourront pas réduire les pertes dues aux maladies animales et ils ne pourront pas améliorer leur productivité.

Voir para. 6, (Conditions de l'amélioration de la santé animale et processus PVS de l'OIE), dans la réponse au questionnaire sur « Les risques de maladies animales, ».

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Éléments probants

Volumes des pertes directes et indirectes dues aux maladies animales : Statistiques nationales et nombreuses publications indiquant les taux de mortalités et le niveau des pertes de production.

Impacts des zoonoses : rapport de l'OMS et publications scientifiques.

Statistiques FAOSTAT, montrant la faible productivité et la croissance extensive de l'élevage dans les pays à faible revenu.

Suivi de l'évolution de l'amélioration des performances de l'élevage et de la forte réduction de l'impact des zoonoses, sur des périodes longues, dans des pays où la santé animale et les services vétérinaires bénéficient de soutiens publics.

Lacunes en matière de connaissances

En raison du manque de données, les pertes de production que subissent les agriculteurs pauvres lorsque leurs animaux sont malades, sont difficiles à estimer pour toutes les maladies et pour un ensemble de pays. En conséquence, les impacts directs et surtout indirects des maladies animales sur l'économie des ménages et les économies nationales des pays à faible revenu sont mal connus.

Les impacts des zoonoses sur les populations les plus vulnérables sont mal connus car ces maladies sont nombreuses, souvent sous-diagnostiquées et rarement déclarées.

De nombreuses expériences, notamment en Asie et en Amérique latine, montrent que les investissements réalisés pour renforcer les services vétérinaires et améliorer la santé animale favorisent une amélioration de la productivité et une forte réduction de la pauvreté rurale (Christiaensen et al. 2010 ; Montalvo et Ravallion 2009). Toutefois, les informations disponibles sont de nature qualitative. Il n'y a pas d'information permettant de comparer l'efficacité respectives des différentes actions de promotion de la santé animale ni de quantifier les retours sur les investissements réalisés pour améliorer la santé animale et la productivité de l'élevage.

Les pertes de productions alimentaires qui sont provoquées par les maladies animales et qui sont l'objet de ce questionnaire, sont les plus faciles à identifier et à évaluer. En revanche, les impacts des maladies animales sur les productions non-alimentaires (par exemple, travail agricole et transport, fumure) et sur les avantages divers que l'élevage procure aux agriculteurs pauvres sont beaucoup moins bien connus. Or, ces avantages ont probablement beaucoup d'importance pour la sécurité alimentaire et pour les processus de sortie de la pauvreté.

Nous nous limiterons ici à fournir une seule référence : Pica et al. (2008) ont montré la capacité particulière du secteur élevage à contribuer à la croissance économique des Etats et à la réduction de la pauvreté dans 66 pays à faible revenu et à revenu intermédiaire. Dans 36 des 66 pays étudiés (donc dans 55% de l'échantillon), une relation causale statistiquement significative a été observée entre le développement du secteur de l'élevage et la croissance économique. Dans 33 pays le développement du secteur de l'élevage semble être (ou avoir été) un moteur de la croissance du PIB par habitant, dans neuf de ces pays une causalité bidirectionnelle a également été constatée. Dans trois pays seulement, l'augmentation de la productivité du secteur de l'élevage semblent être (ou avoir été) tirée par la croissance du PIB par habitant.

Certains avantages indirects de l'élevage semblent contribuer à la réduction de la pauvreté et à la croissance économique d'ensemble (amélioration de la qualité du travail et de la productivité des sols, amélioration des transports des personnes et de l'accès des produits au marché, importance de l'élevage dans l'épargne et dans l'accumulation de capital des ménages).

Ces questions mériteraient d'être mieux étudiées. Actuellement, en dépit de son importance dans la lutte contre la pauvreté et dans l'économie des pays à faible revenu, l'élevage bénéficie peu de soutien budgétaire. Si la capacité particulière de l'élevage à contribuer à la réduction de la pauvreté et à la croissance économique était confirmée, alors dans un souci de cohérence, les appuis que les gouvernements et les agences d'aide accordent à l'élevage mériteraient d'être réévalués et de devenir comparables à ceux accordés aux productions végétales.

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Enquête du Groupe d'experts de haut niveau (HLPE) Questions cruciales et émergentes pour la sécurité alimentaire et la nutrition

Questionnaire

Renseignements concernant le contributeur

Nom, prénom et institution	PRADERE Jean-Paul – Organisation mondiale de la santé animale (OIE)	
Répondez-vous au nom de votre institution ou à titre privé?	Au nom de l'OIE	
Acceptez-vous que cette contribution soit mise à la disposition du public dans le cadre des actes de la consultation?	OUI	
Pays de la personne ou de l'institution qui répond. Veuillez mentionner, le cas échéant, «international» ou «régional».	International	

1. Aperçu de la question/du phénomène

Énoncé <i>en 2 lignes</i> .	Le risque de maladies animales est un obstacle à l'amélioration de la productivité des éleveurs pauvres.		
Description <i>en moins de 5 lignes</i> .	L'importance du risque de maladies empêche les éleveurs pauvres d'entretenir des animaux génétiquement améliorés et de réaliser les investissements qui seraient nécessaires à l'amélioration de leur productivité.		
La question/le phénomène est-il un <i>défi</i> et/ou une <i>opportunité</i> pour la sécurité alimentaire et la nutrition? <i>Veuillez cocher la case appropriée.</i>	Défi	Opportunité	Autre (veuillez préciser)
Méthode et approche utilisées pour déterminer la question/le phénomène et évaluer son importance pour la sécurité et la nutrition. <i>En moins de 10 lignes.</i> Des informations complémentaires ou descriptives (publications, rapports, rapports d'experts, analyses, etc.) peuvent être fournies dans la section 5 ci-dessous.	<ul style="list-style-type: none"> – Observations de terrain : incapacité des petits éleveurs à entretenir des animaux améliorés et à améliorer leur productivité. Emergence d'élevages industriels capables de surmonter le risque de maladies, – Importance des écarts de productivité de l'élevage selon les pays, révélés par les statistiques internationales (FAOSTAT, Perspectives OCDE/FAO) et des publications, – Publications sur l'analyse des effets des risques sur les comportements des agriculteurs. 		
Principale action proposée pour résoudre le problème (ou saisir l'opportunité).	<ul style="list-style-type: none"> – Renforcement (ressources, capacités) des services vétérinaires nationaux et des réseaux de vétérinaires privés (voir para. 6 : Conditions d'amélioration de la santé animale). – – Recherche & Développement (amélioration de la productivité de l'élevage, amélioration des races animales autochtones, etc.) 		

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Principal(aux) acteur(s) concerné(s) ou participant à l'action proposée.	<ul style="list-style-type: none"> - Financement : Gouvernements des pays à faible revenu et Agences d'aide internationale, - Services vétérinaires nationaux et Vété. privés, - Organisations professionnelles d'agriculteurs, - Agriculteurs/éleveurs. - Structures de Recherche & Développement.
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Les champs suivants sont facultatifs pour l'enquête publique

2. Typologie élargie de la question/du phénomène

(*)	Facteur déterminant externe	Interne aux systèmes alimentaires	Les deux
Le phénomène est-t-il l'un, l'autre ou les deux?			La prévention du risque de maladies animales est fonction à la fois de facteurs externes (niveau économique du pays, qualité des formations, etc.) et de facteurs internes aux systèmes. alimentaires (R&D, politique sectorielle, capacités des acteurs, etc.).

(*)	Économique (et productive)	Sociale et culturelle	Gouvernance (institutions, droits, etc.)	Environnemental (ressources, etc.)	Autre PRÉCISER
Nature du phénomène	*	*	*		
Nature de l'impact du phénomène sur la sécurité alimentaire et la nutrition	Manques à gagner de productions et de revenus pour les agriculteurs pauvres	Le risque est un facteur d'inégalité. Les éleveurs riches parviennent à le réduire	*	En s'opposant à des gains de productivité, les maladies animales favorisent une croissance extensive et l'augmentation de la pression sur les sols.	

(*) Veuillez cocher les cases. Des informations complémentaires ou descriptives (publications, rapports, rapports d'experts, analyses, etc.) peuvent être fournies dans la section 6 ci-dessous.

3. Attributs du phénomène

	Classification (**)		
1. Étendue: Est-il pertinent pour les systèmes alimentaires et nutritionnels dans leur ensemble ou pour des parties spécifiques de ces systèmes?	Système de production animale.	Impacts sur l'ensemble des systèmes alimentaires	
2. Portée: Combien de personnes touche-t-il?	Peu	800 millions d'ag. pauvres + consommateurs	
3. Échelle: locale/régionale/mondiale?	Locale	X Régionale	Mondiale
	<i>Indiquez ici le lieu exact</i>	66 pays à faible revenu	

Pour les points 4 à 11 ci-dessous, veuillez utiliser l'échelle [— — , — , 0, +, ++]:
Impact très négatif (— —) / négatif (—) / faible (0) / positif (+) / très positif (++)

4. Impact sur la disponibilité	— —
5. Impact sur l'accès	—
6. Impact sur l'utilisation/la nutrition	— —
7. Impact sur la stabilité	—
8. Impact sur les personnes les plus vulnérables	— — les éleveurs les plus riches parviennent à réduire l'importance du risque de maladies.
9. Impact sur les femmes	— — à égalité avec les hommes

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10. Impact sur les enfants	-- --		
11. Impact sur les populations marginalisées	-- --		
12. Coût de la résolution du problème (ou pour saisir l'opportunité)	Faible	Moyen	X Élevé

(**) Veuillez cocher les cases ou classer les impacts et fournir des données synthétiques si besoin est. Des informations complémentaires ou descriptives peuvent être fournies dans la section 6 ci-dessous.

4. Période

<i>Horizon (*)</i>	<i>Actuellement/ À court terme (1-5 ans)</i>	<i>À moyen terme (5-10 ans)</i>	<i>À long terme (10-20 ans ou plus)</i>
Moment où le phénomène aura un impact	*	*	*
Moment où il faudra intervenir pour traiter la question	*	*	*

(*) Veuillez cocher les cases. Des informations complémentaires ou descriptives (publications, rapports, rapports d'experts, analyses, etc.) peuvent être fournies dans la section 6 ci-dessous.

5. Degré de confiance

Solidité de la base de connaissances actuellement disponible	Faible	X Moyenne	Élevée
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6. Informations complémentaires

Informations complémentaires

En résumé :

Les pertes d'animaux, de revenus et de productions dues aux maladies animales sont les plus faciles à identifier. Toutefois, parallèlement, en raison du risque qu'elles représentent pour la survie des animaux et pour les capacités de production, les maladies animales sont à l'origine de « manques à gagner ». Ces manques à gagner ne sont pas directement observables mais ils sont très importants car la prise en compte du risque conduit les agriculteurs les plus vulnérables à choisir les options de production les moins risquées et demandant le moins d'investissement au détriment d'une intensification de leur production.

Pour minimiser le risque de maladies animales, les agriculteurs vulnérables diversifient leurs activités agricoles, au détriment d'une spécialisation dans l'élevage qui pourrait augmenter leur productivité (Latruffe 2010, OCDE 2009). Ceux qui pratiquent l'élevage préfèrent élever un grand nombre d'animaux autochtones peu productifs mais bien résistants aux maladies et capables de se nourrir seuls. Sauf exception, ils renoncent à élever des animaux génétiquement améliorés, beaucoup plus productifs mais beaucoup plus sensibles aux maladies endémiques locales et exigeant de bonnes conditions d'hygiène et d'alimentation.

En revanche, des éleveurs plus riches parviennent à se spécialiser en réduisant le risque de maladies animales, par exemple en isolant leurs animaux du milieu extérieur et en passant des contrats avec des vétérinaires privés et à créer des élevages industriels de volailles et de porcs.

Au bilan les agriculteurs pauvres qui ne bénéficient pas d'une bonne protection vétérinaire, subissent tout le poids des maladies animales. Ils sont piégés dans des systèmes d'élevage extensifs peu productifs. De plus leurs produits sont concurrencés sur les marchés locaux par des produits importés ou par les produits des éleveurs plus riches.

Les « manques à gagner » de production dus au risque de maladies sont probablement plus importants que les volumes des pertes enregistrées du fait de la présence de ces maladies.

Écarts de productivité entre pays :

Dans les pays à faible revenu et notamment dans les pays les moins avancés (PMA), les performances de l'élevage sont très faibles. Dans les PMA, pour la viande de bœuf, le taux de prélèvement est 5 fois plus faible qu'en Chine et de 6 à 8 fois plus faible que dans les pays développés. Pour la viande de porcs le taux de prélèvement est 4 fois plus faible que la moyenne mondiale. Il faut 5 à 6 mois pour produire un poulet en élevage villageois contre seulement 6 semaines en élevage industriel. Les écarts sont encore plus importants pour la production laitière. La production utile par lactation est environ 20 fois plus importante dans les pays développés que dans les PMA.

Taux de prélèvement de viande en kg/tête en 2011 et taux de croissance annuel moyen du taux de prélèvement (TCAM) de 1985 à 2011, dans des pays pauvres, dans quelques pays sélectionnés² et dans le monde.

	Viande de bovins		Viande de porcs		Viande de volailles		Viande d'ovins et caprins	
	Taux Prélè ¹	TCAM	Taux Prélè ¹	TCAM	Taux Prélè ¹	TCAM	Taux Prélè ¹	TCAM
Australie²	158	1.3%	144	1.2%	9.0	1.4%	1.0	3.2%
Brésil²	45	2.5%	83	5.3%	9.0	4.4%	3	-1.5%
Chine	74.5	7.6%	109.4	2.3%	2.6	3.3%	14.0	5.7%
Europe (27 pays)²	91	0.1%	144	1.0%	8.0	0.5%	10	-0.7%
Nigeria	17.9	- 0.2%	31.0	0.1%	1.4	0.7%	4.9	0.2%
Pakistan	21.4	1.9%	-	-	2.5	1.2%	4.9	- 0.2%
PMA (49 pays)	14.7	0.8%	39.0	0.5%	2.1	1.8%	3.9	0.4%
Monde	41.4	1.0%	114.2	1.3%	4.6	1.6%	6.8	1.0%

¹ en kg par tête, en 2011. Les taux de prélèvement annuels sont calculés en divisant la quantité de viande produite par une espèce par le nombre moyen d'animaux de cette espèce pendant l'année étudiée (encadré 2.1).

² Pour l'Australie, le Brésil et l'Europe des 27, les taux de prélèvements et les TCAM pour la période 1985-2011 sont extraits des Perspectives OCDE-FAO 2012. Pour les autres pays sélectionnés et pour le monde, le TCAM des taux de prélèvement ont été calculés à partir des données de FAOSTAT.

Analyse de la prise en compte du risque par les agriculteurs vulnérables (synthèse d'une étude non publiée)

Tous les entrepreneurs (ce terme inclus les agriculteurs vulnérables) ont une aversion au risque. Les agriculteurs, dont les revenus sont en permanence menacés par de nombreux risques, sont connus pour avoir une très forte aversion au risque.

Pour accepter de réaliser un investissement, un agriculteur devra estimer que l'espérance de gain (E_G) est supérieure au coût estimé du risque (C_R), augmenté de son coefficient d'aversion au risque (A_R). Ce qui peut s'exprimer par la formule : $E_G > C_R \times A_R$

Des études empiriques réalisées dans différents pays (Hardaker 2000), ont permis de quantifier l'aversion relative au risque (le niveau $R = 1$, correspond à une aversion au risque « normale » et le niveau $R = 4$ une aversion au risque extrême) et ont montré que dans la plupart des cas, les agriculteurs les plus modestes sont ceux qui ont le plus d'aversion au risque. L'aversion au risque est plus élevée pour les éleveurs qui, en cas de réalisation du risque peuvent perdre également leur capital animal. Dans un même pays et pour des personnes ayant le même genre d'activité, le niveau d'aversion au risque diminue lorsque la richesse augmente.

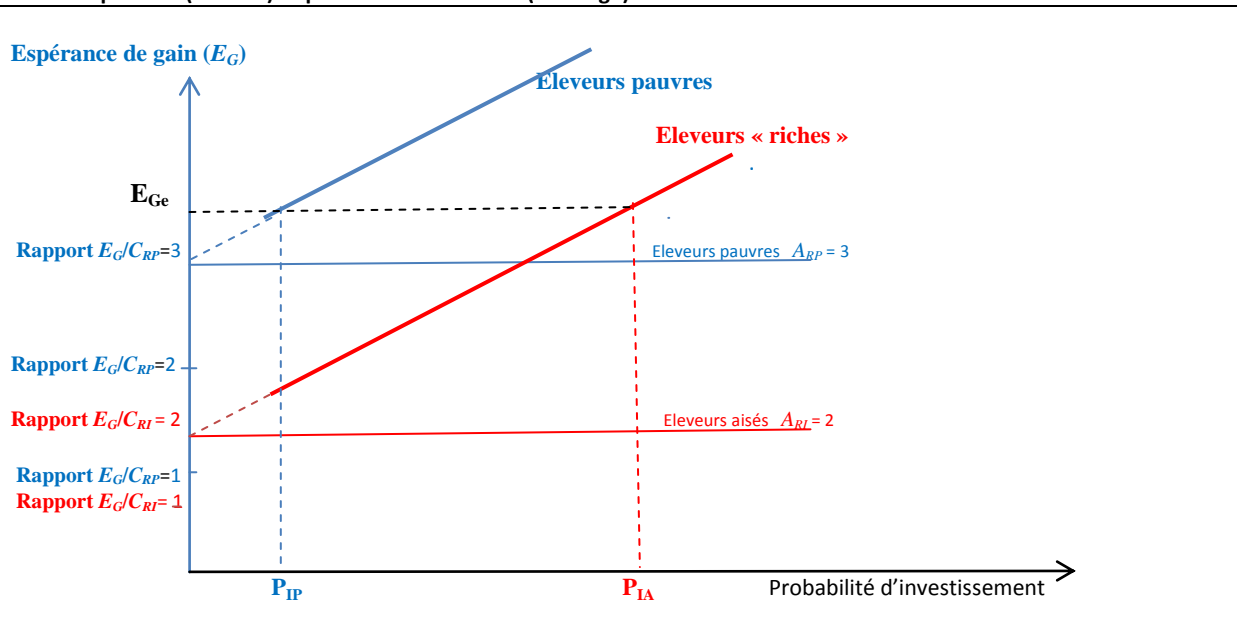
Dans les pays où la demande en produits animaux est très forte, les éleveurs « riches » ont une aversion au risque modérée car la réalisation du risque de perte en cas de maladie animale ne les ferait pas tomber dans la pauvreté. De plus ils disposent généralement d'un savoir-faire et de

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ressources financières qui leur permettent de réduire le risque de maladie (voir graphique) à un niveau (C_{RI}) plus faible que le niveau commun (C_R) qui pèse sur les éleveurs pauvres de la région. En conséquence, pour une même espérance de gain (axe E_G dans le graphique), le coût estimé du risque (C_{RI}) étant plus faible, les éleveurs aisés bénéficient d'un rapport E_G/C_{RI} plus élevé que les éleveurs pauvres. Ils sont donc plus incités à investir que les éleveurs pauvres. Ce constat qui est représenté schématiquement dans le graphique, montre que pour une même espérance de gain E_{Ge} , la probabilité d'investissement est plus forte pour les éleveurs « riches » (P_{IA}) que pour les éleveurs pauvres (P_{IP}).

Pour maximiser leurs profits les éleveurs « riches » s'intéressent de préférence à des élevages de volailles ou parfois de porcs, qui sont plus faciles à isoler des agressions du milieu extérieur et pour lesquels les technologies des pays développés sont plus faciles à adopter. Pour réduire le risque de maladies animales, ils adoptent des techniques d'élevage rationnelles et concluent des contrats avec des vétérinaires privés, qui assurent un suivi rapproché de leurs animaux.

Graphique 6.1 : Représentation graphique de la probabilité d'investissement en fonction du rapport Gain/Risque par les éleveurs pauvres (en bleu) et par les éleveurs aisés (en rouge)



Remarque : pour les besoins de la démonstration graphique et compte tenu des conclusions des travaux d'Hardaker, les coefficients d'aversion au risque retenus sont « 3 » pour les agriculteurs pauvres ($A_{RP}=3$) et « 2 » pour les agriculteurs plus aisés ($A_{RI}=2$).

Quelques études montrent que, dans les mêmes zones, les taux de mortalités des volailles diminuent lorsque l'élevage devient plus intensif. Ils sont souvent deux fois plus faibles en élevages « villageois améliorés » (de l'ordre de 25% pour les poulets) qu'en élevages « villageois traditionnels » (de l'ordre de 50%) et sont nettement plus faibles (de l'ordre de 7 à 8% par pour les poulets) dans les élevages industriels des pays à faible revenu (Shreuder 1996, Otte et Chilonda 2002, Din Van Binh 2004, Moran 2011).

En étant capables, grâce à leur capacité d'investissement, mais aussi à leurs connaissances et à l'appui de vétérinaires, de surmonter les contraintes d'une mauvaise situation zoo-sanitaire, ces éleveurs aisés bénéficient d'opportunités d'investissement de loin supérieures à celles des agriculteurs pauvres. En outre, grâce à la force de la demande, ils peuvent généralement incorporer les coûts techniques de prévention et de traitement du risque dans leurs coûts de production, ce qui entraîne une augmentation des prix payés par les consommateurs. Il y a alors perte de bien-être collectif.

L'attitude des petits éleveurs n'est pas figée. Si le niveau de risque diminue à un niveau qu'ils jugent acceptable par rapport aux gains qu'ils anticipent, ils peuvent alors surmonter leur aversion au risque et investir, dans la mesure de leur moyen, pour augmenter leur productivité. A titre d'exemple, au Kenya, dans des régions où l'altitude permet de réduire le risque de maladie et où un encadrement vétérinaire existe, des petits éleveurs investissent dans l'achat de vaches laitières, qui représentent

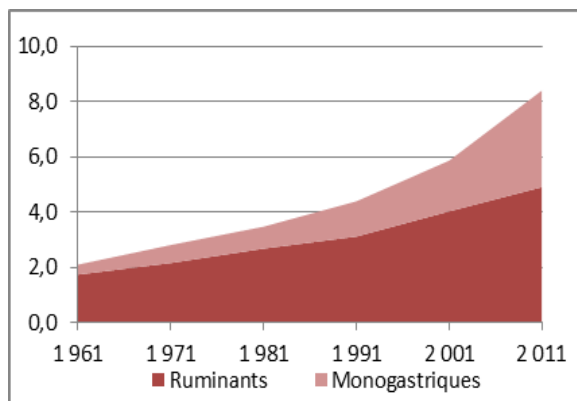
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parfois plusieurs années des revenus de leur ménage, mais dont ils attendent des profits importants (Dermott J. et al 1999).

En raison de capacités différentes à améliorer les conditions d'élevage et à maîtriser le risque de maladie animale, l'écart de productivité entre éleveurs se creuse. Ce sont les éleveurs aisés qui contribuent le plus à la croissance de la production de viande de volailles dans les PMA (graphique ci-dessous). En revanche, les éleveurs pauvres sont piégés dans des systèmes d'élevage extensifs très peu productifs. En outre ils voient leurs produits concurrencés sur les marchés locaux par les produits importés ou par les produits des éleveurs plus aisés.

Les constats qui précèdent confirment les conclusions d'une analyse réalisée par l'OCDE (2009) dans des pays développés, qui montre que, toutes choses égales par ailleurs, les agriculteurs qui ont le plus d'aversion au risque choisissent des options qui réduisent le niveau de leurs revenus en réalisant des choix sous-optimaux en matière de production et d'investissement, ce qui entraîne une perte d'efficacité économique. Au fil du temps les agriculteurs qui ont le plus d'aversion au risque se marginalisent eux-mêmes et s'écartent des circuits économiques les plus rentables. L'évolution du contexte de l'élevage semble confirmer la validité des conclusions de cette analyse pour les pays à faible revenu.

Evolution des volumes des productions de viande de ruminants et de monogastriques (porcs et volailles), dans 49 PMA, de 1961 à 2011 (Millions de tonnes). *D'après FAOSTAT*



Les volumes des productions animales augmentent partout dans le monde. Des analyses (non communiquées ici) montrent que, dans les pays à faible revenu et notamment dans les 49 PMA, cette croissance est principalement le résultat d'une croissance extensive pour les ruminants (avec plus d'animaux et une augmentation de la pression sur les sols) et de la multiplication des élevages industriels, surtout de volailles, pour les élevages de monogastriques (avec amélioration de la productivité).

Jusqu'à présent, les innovations zootechniques et vétérinaires qui ont permis la croissance spectaculaire des productions animales dans les pays les développés et les pays émergents, n'ont pas vraiment profité aux éleveurs pauvres.

Les conditions de l'amélioration de la santé animale :

Suivant les analyses de l'OIE, les Services vétérinaires de plus de 120 pays ont besoin d'être aidés. Outre les pays à faible revenu, et notamment les PMA, de nombreux pays à revenu moyen ne disposent pas de Services vétérinaires capables de garantir une situation satisfaisante pour eux et sans danger sanitaire pour les autres pays.

L'amélioration de la santé animale exige la réalisation de nombreuses conditions : parmi lesquelles l'adaptation de la législation aux besoins des pays, la formation des agents (enseignement vétérinaire et autres), l'amélioration des capacités des laboratoires, des partenariats public/privé adaptés aux besoins, etc.

Pour contribuer à assurer l'efficacité du fonctionnement des Services vétérinaires de tous ses pays Membres, l'OIE a créé l'Outil pour l'évaluation des performances des Services Vétérinaires, souvent appelé « Processus PVS de l'OIE ». Cet outil a été mis en œuvre dans 70% des pays membres de l'OIE Il constitue la principale base utilisable, au niveau mondial, pour l'amélioration de la santé animale et de la santé publique (et notamment de la lutte contre les zoonoses). Il est accessible à tous les pays qui en font la demande et sa mise en œuvre bénéficie de l'appui du Fonds Mondial de l'OIE pour la santé et le bien-être des animaux. La mise en œuvre du processus PVS repose sur l'exécution, par des experts qualifiés, spécialement formés et certifiés par l'OIE, de plusieurs étapes successives, visant dans un premier temps à évaluer qualitativement les services vétérinaires puis, à l'occasion d'étapes suivantes de suivi, à analyser les écarts constatés par rapport aux normes internationales et, en concertation avec les responsables nationaux, de définir les priorités stratégiques pour les Services

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[vétérinaires](#), ainsi que des activités, projets et programmes spécifiques visant à renforcer les politiques de santé animale.

Des informations complémentaires sur le Processus PVS de l'OIE sont accessibles par le lien ; <http://www.oie.int/fr/appui-aux-membres-de-loie/processus-pvs/>

En conclusion :

Dans les pays à faible revenu où vivent une grande partie des agriculteurs pauvres, l'importance du risque de maladies animales, amplifiée par la forte aversion au risque des agriculteurs pauvres : constitue un important obstacle à l'amélioration de la productivité des agriculteurs/éleveurs pauvres.

Les éleveurs les plus riches parviennent à réduire le risque de maladies animales,

- limite la croissance des productions animales et pousse les agriculteurs/éleveurs à conserver des méthodes extensives, utilisant toujours plus d'animaux (principalement des ruminants) nourris aux pâturages. Cette forme de croissance est tirée par la forte demande. La pression qu'elle entraîne sur les ressources naturelles devient insoutenable.
- conduit au creusement des inégalités entre éleveurs riches et éleveurs pauvres (dans un même pays).

L'amélioration de la santé animale constitue une condition nécessaire à l'amélioration de la productivité de l'élevage. En sécurisant le capital animal, elle permettrait de lever l'obstacle qui empêche les agriculteurs pauvres d'accéder à un cercle vertueux, dans lequel des investissements modestes et un début de spécialisation rendraient possibles des gains de productivité, ce qui se traduirait, entre autres, par une augmentation de la production de protéines animales, par une amélioration des revenus des agriculteurs/éleveurs et par une réduction de la pression sur les ressources naturelles.

Éléments probants

- Observations de terrain
- Analyse des statistiques

[Expériences acquises à l'occasion de la mise en œuvre du processus PVS de l'OIE](#)

Lacunes en matière de connaissances

En améliorant la sécurisation des revenus et du capital animal, l'amélioration de la santé animale permettrait probablement de lever le principal des obstacles qui empêchent les agriculteurs pauvres d'accéder à un cercle vertueux, dans lequel des investissements modestes et un début de spécialisation rendraient possibles des gains de productivité. Toutefois, l'amélioration de la santé animale ne suffirait pas, à elle seule, à permettre une forte progression de la productivité.

Des questions importantes restent posées sur la nature des réformes institutionnelles capables de se révéler les plus efficaces, tout en satisfaisant les principaux acteurs (droit d'utilisation de sols, capacité des éleveurs à garantir les emprunts, etc.), sur le volume des financements nécessaires à l'organisation de R&D dans les domaines zootechniques (génétiques, alimentation animale, etc), sur la nature des appuis les plus efficaces pour l'amélioration des réseaux de vétérinaires privés, etc.

Dans les pays développés et émergents, les capacités respectives et les interrelations entre les grands déterminants de la productivité (R&D, capacité d'innovation, qualité des politiques économiques et des politiques de santé animale, qualité des infrastructures, force de la demande) ont été l'objet de nombreuses études (Latruffe 2010). En revanche, dans les pays à faible revenus, les connaissances sur ces sujets sont moins argumentées.

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HLPE Inquiry

Critical and Emerging Issues for Food Security and Nutrition

Questionnaire

About the respondent

Name, Surname and Institution	Juergen Voegelé, Director, Agriculture and Environmental Service Department, World Bank	
Do you answer on behalf of your institution, or as an individual?	On behalf	
Do you agree if this contribution is made available to the public as part of the proceedings?	YES	
Country of the responding individual/institution Please mention international or regional, the case being	International	

1. Overview of the issue

Issue <i>in 2 lines</i>	Climate Change	
Description of the issue <i>in less than 5 lines</i>	Emissions of greenhouse gases from human activity are increasing global temperatures and the frequency and extremes of weather events. Higher global temperatures and more variable weather in aggregate are expected to have negative effects on agriculture, the impacts of which will fall disproportionately on the poor.	
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>	CHALLENGE	
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition <i>In less than 10 lines.</i> Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.	Based on studies focusing on the impacts of climate change on agriculture, food security, and nutrition (see studies listed in section five).	
Main response proposed to address the issue	Climate-smart agriculture	

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Main actor(s) concerned or involved in the response proposed	Governments, Farmers and Farmers Organizations, Private sector, International Organizations, Research and Educational Organizations, Non-Governmental and Civil Society Organizations
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For the public inquiry fields below are optional

2. Broad typology of the issue

(*)	External driver	Internal to food systems	Both
Is the issue either or both?			About 70 percent of greenhouse gas emissions are external to the food system, and about 30 percent are internal to the food system.

(*)	Economic (and productive)	Social and Cultural	Governance (institutions, rights, etc.)	Environmental (resources, etc.)	Other (SPECIFY)
Main nature of the issue				X	
Nature of the main impact of the issue on FSN	X	X	X	X	

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	Classification (**)		
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?			Systemic issue
2. Breadth: Are there many people affected?			Many
3. Scale: local/regional/global?			Global

For items 4-11 below, please use the classification [— — , —, 0, +, ++]:
Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)

4. Impact on Availability	— —
5. Impact on Access	—
6. Impact on Utilization/ nutrition	—
7. Impact on Stability	— —
8. Impact on most vulnerable people	— —
9. Impact on women	—

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10. Impact on children	—		
11. Impact on marginalized populations	—		
12. Cost to address the issue			HIGH

(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

4. Time Scale

<i>Timeframe (*)</i>	<i>Now/Short term (1-5 years)</i>	<i>Medium term (5-10 years)</i>	<i>Long term (10-20 years +)</i>
Moment when the issue will have an impact	X	X	X
Moment to act to address the issue	X	X	X

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.		Middle	
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6. Additional Supporting Information

<i>Additional information</i>
<i>Evidence</i>
<i>Knowledge gaps</i>
<i>References</i>
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HLPE Inquiry

Critical and Emerging Issues for Food Security and Nutrition

Questionnaire

About the respondent

Name, Surname and Institution	Juergen Voegelé, Director, Agriculture and Environmental Service Department, World Bank		
Dou you answer on behalf of your institution, or as an individual?	On behalf		
Do you agree if this contribution is made available to the public as part of the proceedings?	YES		
Country of the responding individual/institution Please mention international or regional, the case being	international		

1. Overview of the issue

Issue <i>in 2 lines</i>	Developing countries have double burden of managing lingering under nutrition and emerging problem of obesity.		
	The general pattern globally shows large increases in the consumption of animal produce, fat and sugar, modest increases in the consumption of cereals and other starchy staples as well as fruit and vegetables, and a decline in the consumption of pulses. This leads to the "double burden" where developing countries will have to manage lingering undernutrition on one hand (amongst its poor rural population) and emerging overweight (amongst its urban population) on the other.		
Description of the issue <i>in less than 5 lines</i>	Overweight and obesity are growing at an alarming rate globally. The number of adults who are obese or overweight in the developing world more than tripled between 1980 and 2008 whilst in richer countries it also rose by over 200 million. In 2008 the figures sat at 904 million in developing countries compared to 557 million in rich countries. Modern societies seem to be converging on a diet high in saturated fat, sugar, and refined foods and low in fiber, often termed the "Western diet." Many see this dietary pattern to be associated with high levels of chronic diseases. The transition to overweight becoming a huge concern is much more rapid in developing countries partly due to biological responses. Those who were undernourished in utero or in early childhood, switching to a diet high in fat, sugar, and salt carries higher risk for developing chronic disease compared to their counterparts who have been affluent for generations due to an adaptive mechanism		
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>	YES	YES	It depends (please specify)

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<p>Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition</p> <p><i>In less than 10 lines. Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.</i></p>	<p>The 2008 and 2013 Lancet series on maternal and child undernutrition has addressed this issue in great detail.</p>
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<p>Main response proposed to address the issue</p>	<p>This issue requires a multi-sectoral approach involving health, social protection, water & sanitation, agriculture etc. Agriculture and food systems are critical as they affect the availability and accessibility of foods that constitute a healthy diet. Production policies such as input, general subsidy, R&D policy need to be more crop-neutral as opposed to being biased towards basic grains or export crops; post-production policies (marketing, food regulations, food safety standards need to be strengthened; and consumer policies such as nutrition awareness, labelling, dietary guidelines need to be greatly improved and expanded. In addition response will need to include a concerted effort in developing appropriate metrics to measure a “diverse and sustainable diets”, which can be used more appropriately in lieu of the widely used FAO hunger indicator.</p>
<p>Main actor(s) concerned or involved in the response proposed</p>	<p>National governments, rural communities, agriculture development organizations, nutrition/health organizations, UN agencies (FAO, WFP, UNICEF, WHO), Scaling Up Nutrition movement, CGIAR, CSOs working in food and nutrition security etc</p>

For the public inquiry fields below are optional

2. Broad typology of the issue

(*)	<i>External driver</i>	<i>Internal to food systems</i>	<i>Both</i>
Is the issue either or both?			<p>Globalization leads to increased foreign investment by food companies in emerging markets (internal). Demand for processed food increases due to higher participation in labor market in emerging markets (external).</p>

(*)	<i>Economic</i>	<i>Social and</i>	<i>Governance</i>	<i>Environmental</i>	<i>Other</i>
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	<i>(and productive)</i>	<i>Cultural</i>	<i>(institutions, rights, etc.)</i>	<i>(resources, etc.)</i>	<i>(SPECIFY)</i>
Main nature of the issue	YES	YES			
Nature of the main impact of the issue on FSN	YES				Health

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	Classification (**)		
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?	Critical point	Systemic Issue	
2. Breadth: Are there many people affected?	Few	Many	
3. Scale: local/regional/global?	Local	Region	GLOBAL
	<i>Indicate here the precise location</i>	<i>Indicate here the precise region</i>	

For items 4-11 below, please use the classification [— — , —, 0, +, ++]:

Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)

4. Impact on Availability	0
5. Impact on Access	0
6. Impact on Utilization/ nutrition	- -
7. Impact on Stability	-
8. Impact on most vulnerable people	Urban poor, rural poor with market access
9. Impact on women	-
10. Impact on children	- -
11. Impact on marginalized populations	Specify as appropriate
12. Cost to address the issue	Low Middle High

(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

4. Time Scale

Timeframe (*)	Now/Short term (1-5 years)	Medium term (5-10 years)	Long term (10-20 years +)
Moment when the issue will have an impact		YES	YES
Moment to act to address the issue	YES	YES	YES

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

5. Degree of confidence

Solidity of currently available knowledge base.	LOW	Middle	High
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6. Additional Supporting Information

Additional information

Future Diets (2014). ODI. <http://www.odi.org.uk/future-diets>

SOFA (2013). FAO. <http://www.fao.org/publications/sofa/2013/en/>

Evidence

- NOW AND THEN: The Global Nutrition Transition: The Pandemic of Obesity in Developing Countries. Popkin et. al. (2012). [Nutr Rev. 2012 January; 70\(1\): 3–21.](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3257829/)
<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3257829/>
- Carlos A. Monteiro, Fabio S. Gomes, and Geoffrey Cannon. The Snack Attack. American Journal of Public Health: June 2010, Vol. 100, No. 6, pp. 975-981.
- Harvard School of Public Health. Obesity Prevention Source. <http://www.hsph.harvard.edu/obesity-prevention-source/obesity-prevention/food-environment/food-pricing-and-agricultural-policy-and-obesity-prevention/>

Knowledge gaps

Policy actions to be taken (very few successful cases in developed countries – limited success with fiscal measures such as tax on high-fat foods etc)

References

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.



HLPE Inquiry

Critical and Emerging Issues for Food Security and Nutrition

Questionnaire

About the respondent

Name, Surname and Institution	Feras Ziadat, ICARDA		
Dou you answer on behalf of your institution, or as an individual?	On behalf	As individual	
Do you agree if this contribution is made available to the public as part of the proceedings?	Yes	No	
Country of the responding individual/institution Please mention international or regional, the case being	Central and West Asia, North and Sub-Saharan Africa		

1. Overview of the issue

Issue <i>in 2 lines</i>	Land degradation / land management in the fragile arid environment		
Description of the issue <i>in less than 5 lines</i>	Land degradation is a serious problem in vulnerable agricultural lands and leads to decline in land productivity as a result of reduced soil fertility and losses of carbon. In rural areas, this threatens the food security of ever growing population.		
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>	Challenge: Land Degradation	Opportunity: Land Management	It depends (please specify)
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition <i>In less than 10 lines. Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.</i> * SLM: Sustainable Land Management	Assess the extent and distribution of land degradation (using spatial techniques); Identify areas with high risk to implement mitigation interventions; participatory implementation of environmentally sound, acceptable and economically feasible / affordable SLM* options; Assess the impact of SLM options on reducing land degradation, improving livelihood and food security (measurement and modeling); Out-scale to targeted areas/communities identified by similarity analysis.		

Main response proposed to address the issue	Knowledge management and dissemination of sustainable land management options to enhance the uptake and adoption by farmers. Technical knowledge is available to identify targeted areas (through similarity analysis) and the proper interventions to suit different areas/communities. After implementation, the impact in improving productivity and food security should be investigated to revise and fine-tune the implementation.
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Main actor(s) concerned or involved in the response proposed	<ul style="list-style-type: none"> • Development programs (donors) to adopt the approach and mainstream the implementation of SLM at wider scales. • Land users / farmers to accept and implement SLM options that suit their needs and challenges. • Research programs to provide technical back stopping and impact assessment.
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For the public inquiry fields below are optional

2. Broad typology of the issue

(*)	<i>External driver</i>	<i>Internal to food systems</i>	<i>Both</i>
Is the issue either or both?	<ul style="list-style-type: none"> • Climate change/variability • Economy and Finance 	<ul style="list-style-type: none"> • Improper land use types / management in fragile ecosystem 	Briefly mention how this may be the case

(*)	<i>Economic (and productive)</i>	<i>Social and Cultural</i>	<i>Governance (institutions, rights, etc.)</i>	<i>Environmental (resources, etc.)</i>	<i>Other (SPECIFY)</i>
Main nature of the issue	X			X	Land use practices
Nature of the main impact of the issue on FSN	X			X	Quantity and quality of Food

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	<i>Classification (**)</i>		
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?	Critical point	Systemic issue	
2. Breadth: Are there many people affected?	Few	Many	
3. Scale: local/regional/global? <i>Land degradation is a Global phenomenon but with more obvious effect on food security and nutrition in the dry areas, where people depend directly on (seasonal) land productivity.</i>	Local <i>Indicate here the precise location</i>	Region <i>Indicate here the precise region</i>	Global

For items 4-11 below, please use the classification [— — , — , 0, +, ++]:

Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)

4. Impact on Availability	— —
5. Impact on Access	0
6. Impact on Utilization/ nutrition	0
7. Impact on Stability	— —
8. Impact on most vulnerable people	— — direct dependence on land productivity
9. Impact on women	— —

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10. Impact on children	-- --		
11. Impact on marginalized populations	--		
12. Cost to address the issue	Low	Middle	High

(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

4. Time Scale

<i>Timeframe (*)</i>	<i>Now/Short term (1-5 years)</i>	<i>Medium term (5-10 years)</i>	<i>Long term (10-20 years +)</i>
Moment when the issue will have an impact	X		
Moment to act to address the issue	X		

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.	Low	Middle	High
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6. Additional Supporting Information

Additional information

- Land degradation signifies the temporary or permanent decline in the productive capacity of the land (UN/FAO definition).
- The annual costs of soil erosion in the US are estimated between US\$ 30 billion and US\$ 44 billion (Morgan, 2005). In the dry areas, soil erosion is strongly contributing to desertification, which is a serious problem in many countries in Asia and Africa (UNEP, 2000).
- The on-site effect of erosion are particularly important on agricultural lands where it leads to an important loss of fertility which can ultimately leads to an abandonment of the land (Morgan, 2005). Erosion also creates environmental damages through sedimentation pollution and increased flooding. Thus, off-site effects costs can often outweigh those arising from the loss of soil in agricultural fields. Furthermore, eroded soil may loss 75 to 80% of their carbon content (Morgan, 2005) and so contribute to climate change by emission of carbon in the atmosphere.
- Soil erosion is particularly important problem in developing countries where a large part of the population lives in rural area. Most of the rural incomes are depending on natural resources.

Evidence

- The erosion-prevention practices adopted (structural and vegetative means) reduced rill erosion by up to 60% and captured 3.2 tons of soil per hectare. The semi-circular bunds reduced total rill erosion from 138.9 to 82.9 t/ha and reduced the number of rills from 25 to 13 (Ziadat et al., 2013).
- Soil conservation and water harvesting interventions reduced soil and water losses to almost half of that in undeveloped fields. These benefits are useful in reducing soil and water losses and improving the productivity of the olive trees (Ziadat et al., 2013).
- Planting trees and implementing SWC measures reduce the watershed sediment yield by 44%. This results in reducing nutrients losses and improves soil fertility and productivity. The model predicted 8 and 17% crop yield increase (Sommer, et al., 2013).
- Intercropping diversifies the sources of income, reduces erosion and improves soil fertility. Analysis shows that SWC structures and practices are profitable for the farmers. To enhance

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adoption, the financial constraints as well as farmer's beliefs and perceptions should be considered (Ziadat et al., 2013).

- By means of the calibrated model, mean annual runoff (271 mm) and soil loss (22.6 t ha⁻¹) was calculated and the highly endangered regions concerning land degradation were located (Kendie Addis et al., 2013).

Knowledge gaps

- Identifying hot spot areas for soil erosion and identify severity of water and wind erosion for large areas within the arid environment.
- Adaptation to climate change and extreme events: Most climate change scenarios expect less rain in the dry areas and more frequent extreme events, such as erosive rainstorms with high intensity. Understanding the temporal and spatial distribution of these events to formulate effective adaptation strategies is necessary to avoid further land degradation in already degraded and fragile agro-ecosystems.
- Approaches to enhance adoption by land users / farmers need to be identified. This might include knowledge management and dissemination and providing proper enabling environment.

References

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- Ziadat, F., Oweis, T., Al-Wadaey, A., Aw Hassan, A., Sakai, H., van der Zanden, E., Closset, M., Pasiiecznik, B., Al Ahmad, K., Hayek, P. 2013. Soil conservation and water harvesting to improve community livelihoods and fight land degradation in the mountains of Syria. ICARDA Working Paper 9. <http://icarda.org/publication/working-papers>.

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HLPE Inquiry

Critical and Emerging Issues for Food Security and Nutrition

Questionnaire

About the respondent

Name, Surname and Institution	Kristofer Dodge/ ICARDA	
Do you answer on behalf of your institution, or as an individual?	<input checked="" type="checkbox"/> On behalf of ICARDA	<input type="checkbox"/> As individual
Do you agree if this contribution is made available to the public as part of the proceedings?	<input checked="" type="checkbox"/> Yes no problem	<input type="checkbox"/> No
Country of the responding individual/institution Please mention international or regional, the case being	Jordan/ ICARDA/ International	

1. Overview of the issue

Issue <i>in 2 lines</i>	Increasing water scarcity in dry areas		
Description of the issue <i>in less than 5 lines</i>	Water scarcity intensifies in dry areas with rapidly growing population, increased demand and climate change. Water for food is declining as more water is diverted to other priority sectors. This increases the dependency of developing countries in the dry areas imports and affects their food security.		
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>	<input checked="" type="checkbox"/> Challenge	<input type="checkbox"/> Opportunity	<input type="checkbox"/> It depends (please specify)
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition <i>In less than 10 lines. Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.</i>	The issue of water scarcity in dry areas and its impact on food production is well established through many research outputs and reports published by scientists and international organizations (CGIAR, FAO, UNDP, UNESCO, etc). The relation between shortages of water, food production and food security of poor communities' livelihoods was intensively analyzed, where a direct relation is established. Case studies on the impact of drought and water shortages on people's livelihoods in the Horn of Africa, Syria, and North Africa were published and received media attention.		

Main response proposed to address the issue	As most of the water available for agriculture in dry areas is already tapped, and as less water is becoming available for food production (and basic environmental needs for sustainability), the only way to reduce the impact on food production and security is by increasing the water and land productivities and improving the efficiency of water use. Water productivity is the biophysical, economic, environmental, social and nutritional return of a unit of water consumed. This is an integrated and comprehensive framework that requires a paradigm change in the way water is used in agriculture under scarcity. Changing focus from land to water, alternative cropping patterns, revising irrigation
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Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

	guidelines to maximize water productivity, changes in policies, institutional setups and socio economics of the agricultural sector are needed to achieve better use of water.
Main actor(s) concerned or involved in the response proposed	<p>Policy makers in the water scarce areas are the main actors.</p> <p>Research institutes can provide the evidence and the means for the change.</p> <p>Development agencies will implement the response when policies are favorable and also generate data to support social benefits/lack of benefits from investment.</p> <p>Farmers are the target here and can adopt the response when it increases their income and improves their livelihoods.</p>

For the public inquiry fields below are optional

2. Broad typology of the issue

(*)	External driver	Internal to food systems	Both
Is the issue either or both?			The issue is external in that water scarcity in dry areas is physical and little can be done to change. The unproductive use of water in agriculture is internal and can be changed.

(*)	Economic (and productive)	Social and Cultural	Governance (institutions, rights, etc.)	Environmental (resources, etc.)	Other (SPECIFY)
Main nature of the issue	X	X	X	X	
Nature of the main impact of the issue on FSN	X	X		X	

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	Classification (**)		
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?	Critical point	X Systemic issue	
2. Breadth: Are there many people affected?	Few	X Many	
3. Scale: local/regional/global?	Local	Region	Dry Areas Global
	<i>Indicate here the precise location</i>	<i>Central, West Asia and North Africa</i>	

For items 4-11 below, please use the classification [— — , — , 0, +, ++]:

Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)

4. Impact on Availability	— —
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Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

5. Impact on Access	–		
6. Impact on Utilization/ nutrition	–		
7. Impact on Stability	–		
8. Impact on most vulnerable people	-- Vulnerable people have lower capacity to find alternatives		
9. Impact on women	-- Women are also vulnerable in dry areas and often carry the burden of water collection		
10. Impact on children	Malnutrition impacts young children and during prenatal stages during drought years of food insecurity		
11. Impact on marginalized populations	__ Marginalized people already have FS problem and this adds to their misery		
12. Cost to address the issue	Low	Middle	High

(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

4. Time Scale

<i>Timeframe (*)</i>	<i>Now/Short term (1-5 years)</i>	<i>Medium term (5-10 years)</i>	<i>Long term (10-20 years +)</i>
Moment when the issue will have an impact	X		
Moment to act to address the issue	X		

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.	Low	Middle	X High
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6. Additional Supporting Information

Additional information

Over the last few decades annual per capita water in many countries of the dry areas dropped by half and became below the water poverty level. At the same time the food needs of the populations more than doubled. Yet agriculture and water use continued business as usual. Both in terms of crops and patterns and in water application practices. Earlier water was plentiful and land was the limiting resource so focus was on increasing yields per unit land. Now the opposite, water is more limiting than land in water scarce areas but the focus continued to be on land. It is time to change this paradigm and influence policies to follow suit.

Evidence

The continuing water shortage in dry areas and the reduction in agricultural water is well established. Research at ICARDA and many other institutions have shown that it is possible to more than double the productivity of water by applying new management practices such as deficit irrigation, changing cropping patterns, reallocating water to more productive practices such as supplemental irrigation in rain fed areas and invest in water conservation practices such as water harvesting.

The CGIAR Comprehensive Assessment for Water Management has documented the great potential in rain fed agriculture and developed the concept of water productivity in a series of volumes available for public.

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

Knowledge gaps

1. Knowledge regarding values of water productivity (biological, economic, nutritional, environmental and social) of various agricultural systems/crops under different conditions and countries in water scarce areas
2. Political and social cost of changing agricultural water management to meet challenges of increasing water scarcity in dry areas.

References

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HLPE Inquiry

Critical and Emerging Issues for Food Security and Nutrition

Questionnaire

About the respondent

Name, Surname and Institution	ICARDA	
Do you answer on behalf of your institution, or as an individual?	<input checked="" type="checkbox"/> On behalf of ICARDA	<input type="checkbox"/> As individual
Do you agree if this contribution is made available to the public as part of the proceedings?	<input checked="" type="checkbox"/> Yes no problem	<input type="checkbox"/> No
Country of the responding individual/institution Please mention international or regional, the case being	Jordan/ ICARDA/ International	

1. Overview of the issue

Issue <i>in 2 lines</i>	Increasing water scarcity in dry areas		
Description of the issue <i>in less than 5 lines</i>	Water scarcity intensifies in dry areas with rapidly growing population, increased demand and climate change. Water for food is declining as more water is diverted to other priority sectors. This increases the dependency of developing countries in the dry areas imports and affects their food security.		
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>	<input checked="" type="checkbox"/> Challenge	<input type="checkbox"/> Opportunity	<input type="checkbox"/> It depends (please specify)
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition <i>In less than 10 lines.</i> Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.	The issue of water scarcity in dry areas and its impact on food production is well established through many research outputs and reports published by scientists and international organizations (CGIAR, FAO, UNDP, UNESCO, etc). The relation between shortages of water, food production and food security of poor communities' livelihoods was intensively analyzed, where a direct relation is established. Case studies on the impact of drought and water shortages on people's livelihoods in the Horn of Africa, Syria, and North Africa were published and received media attention.		

Main response proposed to address the issue	As most of the water available for agriculture in dry areas is already tapped, and as less water is becoming available for food production (and basic environmental needs for sustainability), the only way to reduce the impact on food production and security is by increasing the water and land productivities and improving the efficiency of water use. Water productivity is the biophysical, economic, environmental, social and nutritional return of a unit of water consumed. This is an integrated and comprehensive framework that requires a paradigm change in the way water is used in agriculture under scarcity. Changing focus from land to water, alternative cropping patterns, revising irrigation guidelines to maximize water productivity, changes
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Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

	in policies, institutional setups and socio economics of the agricultural sector are needed to achieve better use of water.
Main actor(s) concerned or involved in the response proposed	<p>Policy makers in the water scarce areas are the main actors.</p> <p>Research institutes can provide the evidence and the means for the change.</p> <p>Development agencies will implement the response when policies are favorable.</p> <p>Farmers are the target here and can adopt the response when it increases their income and improves their livelihoods.</p>

For the public inquiry fields below are optional

2. Broad typology of the issue

(*)	External driver	Internal to food systems	Both
Is the issue either or both?			The issue is external in that water scarcity in dry areas is physical and little can be done to change. The unproductive use of water in agriculture is internal and can be changed.

(*)	Economic (and productive)	Social and Cultural	Governance (institutions, rights, etc.)	Environmental (resources, etc.)	Other (SPECIFY)
Main nature of the issue	X	X	X	X	
Nature of the main impact of the issue on FSN	X	X		X	

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	Classification (**)		
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?	Critical point	X Systemic issue	
2. Breadth: Are there many people affected?	Few	X Many	
3. Scale: local/regional/global?	Local	Region	Dry Areas Global
	<i>Indicate here the precise location</i>	<i>Central, West Asia and North Africa</i>	

For items 4-11 below, please use the classification [— — , — , 0, +, ++]:

Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)

4. Impact on Availability	— —
5. Impact on Access	—

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

6. Impact on Utilization/ nutrition	–		
7. Impact on Stability	–		
8. Impact on most vulnerable people	-- Vulnerable people have lower capacity to find alternatives		
9. Impact on women	-- Women are also vulnerable in this region		
10. Impact on children	–		
11. Impact on marginalized populations	__ Marginalized people already have FS problem and this adds to their misery		
12. Cost to address the issue	Low	Middle	High

(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

4. Time Scale

<i>Timeframe (*)</i>	<i>Now/Short term (1-5 years)</i>	<i>Medium term (5-10 years)</i>	<i>Long term (10-20 years +)</i>
Moment when the issue will have an impact	X		
Moment to act to address the issue	X		

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.	Low	Middle	X High
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6. Additional Supporting Information

<p><i>Additional information</i></p> <p>Over the last few decades annual per capita water in many countries of the dry areas dropped by half and became below the water poverty level. At the same time the food needs of the populations more than doubled. Yet agriculture and water use continued business as usual. Both in terms of crops and patterns and in water application practices. Earlier water was plentiful and land was the limiting resource so focus was on increasing yields per unit land. Now the opposite, water is more limiting than land in water scarce areas but the focus continued to be on land. It is time to change that together with all needed policies and guidelines.</p>
<p><i>Evidence</i></p> <p>The continuing water shortage in dry areas and the reduction in agricultural water is well established. Research at ICARDA and many other institutions have shown that it is possible to more than double the productivity of water by applying new management practices such as deficit irrigation, changing cropping patterns, reallocating water to more productive practices such as supplemental irrigation in rain fed areas and invest in water conservation practices such as water harvesting.</p> <p>The CGIAR Comprehensive Assessment for Water Management has documented the great potential in rain fed agriculture and developed the concept of water productivity in a series of volumes available for public.</p>

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

Knowledge gaps

3. Knowledge regarding values of water productivity (biological, economic, nutritional, environmental and social) of various agricultural systems/crops under different conditions and countries in water scarce areas
4. Political and social cost of changing agricultural water management to meet challenges of increasing water scarcity in dry areas.

References

- United Nations Development Programme (UNDP). 2013. Water Governance in the Arab Region: Managing Scarcity and Securing the Future. UNDP, New York, NY, USA.
- ICARDA (International center for Agricultural Research in Dry Areas. 2007. Improving livelihoods in dry Areas. Strategic Plan 2007-2016. ICARDA, Aleppo, Syria. X+52 pp.
- The Comprehensive Assessment of Water Management in Agriculture series, (volumes; 1-16). 2003-2009. International Water Management Institute (IWMI) Colombo, Sri Lanka. CABI Publishing, Wallingford, U.K.
- David Molden ed. 2007. Water for Food, Water for Life. International Water Management Institute. Colombo, Sri Lanka and Earthscan, London, UK.

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.



HLPE Inquiry

Critical and Emerging Issues for Food Security and Nutrition

Questionnaire

About the respondent

Name, Surname and Institution	Jonathan Brooks, OECD	
Dou you answer on behalf of your institution, or as an individual?	On behalf	As individual
Do you agree if this contribution is made available to the public as part of the proceedings?	Yes	No
Country of the responding individual/institution Please mention international or regional, the case being	France	

1. Overview of the issue

Issue <i>in 2 lines</i>	Global Food Security is multi-faceted		
Description of the issue <i>in less than 5 lines</i>	Need to raise the incomes of agricultural and rural households, and thereby improve poor peoples' access to food. Complementary policies, for example to improve health and sanitation, are required to ensure improvements in peoples' nutrition .Government policies can stimulate productivity sustainably and contain upward pressure on food prices. Trade necessary to ensure that resources are used efficiently and sustainably, and to get food from surplus to deficit regions, hence need for multilateral reforms.		
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>	Challenge	Opportunity	Challenge and opportunity
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition <i>In less than 10 lines.</i> Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.	OECD has undertaken a range of research and analysis addressing different dimensions of the problem, as identified above.		
Main response proposed to address the issue	Responses proposed along each dimension: Needs for global policy action : improved market information and coordination (e.g. through AMIS); fostering sustainable productivity growth; guidelines for responsible investment in agriculture; global trade reform (conclusion of the Doha Round); catalytic role of ODA. OECD countries : improved policy coherence		

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	through reductions in trade protection and trade-distorting support; knowledge sharing (e.g. on transferable technologies); ODA, including Aid for Trade. Developing countries: improved agricultural productivity allied with balanced rural development; development of risk management tools; provision of core public services such as clean water and support for nutrition. Avoidance of trade-restrictions.
Main actor(s) concerned or involved in the response proposed	Actions needed at the global, regional and national levels (see above).

For the public inquiry fields below are optional

2. Broad typology of the issue

(*)	<i>External driver</i>	<i>Internal to food systems</i>	<i>Both</i>
Is the issue either or both?			Briefly mention how this may be the case

(*)	<i>Economic (and productive)</i>	<i>Social and Cultural</i>	<i>Governance (institutions, rights, etc.)</i>	<i>Environmental (resources, etc.)</i>	<i>Other (SPECIFY)</i>
Main nature of the issue					
Nature of the main impact of the issue on FSN					

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	<i>Classification (**)</i>		
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?	Critical point	Systemic issue	
2. Breadth: Are there many people affected?	Few	Many	
3. Scale: local/regional/global?	Local	Region	Global
	<i>Indicate here the precise location</i>	<i>Indicate here the precise region</i>	

For items 4-11 below, please use the classification [— — , —, 0, +, ++]:

Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)

4. Impact on Availability	
5. Impact on Access	

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6. Impact on Utilization/ nutrition			
7. Impact on Stability			
8. Impact on most vulnerable people	Specify as appropriate		
9. Impact on women			
10. Impact on children			
11. Impact on marginalized populations	Specify as appropriate		
12. Cost to address the issue	Low	Middle	High

(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

4. Time Scale

<i>Timeframe (*)</i>	<i>Now/Short term (1-5 years)</i>	<i>Medium term (5-10 years)</i>	<i>Long term (10-20 years +)</i>
Moment when the issue will have an impact			
Moment to act to address the issue			

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.	Low	Middle	High
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6. Additional Supporting Information

Additional information

OECD has undertaken a wide range of work that pertains to various aspects of global food security (see references below). Much of this is indirect work, for example looking at the functioning of world food markets, with key references below.

Evidence

The evidence base comes from a range of sources: country-specific work, as well as theme based analysis of issues germane to global food security.

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Knowledge gaps

We know much of what needs to be done to improve global food security. Yet, there are still information gaps on the precise mix of policies needed to improve peoples' access to food, and on the policy conditions required to increase agricultural supply sustainably.

References

OECD (2013), Global Food Security: Challenges for the Food and Agriculture System.

OECD (2012), Policy Framework for Investment in Agriculture.

OECD (2012), Policy Coherence and Food Security: The Effects of OECD Countries' Agricultural Policies.

OECD (2012), Agricultural Policies for Poverty Reduction.

OECD (2011), Managing Risk in Agriculture: Policy Assessment and Design.

OECD and FAO (2013), The OECD-FAO Agricultural Outlook.

OECD (2013), Agricultural Policy Monitoring and Evaluation: OECD Countries and Emerging Economies.

FAO, OECD et al. [for G20] (2012), "Sustainable Agricultural Productivity Growth and Bridging the Gap for Small Family Farms", Inter-Agency Report to the Mexican G20 Presidency with contributions from 12 international organisations.

FAO, OECD et al. [for G20] (2011), "Price Volatility in Food and Agricultural Markets: Policy Responses", Inter-Agency Report to the French G20 Presidency with contributions from 10 international organisations.

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HLPE Inquiry

Critical and Emerging Issues for Food Security and Nutrition

Questionnaire

About the respondent

Name, Surname and Institution	Fengying Nie, Chinese Academy of Agricultural Sciences	
Dou you answer on behalf of your institution, or as an individual?		√As individual
Do you agree if this contribution is made available to the public as part of the proceedings?	√Yes	
Country of the responding individual/institution Please mention international or regional, the case being	China	

1. Overview of the issue

Issue <i>in 2 lines</i>	Integrated Farm Management System (IFMS) Enhancing Sustainable Agricultural Development (SAD)		
Description of the issue <i>in less than 5 lines</i>	IFMS including soil, water, weather, crops, inputs, market information, etc. will provide efficient soil management, appropriate cultivation techniques, smart production decisions to minimize reliance on chemicals, optimize productivity and profit for SAD.		
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>	Challenge	√Opportunity	It depends (please specify)
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition (FSN) <i>In less than 10 lines.</i> Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.	Agricultural development for food, nutrition and livelihood security and the ecological integrity for sustainability are increasingly linked and integrated. To solve the food security and nutrition issue in a wide scope with the System Theory and Optimality Theory is a popular way. IFMS deals with the whole supply chain as a system including information from food production to process and logistics and ends with market demand. And Comparative Analysis can be used to assess its importance for FSN.		

Main response proposed to address the issue	As an integrated system, data and information sharing from multi-disciplines is the basis. To establish the system and achieve efficient output, both infrastructures and R&D input together with well-trained human resources are needed.
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Main actor(s) concerned or involved in the response proposed	The government should work on promoting data and information sharing and investing on the establishment of the system. Incentive institutions should be designed to encourage producers to use and feedback to the system. Research agencies, technical companies together with other private stakeholders should support the maintenances and updates of the system.
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For the public inquiry fields below are optional

2. Broad typology of the issue

(*)	External driver	Internal to food systems	Both
Is the issue either or both?		√	Briefly mention how this may be the case

(*)	Economic (and productive)	Social and Cultural	Governance (institutions, rights, etc.)	Environmental (resources, etc.)	Other (SPECIFY)
Main nature of the issue	√		√	√	
Nature of the main impact of the issue on FSN	√			√	

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	Classification (**)		
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?	Critical point	√Systemic issue	
2. Breadth: Are there many people affected?	Few	√Many	
3. Scale: local/regional/global?	Local	Region	√Global
	<i>Indicate here the precise location</i>	<i>Indicate here the precise region</i>	

For items 4-11 below, please use the classification [— — , — , 0, +, ++]:

Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)

4. Impact on Availability	++
5. Impact on Access	+
6. Impact on Utilization/ nutrition	+
7. Impact on Stability	++
8. Impact on most vulnerable people	+IFMS may strengthen the coping strategy with natural and/or economic shocks
9. Impact on women	+
10. Impact on children	0

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11. Impact on marginalized populations	+Marginalized populations will still be constrained because of limited capacities		
12. Cost to address the issue	Low	√Middle	High

(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

4. Time Scale

<i>Timeframe (*)</i>	<i>Now/Short term (1-5 years)</i>	<i>Medium term (5-10 years)</i>	<i>Long term (10-20 years +)</i>
Moment when the issue will have an impact	√		
Moment to act to address the issue	√		

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.	Low	√Middle	High
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6. Additional Supporting Information

Additional information

Integrated Farm Management (IFM) involving Marketing, Organization and Planning, Soil management, Crop protection, Energy efficiency, Pollution control, Wildlife and landscape management, is proved to be successful way for the sustainable agricultural development which can guarantee the food security and nutrition in the long run.

Evidence

Europe demonstrated good examples on linking environment with farming and hi-tech farm management. Developing countries are now trying to develop this intelligent eco-friendly mode, and some technology companies pioneer this trial, like JOYVIO in China.

Knowledge gaps

Data and information sharing and integration are the first bottleneck for this IFMS.
Wise decision making based on research and technical support is still questionable.

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References

Cathy Hawes. 2007 Sustainability Research at SCRI.

<http://www.scri.ac.uk/scri/file/cross%20cutting%20themes/Sustainability.pdf>

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HLPE Inquiry

Critical and Emerging Issues for Food Security and Nutrition

Questionnaire

About the respondent

Name, Surname and Institution	Liming Ye, Institute of Agricultural Resources and Regional Planning, Chinese Academy of Agricultural Sciences	
Dou you answer on behalf of your institution, or as an individual?		As individual
Do you agree if this contribution is made available to the public as part of the proceedings?	Yes	
Country of the responding individual/institution Please mention international or regional, the case being	China	

1. Overview of the issue

Issue <i>in 2 lines</i>	Socioeconomic development pathway as a powerful policy option in long-term FSN regulation in China		
Description of the issue <i>in less than 5 lines</i>	Development pathways regulate the future trends of FSN in China in 2050. The more environmental-friendly pathway in association with the IPCC-B2 emission scenario is much superior in ensuring food security than the other A2-associated pathway.		
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>	<input checked="" type="checkbox"/> Challenge	<input checked="" type="checkbox"/> Opportunity	
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition <i>In less than 10 lines. Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.</i>	Integrated assessment of FSN in terms of a food security index FSI (or food self-sufficiency level essentially) in 2050 in China. The CERES crop models and IPCC SRES A2 and B2 emission scenarios were used to identify climate change impact on crop yield with CO ₂ fertilization effect included. The following factors were considered to evaluate the FSI: population size, urbanization rate, cropland area, cropping intensity, technology development, and climate change.		

Main response proposed to address the issue	The policy dimension needs much more attention in ensuring long-term food security in China. It is dangerous to regard FSN simply as a technical balance between production and consumption. The benefits of technological advances are mostly isolated and short-lived. Adoption for a more balanced and environmental-friendly development pathway is much more fundamental and desirable.
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Main actor(s) concerned or involved in the response proposed	Policy makers, scientists and the general public
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For the public inquiry fields below are optional

2. Broad typology of the issue

(*)	<i>External driver</i>	<i>Internal to food systems</i>	<i>Both</i>
Is the issue either or both?			Cropland protection and fertility enhancement policies boost production internally, while population and environmental policies may produce positive or negative impacts on the food systems.

(*)	<i>Economic (and productive)</i>	<i>Social and Cultural</i>	<i>Governance (institutions, rights, etc.)</i>	<i>Environmental (resources, etc.)</i>	<i>Other (SPECIFY)</i>
Main nature of the issue	X	X	X	X	
Nature of the main impact of the issue on FSN	X	X	X	X	

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	<i>Classification (**)</i>		
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?			Systemic issue
2. Breadth: Are there many people affected?			Many
3. Scale: local/regional/global?	Local	Region	Global
	<i>Indicate here the precise location</i>	CHINA	

For items 4-11 below, please use the classification [— — , — , 0 , + , ++]:
Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)

4. Impact on Availability	+
5. Impact on Access	++
6. Impact on Utilization/ nutrition	++
7. Impact on Stability	+

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8. Impact on most vulnerable people	++ significant improvements in poverty reduction through geographically balanced development		
9. Impact on women	- higher urbanization rate may increase the number of women in agriculture		
10. Impact on children	++ improved nutrition and reduced mortality under more balanced development and lower population growth rate		
11. Impact on marginalized populations	0		
12. Cost to address the issue			High

(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

4. Time Scale

<i>Timeframe (*)</i>	<i>Now/Short term (1-5 years)</i>	<i>Medium term (5-10 years)</i>	<i>Long term (10-20 years +)</i>
Moment when the issue will have an impact		X	
Moment to act to address the issue	X		

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.		Middle	
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6. Additional Supporting Information

<i>Additional information</i>
<i>Evidence</i>

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Knowledge gaps

FSN has received much attention in China and elsewhere. However, empirical analyses and modeling efforts linking socioeconomic development pathway and FSN are lacking. More research is therefore needed.

References

Ye et al. (2013) Climate change impact on China food security in 2050. *Agronomy for Sustainable Development* 33: 363-374. doi:10.1007/s13593-012-0102-0.

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HLPE Inquiry
Critical and Emerging Issues for Food Security and Nutrition
Questionnaire

About the respondent

Name, Surname and Institution	Kevin Chen, ICARD/CAAS and IFPRI	
Do you answer on behalf of your institution, or as an individual?		As individual
Do you agree if this contribution is made available to the public as part of the proceedings?	Yes	
Country of the responding individual/institution Please mention international or regional, the case being	China	

1. Overview of the issue

Issue <i>in 2 lines</i>	Who Will Farm in China in the Next Decade or Two?	
Description of the issue <i>in less than 5 lines</i>	Approximately 12 million peoples are projected to move from rural to urban areas each year over the next decade in China, and most of these migrants are expected to be between 16-35 years old; while the elderly and children are expected to remain in rural areas to carry out agricultural activities. The aging of agricultural labor force will speed up, which will be followed by a sharp decline in the total agricultural labor force in the next 20-30 years. Moreover, significant levels of land abandonment have been reported in certain locations of China. Stories of "hollow villages" in various parts of China have attracted headlines. Ultimately, these troubling developments beg the question - will there be young farmers left to produce food for their countrymen and women in the next a few decades?	
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>		It depends the net effect of migration and aging on agricultural production.
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition <i>In less than 10 lines.</i> Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.	A combination of desk review and field visits is used. The desktop review involved synthesizing existing literature on food security policies in China. It draws on the experiences of both public and private sector players, research institutions, and relevant scientific evidence. The information for the field study was gathered through consultations with government representatives and advisers involved in issues related to agricultural development in	

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China in line ministries, research institutes, and universities. The information generated from the desk review and field research is used to identify the issue and assess its importance for food security and nutrition.

Main response proposed to address the issue

An often-cited cause of the farm problem is the low profitability of smallholder crop production. The current prices for major crops in China are beneath the profit threshold for China's smallholder farmers. With ample opportunities outside of agriculture, many farm households are becoming increasingly disinterested in farming. With the current production scale, it is very unlikely that farm households will pursue farming as a livelihood strategy even with the prices doubled for their produce. At the same time, despite China's sizeable investment in a major grain price subsidy policy, it is important to note that grain prices in China are already equal to if not higher than the corresponding world prices. China has already lost its comparative advantage of producing grain because of rapid rural urban transformation. With the further increase of grain prices, the pressure to import more will continue to mount and tighter border controls (which must be formulated to conform to WTO regulations) will be necessary to ensure the desired level of grain self-sufficiency. More attention probably needs to be paid to improving the efficiency of current subsidy policies and identifying other less distortionary measures.

Also the solutions to make farming more profitable are not necessarily to be found in price subsidy but in directly augmenting the scale of farms. Facilitating land transfers within the current political and institutional setting is instrumental to increasing sizes and realizing economies of scale in farming. Larger scale farming can also be supported through land concessions or forms of contract farming and cooperation that link large firms in the supply chain to small farmers. The success of such policies will require the active involvement of the private sector, which will only be attracted to the agricultural sector if the government has already taken comprehensive steps to improve agriculture infrastructure at the village level. A transition from relying on village-level investment alone to also incorporating national-level government support is necessary in order to meaningfully expand and improve agricultural and public infrastructure in rural villages. For example, new village roads and irrigation canals were built at Luping village of Sichuan with government support, which was offered in response to the earthquake in 2008. This enabled investors to contract land from villages in the village where they developed specialized rice production base

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	<p>while the farmers with the use rights of this land received the rent. In this case, not only did the land become more productive, but the elderly villagers also gained employment opportunities. Because of the new road and irrigation system built, both farmers and investors benefited.</p> <p>Science and technology has proved to be a key for sustainable agricultural development. The percent of public expenditure on agricultural research and development as an agricultural GDP in China is still significantly below 1% (the target the FAO recommends for developing countries) and far less than the percent of agricultural GDP spent on direct subsidies. As a result, the 2012 Number One policy document rightly calls for more national investment in agricultural research and development. The government should encourage the transfer of industry to less-developed inner districts, so as to generate non-farm employment opportunities, provide better social protection and facilitate migrant households' transition out of agriculture. Farmers in China do not own the land but have the use right. Migrants cannot take part in social safety net that is provided to the urban residents. To encourage the land consolidation, a better social safety net needs to be built for rural residents. As for the entrepreneurial activity of return migrants, the government should provide ample support, which would help them to undertake capital-intensive agriculture activities and non-farm businesses. The evidence also reveals that return migrants are more likely to lease out farmland and leave traditional agriculture, in order to allocate more resources to livestock production or small nonfarm enterprises. Targeted land transfer is instrumental to fostering the ascent of a new generation of well-informed and innovative farmers. Policies need to be put in place to ensure that this new generation of farmers will be equipped with knowledge and skills, so as to facilitate the industrialization, intensification and scaling up of agriculture, all of which offer much opportunity for improving the profitability and sustainability of China's agriculture.</p>
<p>Main actor(s) concerned or involved in the response proposed</p>	<p>Government, private sector, and farmers</p>

For the public inquiry fields below are optional

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

2. Broad typology of the issue

(*)	<i>External driver</i>	<i>Internal to food systems</i>	<i>Both</i>
Is the issue either or both?	External		Migration and aging are issues caused by factors outside of food systems such as urbanization and population policy.

(*)	<i>Economic (and productive)</i>	<i>Social and Cultural</i>	<i>Governance (institutions, rights, etc.)</i>	<i>Environmental (resources, etc.)</i>	<i>Other (SPECIFY)</i>
Main nature of the issue	*				
Nature of the main impact of the issue on FSN	*				

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	<i>Classification (**)</i>	
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?		**Systemic issue
2. Breadth: Are there many people affected?		**Many
3. Scale: local/regional/global?		**Region **East and Southeast Asia

For items 4-11 below, please use the classification [— — , — , 0, +, ++]:
Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)

4. Impact on Availability	Unclear
5. Impact on Access	Unclear
6. Impact on Utilization/ nutrition	Unclear
7. Impact on Stability	Unclear
8. Impact on most vulnerable people	--
9. Impact on women	--
10. Impact on children	--
11. Impact on marginalized populations	--
12. Cost to address the issue	Low compared to the potential benefit of managing the issue well

(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

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4. Time Scale

<i>Timeframe (*)</i>	<i>Now/Short term (1-5 years)</i>	<i>Medium term (5-10 years)</i>	<i>Long term (10-20 years +)</i>
Moment when the issue will have an impact			*
Moment to act to address the issue	*		

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.	LOW		
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6. Additional Supporting Information

Additional information

The exhaustion of the demographic bonus and urbanization has pushed up the cost of rural labor. First, China's urbanization has outpaced its economic growth since 2006. About 80 percent of the population lived in rural areas in 1980 and by 2011 more than half of China's citizens were urban residents. The second change is related to the demographic distribution of the population. Advances in healthcare and nutrition, combined with the one child policy, have led to the rapid aging of China's population. The third change is massive labor migration. By the end of 2012 the number of rural migrant workers reached 263 million, almost 20 percent of the population.

Evidence

Since 1988, the number of circular migrants (i.e. the so-called "floating population") has increased more than five-fold (from 26 million in 1988 to 159 million in 2011). And migration growth until now is viewed as but the tip of the proverbial iceberg. China's population reach over 50 percent urban, and the transition from an agricultural to urban society is going to continue at least until we reach something like 70-80 percent. Approximately 12 million peoples are projected to move from rural to urban areas each year over the next decade, and most of these migrants are expected to be between 16-35 years old; while the elderly and children are expected to remain in rural areas to carry out agricultural activities, even though they are typically less capable of handling new technology. A recent study by Professor Funning Zhong from Nanjing Agricultural University suggests that the age structure of rural residents looks like a spindle with the tail at bottom. With the elderly leaving employment and youngsters moving out, the "spindle" will become thinner and thinner, with the top shrinking much faster. As a result, the aging of agricultural labor force will speed up, which will be followed by a sharp decline in the total agricultural labor force in 20-30 years. Moreover, significant levels of land abandonment have been reported in certain locations. Stories of "hollow villages" in various parts of China have attracted headlines. Ultimately, these troubling developments beg the question - will there be young farmers left to produce food for their countrymen and women in the next a few decades?

Agricultural labor loss is expected to reduce overall agricultural productivity as farmers will likely cope with absence of their family members and the attendant loss of productive capacity by reducing their agricultural investment and shifting from multi-cropping to single-cropping. In some places, particularly where marginal lands are located, land may well be abandoned altogether. According to a 2004 survey by the Ministry of Science and Technology (MOST), 6.5% of cultivated land was abandoned. Sichuan Department of Agriculture reported that 5.3% of cultivated lands were abandoned in 2008, while Anhui Agricultural Committee reported that 0.17% of cultivated lands were abandoned. Private

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investments have been attracted in the rural areas but majority focuses on cash crop such as vegetables and fruits and livestock production. The continuation of these various trends is expected to exert a stronger downward pressure on crop production.

However, there are also the potential benefits that migration can bring to agricultural production. First of all, crop production does not necessarily suffer when household members move away as their remittances support the purchase of labor-saving farm equipment, and even stimulate crop production. For example, a recent study by the International Food Policy Research Institute finds that increases in productive capital investment can significantly promote the productivity of migrant households who receive remittances. There is evidence, however, that remittances are insufficiently allocated to investments that improve the productive capacity of cropland. Evidence also suggests that there is a stronger tendency to lease out farmland among migrant households. The rising wages for hired workers has in turn stimulated farmers' demand for farm machinery. The use of machinery enables progressive farmers to increase their farm size, to realize the scale of economies, and therefore to improve productivity. Migrant households are also likely moving from labor intensive cash crop and livestock production into land intensive staple production. The adverse effect of labor lost on agricultural productivity dominates only when there is inadequate compensation for the labor loss.

The existing literature shows mixed results for the effects of migration on agriculture across countries and reveals that the agricultural productivity outcomes of rural-urban migration depend to a large degree on the broader agro-ecologic, economic, and institutional context. Is the current fever pitch over the future of China's small farmers unfounded? Such an incredible trend of rural-urban migration is not totally unique to China. North America (in the early 1900s), Japan and South Korea (during the 1970s and 1980s), and several developing economies such as Brazil (1990s-2000s) have all undergone similar population shifts. In these countries, a binomial distribution of farm size has been observed to emerge, with numerous smallholders at one end and large commercial farms at the other, with many in between. It is interesting to note that, even in countries like the United States and Japan, family farms are still dominant form of agricultural production for most agricultural activities.

It is also worthwhile to point out that agricultural production does not necessarily suffer when household members move away. Recent developments in the labor market have induced changes in farm structure as capitalization and mechanization become attractive. There is a surge in large and medium size tractor use accompanied by a declining agricultural labor-land ratio (Christiaensen 2012; Cai and Du 2013). A recent study by IFPRI finds that increases in productive capital investment can significantly promote the productivity of migrant households who receive remittances. In addition, increased demand for farm machinery from rising wages encourages smallholders to capture the economies of scale from mechanization and remain internationally competitive. Cui and Zhan (2013) also noticed that high production efficiency is associated with reduced labor and intensified mechanization.

Knowledge gaps

Whether the migration and aging of rural labor helps or hurts agricultural production and to what extent remain unanswered. Despite the widespread coverage of the questions surrounding this unprecedented surge in rural-urban migration, less attention has been paid to the complexity of the answers.

References

- Cai, F. and Y. Du. 2013. Agricultural input at the new stage of economic development in China. Report under Asian Development Bank TA-7306-PRC: Policy Study on Government Public Expenditure in Agricultural Production.
- Christiaensen, L. 2012. The role of agriculture in a modernizing society: Food, farms and fields in China 2030. Discussion Papers 77367. Washington, DC: World Bank.
- Cui, Y. and H. Zhan. 2013. Government public expenditure and grain production efficiency of rural households and farmer income in China. Report under Asian Development Bank TA-7306-PRC: Policy Study on Government Public Expenditure in Agricultural Production.
- Yu, Bingxin, K. Chen, and Y. Zhang. 2013. Public Expenditure in Agriculture under a Rapid Transforming Economy: the Case of the People's Republic of China. Report under Asian Development

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

Bank TA-7306-PRC: Policy Study on Government Public Expenditure in Agricultural Production.

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.



HLPE Inquiry

Critical and Emerging Issues for Food Security and Nutrition

Questionnaire

About the respondent

Name, Surname and Institution	Fengying Nie, Chinese Academy of Agricultural Sciences		
Dou you answer on behalf of your institution, or as an individual?		As individual	
Do you agree if this contribution is made available to the public as part of the proceedings?	Yes		
Country of the responding individual/institution Please mention international or regional, the case being	China		

1. Overview of the issue

Issue <i>in 2 lines</i>	New producing bodies can accelerate the modern agricultural development		
Description of the issue <i>in less than 5 lines</i>	Driven by urbanization and industrialization, migration of rural labors accelerated land transfer. New producing bodies, including large-scale farmers, cooperatives, family farming, etc. featured with more efficient farm management will promote modern agricultural development.		
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>	Challenge	<input checked="" type="checkbox"/> Opportunity	It depends (please specify)
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition <i>In less than 10 lines.</i> Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.	Literatures on efficiency of large-scale farming in developed economies demonstrate the rising trend of land consolidation. Under the swift urbanization in China, new producing bodies are emerging and take more importance role in food production. Surveys and econometrical assessment of the productivity of new bodies are widely conducted. Comprehensive evaluation system (indicator system) can be used to compare with traditional small farming.		
Main response proposed to address the issue	Join effort are needed for promoting new producing bodies. Land transfer legislation is in great need to protect farmers' benefit. Sufficient financial support and various credit systems are the bottleneck. Natural and economic shocks expose largest risk while agricultural insurance is still in short. Agricultural research booms while technology extension and mechanization is still lagged compared with research achievements.		

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Main actor(s) concerned or involved in the response proposed	Policy makers are responsible for the land registration and social safe net system. Both public and private sectors are encouraged to join in investment and agricultural insurance development. The agricultural extension system is the key power to strengthen technology development and promote mechanization.
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For the public inquiry fields below are optional

2. Broad typology of the issue

(*)	<i>External driver</i>	<i>Internal to food systems</i>	<i>Both</i>
Is the issue either or both?	√		Briefly mention how this may be the case

(*)	<i>Economic (and productive)</i>	<i>Social and Cultural</i>	<i>Governance (institutions, rights, etc.)</i>	<i>Environmental (resources, etc.)</i>	<i>Other (SPECIFY)</i>
Main nature of the issue	√		√		
Nature of the main impact of the issue on FSN	√				

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	<i>Classification (**)</i>		
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?	Critical point	√Systemic issue	
2. Breadth: Are there many people affected?	Few	√Many	
3. Scale: local/regional/global?	Local	Region	Global
	<i>China</i>	<i>Indicate here the precise region</i>	

For items 4-11 below, please use the classification [— — , — , 0 , + , ++]:

Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)

4. Impact on Availability	++
5. Impact on Access	++
6. Impact on Utilization/ nutrition	+
7. Impact on Stability	0
8. Impact on most vulnerable people	+ There're both positive and negative impacts on vulnerable people. There's possibility for vulnerable people to become new producing bodies which can probably increase their potential economic welfare. On the other hand if vulnerable people is pushing out agricultural, without other living skills, it will be great

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	challenge for their living.		
9. Impact on women	+		
10. Impact on children	0		
11. Impact on marginalized populations	+ Specify as appropriate		
12. Cost to address the issue	Low	Middle	√High

(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

4. Time Scale

<i>Timeframe (*)</i>	<i>Now/Short term (1-5 years)</i>	<i>Medium term (5-10 years)</i>	<i>Long term (10-20 years +)</i>
Moment when the issue will have an impact		√	
Moment to act to address the issue	√		

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.	Low	Middle	√High
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6. Additional Supporting Information

<p><i>Additional information</i></p> <p>The proportion of large scale production in both animal and dairy and also crops is a typical feature. Land transfer is greatly accelerated by China's No. 1 Central Document on agricultural development in 2013 which put forwards promoting Family Farming and other new farming business models. Level of mechanized land preparation, planting and harvesting surpasses 50% while for wheat it's above 90%. These conditions enhance the rapid mushrooming of new producing bodies.</p>
<p><i>Evidence</i></p> <p>Innovative production modes are emerging in the main producing areas, such as community land share-holding cooperatives, cooperative production and logistics supported by large information platform, etc.</p>
<p><i>Knowledge gaps</i></p> <p>Effective agricultural insurance system is far from well designed. Education and training system for the new producing bodies are in great need.</p>
<p><i>References</i></p> <p>China Central Government, 2013. No. 1 Central Document on agricultural development. http://www.gov.cn/jrzq/2013-01/31/content_2324293.htm</p>

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HLPE Inquiry

Critical and Emerging Issues for Food Security and Nutrition

Questionnaire

About the respondent

Name, Surname and Institution	Fengying Nie, Chinese Academy of Agricultural Sciences		
Dou you answer on behalf of your institution, or as an individual?		As individual	
Do you agree if this contribution is made available to the public as part of the proceedings?	Yes		
Country of the responding individual/institution Please mention international or regional, the case being	China		

1. Overview of the issue

Issue <i>in 2 lines</i>	Promoting Good Practice in Enhancing Smallholder Access to Markets and Value Chain Benefits		
Description of the issue <i>in less than 5 lines</i>	Growing market oriented economy in developing countries can benefit smallholder farmers but also risk the being pushed out of markets and worsened food security. Good practice should be promoted for easing market entry, institutional reform and farmer friendly policies.		
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>	Challenge	<input checked="" type="checkbox"/> Opportunity	It depends (please specify)
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition <i>In less than 10 lines.</i> Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.	Some featured small farmers under advantaged market or policy privileges benefit from participation in the market and value chain development. Field Survey and Focus Group Discussion can be used to identify the good practices. A participatory approach including both subjective and objective economic benefit assessment can be made through the streamline of the value chain.		
Main response proposed to address the issue	Improvement of market and transportation infrastructure and access to market services will ease the participation of market. Standardized production can make the products easily enter the market. But diversified or localized products can also help small farmers benefit from featured added value.		

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Main actor(s) concerned or involved in the response proposed	Government should invest in market and transportation infrastructure. Private sector and small farmers can benefit from participation in the market activities. Social Media and other advocacy channels can take very active role in promoting these good practices.
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For the public inquiry fields below are optional

2. Broad typology of the issue

(*)	<i>External driver</i>	<i>Internal to food systems</i>	<i>Both</i>
Is the issue either or both?	√		Briefly mention how this may be the case

(*)	<i>Economic (and productive)</i>	<i>Social and Cultural</i>	<i>Governance (institutions, rights, etc.)</i>	<i>Environmental (resources, etc.)</i>	<i>Other (SPECIFY)</i>
Main nature of the issue	√		√		
Nature of the main impact of the issue on FSN	√				

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	<i>Classification (**)</i>		
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?	Critical point		
2. Breadth: Are there many people affected?	Many		
3. Scale: local/regional/global?	Local	Region	√Global
	<i>Indicate here the precise location</i>		

For items 4-11 below, please use the classification [— — , — , 0, +, ++]:

Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)

4. Impact on Availability	+
5. Impact on Access	++
6. Impact on Utilization/ nutrition	0
7. Impact on Stability	++
8. Impact on most vulnerable people	++ The benefit of vulnerable people can be increased through efficient market participation
9. Impact on women	++
10. Impact on children	0

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11. Impact on marginalized populations	++Marginalized population are constrained to access to market, these population should be one focus target for this issue		
12. Cost to address the issue	√Low	Middle	High

(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

4. Time Scale

<i>Timeframe (*)</i>	<i>Now/Short term (1-5 years)</i>	<i>Medium term (5-10 years)</i>	<i>Long term (10-20 years +)</i>
Moment when the issue will have an impact	√		
Moment to act to address the issue	√		

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.	Low	Middle	√High
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6. Additional Supporting Information

<i>Additional information</i>
<i>Evidence</i>
<i>Knowledge gaps</i>
<i>References</i> FAO. 2007. Approaches to Linking Producers to Markets. Agricultural Management, Marketing and Finance Occasional Paper No.13. Antonio Rota. 2007. Value chains, linking producers to the markets. IFAD Livestock Thematic Papers.

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HLPE Inquiry

Critical and Emerging Issues for Food Security and Nutrition Questionnaire

About the respondent

Name, Surname and Institution	Jieying Bi, Chinese Academy of Agricultural Sciences	
Dou you answer on behalf of your institution, or as an individual?		As individual
Do you agree if this contribution is made available to the public as part of the proceedings?	Yes	
Country of the responding individual/institution Please mention international or regional, the case being	China	

1. Overview of the issue

Issue <i>in 2 lines</i>	Youth is escaping from rural and agriculture		
Description of the issue <i>in less than 5 lines</i>	The rural youth is moving away from agriculture, which is leading to ageing farming, slow pace of adoption of new innovations and technologies, huge losses in technology dissemination and delinking science with society. It is serious threaten to FSN.		
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>	<input checked="" type="checkbox"/> Challenge	<input type="checkbox"/> Opportunity	<input type="checkbox"/> It depends (please specify)
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition <i>In less than 10 lines. Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.</i>	Population Census and Statistics shows the rural labor age structure in agricultural and the rising trend of migration of rural youth to urban and non-agricultural sector. Productivity analysis and comparison can be made among different age groups. Youth is more innovative, productive and receptive and curious to engage in and contribute to new technologies, which is a great asset for food production and value chain development.		

Main response proposed to address the issue	<p>The future agriculture will be market oriented which calls for agribusiness management capacity and entrepreneurship while there's limited social atmosphere and policy to guide, support and intrigue starting business.</p> <p>The current education and training can't enable the youth to meet the comprehensive and technical requirements for modern agriculture.</p> <p>The comparatively low income and historical misunderstanding of agriculture related career make the youth lack of interest in agricultural farming and research.</p>
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	<p>Current land policy and lack of financial support makes difficult to operation modern large scale agriculture production. Indecent living conditions in rural area makes youth migrant into cities.</p>
<p>Main actor(s) concerned or involved in the response proposed</p>	<p>The government should take the responsibility to formulate national foresight for modern agriculture and strategy while consultancy from International Agencies, NGOs, and local stakeholders, like researchers, farmers and cooperatives, youth and policy makers should be involved. Ministries should work together for an efficient support system. Multi ministries, including MOA, MOST, MOE, MOC should cooperate. All kinds of Medias to advocate modern agriculture are needed. Policies which encourage the development of modern agriculture and youth in participation agriculture, successful stories, kinds of awards of youth in ARD, and international foresights and experiences can be broadly publicized to establish the social atmosphere of encouraging agriculture.</p>

For the public inquiry fields below are optional

2. Broad typology of the issue

(*)	<i>External driver</i>	<i>Internal to food systems</i>	<i>Both</i>
Is the issue either or both?	√		Briefly mention how this may be the case

(*)	<i>Economic (and productive)</i>	<i>Social and Cultural</i>	<i>Governance (institutions, rights, etc.)</i>	<i>Environmental (resources, etc.)</i>	<i>Other (SPECIFY)</i>
Main nature of the issue	√	√	√		
Nature of the main impact of the issue on FSN	√	√			

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	<i>Classification (**)</i>	
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?	√Critical point	Systemic issue
2. Breadth: Are there many people affected?	Few	√Many

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3. Scale: local/regional/global?	Local	Region	Global
	<i>Indicate here the precise location</i>	<i>Asia</i>	
For items 4-11 below, please use the classification [— — , —, 0, +, ++]: Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)			
4. Impact on Availability	—		
5. Impact on Access	—		
6. Impact on Utilization/ nutrition	—		
7. Impact on Stability	—		
8. Impact on most vulnerable people	—		
9. Impact on women	—		
10. Impact on children	0		
11. Impact on marginalized populations	— —Marginalized populations will be more and more concentrated and far fall behind because of lacking vibrant productivity		
12. Cost to address the issue	Low	√Middle	High

(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

4. Time Scale

<i>Timeframe (*)</i>	<i>Now/Short term (1-5 years)</i>	<i>Medium term (5-10 years)</i>	<i>Long term (10-20 years +)</i>
Moment when the issue will have an impact			√
Moment to act to address the issue	√		

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.	Low	Middle	√High
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6. Additional Supporting Information

Additional information

The challenges of retaining youth in agriculture have been recognized globally which also figured prominently in the Global Conference on Agriculture Research for Development 2012 (GCARD2012). The GCARD 2 have put forth “Youth (including young women) and Agriculture” as one of the focal discussions.

As first stepping stone to GCARD2012 decisions, a national initiative on young professionals in agriculture was taken in India to deliberate on “Foresight and Future Pathways of Agricultural Research through Youth in India” organized by IICA, APAARI, and TAAS in 2013.

Realizing new challenges and opportunities for youth in agriculture, the First Asia Pacific Regional Workshop on “Youth and Agriculture: Challenges and Opportunities” is organized by APAARI and Pakistan Agricultural Research Council (PARC) in 2013.

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Evidence

There're amount of evidence showing the new trend of youth innovative participation in agriculture. Classical types include engaging in large-scale production and cooperatives in crops, specialized production and modern logistic in livestock sector, ecological agriculture and tourism, promotion of Community Support Agriculture (CSA), etc.

Knowledge gaps

The main gap lies in multidiscipline knowledge and entrepreneurship required for modern food security and nutrition system while the current education and training can't enable the youth to meet the requirements.

Another gap lies in youth missing role in policy debate and policy making.

References

APAARI, 2013. Foresight and Future Pathways of Agricultural Research Through Youth, Conference Proceeding.

APAARI, 2013. Regional Workshop on Youth and Agriculture: Challenges and Opportunities, Concept Note.

GFAR, 2012. Global Conference on Agriculture Research for Development 2012, GCARD 2012 Proceeding.

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HLPE Inquiry

Critical and Emerging Issues for Food Security and Nutrition

Questionnaire

About the respondent

Name, Surname and Institution	Dr Peter Carberry, CSIRO	
Do you answer on behalf of your institution, or as an individual?	On behalf	
Do you agree if this contribution is made available to the public as part of the proceedings?	Yes	
Country of the responding individual/institution Please mention international or regional, the case being	Based in Australia with a significant international research footprint in Africa and Asia/Pacific.	

1. Overview of the issue

Issue <i>in 2 lines</i>	Reducing the food demand trajectory		
Description of the issue <i>in less than 5 lines</i>	Along with increasing food production and avoiding loss in current or future production, reducing the food demand trajectory is a critical component of future food security. This issue involves explicitly addressing the drivers of food demand.		
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>	Challenge	Opportunity	<input checked="" type="checkbox"/> It depends The framing of the food wedges sets the challenge, the pathways provides the opportunities (see below)
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition <i>In less than 10 lines.</i> Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.	The trajectory of food demand from 1970 to 2050 was quantified in response to the drivers causing projected demand. A 'mega wedge' of the increased food demand from 2010-2050 can be broken into the three smaller food wedges of reducing the food demand trajectory, increasing food productivity and avoiding loss in current or future production. For each food wedge, a set of likely pathways is proposed to meet its challenge.		

Main response proposed to address the issue	Four pathways are proposed to meet this issue: <ul style="list-style-type: none"> • Reducing waste along the food value chain • Reducing over-consumption in human diets • Balancing the livestock component of future diets • Developing smart biofuel policies and technologies
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Main actor(s) concerned or involved in the response proposed	Consumers National Governments and policy makers Agri-industry Research and Development domain
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For the public inquiry fields below are optional

2. Broad typology of the issue

(*)	External driver	Internal to food systems	Both
Is the issue either or both?			While reducing waste along with developing smart biofuel policies and technology are internal to the food system, human behaviour change is external and varies depending on governance, wealth, geography and culture.

(*)	Economic (and productive)	Social and Cultural	Governance (institutions, rights, etc.)	Environmental (resources, etc.)	Other (SPECIFY)
Main nature of the issue		✓			
Nature of the main impact of the issue on FSN		✓			

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	Classification (**)		
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?	Critical point	Systemic issue ✓	
2. Breadth: Are there many people affected?	Few	Many ✓	
3. Scale: local/regional/global?	Local	Region	Global ✓
	<i>Indicate here the precise location</i>	<i>Indicate here the precise region</i>	

For items 4-11 below, please use the classification [— — , — , 0, +, ++]:

Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)

4. Impact on Availability	+
5. Impact on Access	0
6. Impact on Utilization/ nutrition	++

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7. Impact on Stability	+		
8. Impact on most vulnerable people	0		
9. Impact on women	0		
10. Impact on children	0		
11. Impact on marginalized populations	0		
12. Cost to address the issue	Low	<input checked="" type="checkbox"/> Middle	High

(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

4. Time Scale

<i>Timeframe (*)</i>	<i>Now/Short term (1-5 years)</i>	<i>Medium term (5-10 years)</i>	<i>Long term (10-20 years +)</i>
Moment when the issue will have an impact	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Moment to act to address the issue	<input checked="" type="checkbox"/>		

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.	Low	Middle <input checked="" type="checkbox"/>	High
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6. Additional Supporting Information

Additional information

The projection of global food demand to 2050, with assumptions on population growth, dietary shifts and biofuel expansion, provides an estimate for the amount of additional food needed over the next 40 years to satisfy human needs. This additional food demand, expressed in energy terms (kcal), represents a “mega-wedge” akin to the carbon stabilisation wedges of Pascala and Socolow (2004). For the three food wedges; reducing the food demand trajectory, increasing food productivity and avoiding loss in current or future production, a total of 14 pathways are proposed. Of these, four pathways are proposed specifically to **reduce the food demand trajectory**:

- 1. Reducing waste along the food value chain.** Waste occurs throughout the food value chain, on farm, in storage, in processing, in the marketplace and in households. Estimates vary, but figures in the 20-40% range are reported (Godfray et al. 2010; FAO 2011). A host of complex technical, economic and social drivers are implicated and the location of the waste and the significance of the drivers differ between the developed and developing world. For example, most food waste in the developing world occurs before it reaches the consumer due to poor harvesting practices, lack of adequate storage systems, lack of cold chains, pests and diseases. In contrast, most waste in the developed world is due to sell-by dates in supermarkets, restaurants and households. Any reductions in waste within the production and consumption systems would reduce the global food demand trajectory.
- 2. Reducing over-consumption in human diets.** Some of the current and projected food demand arises from over-consumption of food with growing health consequences in both the developed and some segments of society in the developing world. Global estimates suggest 1.4 billion adults, 20 and older, are overweight, compared to 1.0 billion undernourished. Of these overweight adults, over 200 million men and nearly 300 million women are obese. Reducing over consumption and achieving more balanced and nutritious diets could help reduce future food demand trajectories and deliver associated health benefits such as reduction in cardiovascular diseases, diabetes and metabolic syndromes (McMichael et al., 2007).
- 3. Balancing the livestock component of future diets.** Livestock products make up 17 and 30% of

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the global kilocalorie and protein consumption respectively. Livestock product consumption is growing in response to rising living standards, especially in the fast growing economies in Asia, Latin America and parts of Africa (IAASTD, 2009). While there are nutritional benefits associated with a livestock-derived component in diets, dietary shifts towards livestock products are driving over half of the future food production demand. Producing calorie energy and protein from livestock takes an estimated 2.5 to 100 times more resources than from grain (Herrero et al., 2013). Currently, one third of the world's cereal supply is used for livestock feed, resulting in lower energy efficiencies (de Fraiture et al. 2007; FAO, 2006). Projections suggest that livestock feeding will account for close to 50% of cereal use by 2050 (IAASTD, 2009). An increase in the direct cereal consumption by humans would boost the global food system's energy efficiency, although the reality is that cereal consumption per capita has remained constant in many parts of the world (FAOSTAT, 2013). Garnett et al. (2013) note that behavioural shifts in existing diets in developed countries and aspirational diets in developing countries will not be readily achieved. However, the definition of sustainable, diverse diets and socially-acceptable diets is an area that merits considerable additional research.

4. Developing smart biofuel policies and technologies. In 2011, 15% global maize production (largely in the USA), 10% vegetable oil production (largely in Europe) and 14% sugar production (largely in Brazil) were diverted to biofuel manufacture (data sourced from FAOSTAT and USDA). The prospects are that the demand for biofuels will continue to grow, depending on cost competitiveness with conventional and unconventional fossil fuels, technological advances such as cellulose to biofuel and policy settings. Advances in biofuel technologies and/or policies that mean biofuels will be less competitive with food crops (or the land and water used to produce food crops) represent a pathway towards food security in 2050.

Evidence

The framing for this response draws on the analyses presented in:

Keating, B.A. and Carberry, P.S. (2010) Sustainable production, food security and supply chain implications. *Aspects of Applied Biology*, 102:7-19.

Brian A. Keating, Mario Herrero, Peter S. Carberry, John Gardner and Martin Cole. Food wedges: framing the global food demand and supply challenge towards 2050. *Global Food Security* (in review)

Knowledge gaps

The food security challenge in 2014 is akin to the greenhouse gas stabilisation challenge addressed by Pacala and Socolow (2004). Food security, and in particular the food supply and demand challenge, is a similarly complex challenge in need of being broken down into some more digestible components that aid in planning, policy and investment response. The simple framing of the food supply and demand balance as food wedges, addressed through proposed solution pathways, is not an alternative to comprehensive integrated assessments based on quantitative modelling. Integrated assessments need to be underpinned by continued advances in knowledge, models and data resources and by methods that can explore the synergies and tradeoffs amongst the solution pathways. Likewise within each pathway, innovations in technologies and practices are essential if the proposed solutions are to contribute to future food security.

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Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.



HLPE Inquiry

Critical and Emerging Issues for Food Security and Nutrition

Questionnaire

About the respondent

Name, Surname and Institution	Dr Peter Carberry, CSIRO	
Do you answer on behalf of your institution, or as an individual?	On behalf	
Do you agree if this contribution is made available to the public as part of the proceedings?	Yes	
Country of the responding individual/institution Please mention international or regional, the case being	Based in Australia with a significant international research footprint in Africa and Asia/Pacific.	

1. Overview of the issue

Issue <i>in 2 lines</i>	Increasing food production.		
Description of the issue <i>in less than 5 lines</i>	Along with avoiding loss in current or future production and reducing the food demand trajectory, increasing food production is a critical component of future food security. This issue involves explicitly addressing the need to increase production.		
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>	Challenge	Opportunity	<input checked="" type="checkbox"/> It depends The framing of the food wedges sets the challenge, the pathways provides the opportunities (see below)
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition <i>In less than 10 lines.</i> Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.	The trajectory of food demand from 1970 to 2050 was quantified in response to the drivers causing projected demand. A 'mega wedge' of the increased food demand from 2010-2050 can be broken into the three smaller food wedges of reducing the food demand trajectory, increasing food productivity and avoiding loss in current or future production. For each food wedge, a set of likely pathways is proposed to meet its challenge.		
Main response proposed to address the issue	Six pathways are proposed to meet this issue: <ul style="list-style-type: none"> • Expanding the net land footprint used for food production • Expanding the irrigation water supply • Expanding aquaculture production • Closing yield gaps in existing systems • Developing new, more intense farming systems 		

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	<ul style="list-style-type: none"> Crop and livestock genetic improvement
Main actor(s) concerned or involved in the response proposed	National Governments and policy makers Agri-industry Research and Development domain

For the public inquiry fields below are optional

2. Broad typology of the issue

(*)	<i>External driver</i>	<i>Internal to food systems</i>	<i>Both</i>
Is the issue either or both?			✓

(*)	<i>Economic (and productive)</i>	<i>Social and Cultural</i>	<i>Governance (institutions, rights, etc.)</i>	<i>Environmental (resources, etc.)</i>	<i>Other (SPECIFY)</i>
Main nature of the issue	✓				
Nature of the main impact of the issue on FSN	✓				

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue


	Classification (**)		
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?	Critical point	Systemic issue ✓	
2. Breadth: Are there many people affected?	Few	Many ✓	
3. Scale: local/regional/global?	Local	Region	Global ✓
	<i>Indicate here the precise location</i>	<i>Indicate here the precise region</i>	

For items 4-11 below, please use the classification [— — , — , 0, +, ++]:

Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)




4. Impact on Availability	++
5. Impact on Access	++
6. Impact on Utilization/ nutrition	0

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7. Impact on Stability	++		
8. Impact on most vulnerable people	++ Improving production can improve access to nutritious food, reduce cost, especially if this targets production systems in developing regions.		
9. Impact on women	++		
10. Impact on children	++		
11. Impact on marginalized populations	++		
12. Cost to address the issue	Low	Middle	High 


(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

4. Time Scale

<i>Timeframe (*)</i>	<i>Now/Short term (1-5 years)</i>	<i>Medium term (5-10 years)</i>	<i>Long term (10-20 years +)</i>
Moment when the issue will have an impact			
Moment to act to address the issue			

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.	Low	Middle 	High
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6. Additional Supporting Information

Additional information

The projection of global food demand to 2050, with assumptions on population growth, dietary shifts and biofuel expansion, provides an estimate for the amount of additional food needed over the next 40 years to satisfy human needs. This additional food demand, expressed in energy terms (kcal), represents a “mega-wedge” akin to the carbon stabilisation wedges of Pascala and Socolow (2004). For the three food wedges; reducing the food demand trajectory, increasing food productivity and avoiding loss in current or future production, a total of 14 pathways are proposed. Of these, six pathways are proposed specifically to **increase food production**.

1. Expanding the net land footprint. The land footprint of global agriculture is estimated at 4894m ha in 2010 (FAOSTAT, 2013). Over the period 1961 to 2000, the land footprint grew by only 11%, while agricultural output grew by 153% (FAOSTAT, 2013). In much of the world, food demand was met by increasing food output per unit land and only modestly by increasing land devoted to agriculture. Sub-Saharan Africa was an exception with land expansion the major source of increased food production (36m ha). Some of the future food demand to 2050 could be met by expanding agriculture onto land not previously cleared or cultivated. Estimates of additional arable land vary, but figures of 445m ha to 2100 are suggested, predominantly in Sub-Saharan Africa and South America (Lambin et al., forthcoming). Clearing or cultivation of forestland or grassland comes at the price of a significant greenhouse gas load with climate change implications as well as biodiversity impacts.

2. Expanding the irrigation water supply. Agricultural production is estimated to use 70%

global freshwater resources from rivers, lakes and groundwater (blue water). These withdrawals produced 20% global food, with the remaining 80% produced from rainfed agriculture (CA, 2007). Further irrigation development could contribute a pathway to meeting global food demands in 2050, particularly in regions such as Sub-Saharan Africa given its current low levels of irrigation development (IAASTD, 2009). There are pressures (climate change, resource degradation) on existing irrigation regions and considerable uncertainty on extent to which irrigation can be sustainably expanded to meet future food demand. Hence, increasing the efficiency of global rainfed agriculture is also of paramount importance for the sustainability of the global food system (CA, 2007).

- 3. Expanding aquaculture production.** Currently, fish products account for around 15% animal source food protein globally (WHO, 2012). Until 2000, two-thirds of the global fish supply came from capture fisheries in marine and inland waters, with aquaculture contributing the remaining production. While capture fisheries have stabilised, or in some cases declined, most increases in future fish production will come from aquaculture (Delgado, 2000). Aquaculture can make use of land and water not otherwise suited to food production provided sustainable feeding systems can be established. Additionally, aquaculture can be integrated into mixed crop-livestock and fish systems, improving nutrient cycles and farmers' incomes. Currently aquaculture systems and aquaculture might represent one of the pathways rapidly growing in the developing world for food security in 2050.
- 4. Closing yield gaps in existing crop and livestock production systems.** Yield gaps are defined as the gap between the yields currently being achieved by farmers and the yields that are attainable if existing varieties, technologies and farming practices are adopted. Yield gaps vary from as low as 10-20% in developed countries up to 60-80% in some developing regions, such as Sub-Saharan Africa (World Bank, 2007; Foley et al., 2011; Tittonell and Giller, 2013, van Ittersum et al., 2013; Carberry et al., 2013). There are many reasons why a yield gap might exist and it is not as simple as farmers not being willing or able to adopt a set of technologies and practices. Input or output markets prices or conditions may make it unattractive for farmers to make the investments or take on the risks to close the yield gap. Closing the yield gap within a commodity production system through the application of existing technologies and knowledge is a potentially important pathway towards food security in 2050.
- 5. Developing new farming systems that intensify land and water use.** Evolving new or modified farming systems that make more efficient and complete use of land and water resources is another food security pathway, differentiated here from closing yield gaps by the novel nature of the system that is developed (Havlik et al. 2013). Double or triple cropping in a historically single cropping system is one example. Another is the introduction of novel cropping elements into historically livestock grazing systems, as often observed in parts of Sub-Saharan Africa (Herrero et al., 2010). Additionally, changes in the structure and size of farming systems could also play a significant part in modifying food production, incomes and their associated efficiencies (Hazell, 2003). This pathway could be considered as closing the yield gap through systems-level innovations.
- 6. Crop and livestock improvement to lift genetic potential.** Developing new genetics provides the prospect of lifting yield ceilings to levels not previously possible for a given production environment. In this way it is different to closing yield gaps because it is fundamentally focused on lifting the yield potential for a particular production environment. The approach may interact with other pathways but the primary differentiation is that the pathway is focused on genetic advance in crops, pastures, trees or animals using conventional or advanced techniques (genomics and other -omics). Such advances offer significant technological surprises in the future, and significantly modify our understanding of how to increase global food production (Fedoroff et al., 2010).

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

Evidence

The framing for this response draws on the analyses presented in:

Keating, B.A. and Carberry, P.S. (2010) Sustainable production, food security and supply chain implications. *Aspects of Applied Biology*, 102:7-19.

Brian A. Keating, Mario Herrero, Peter S. Carberry, John Gardner and Martin Cole. Food wedges: framing the global food demand and supply challenge towards 2050. *Global Food Security* (in review)

Knowledge gaps

The food security challenge in 2014 is akin to the greenhouse gas stabilisation challenge addressed by Pacala and Socolow (2004). Food security, and in particular the food supply and demand challenge, is a similarly complex challenge in need of being broken down into some more digestible components that aid in planning, policy and investment response. The simple framing of the food supply and demand balance as food wedges, addressed through proposed solution pathways, is not an alternative to comprehensive integrated assessments based on quantitative modelling. Integrated assessments need to be underpinned by continued advances in knowledge, models and data resources and by methods that can explore the synergies and tradeoffs amongst the solution pathways. Likewise within each pathway, innovations in technologies and practices are essential if the proposed solutions are to contribute to future food security.

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HLPE Inquiry Critical and Emerging Issues for Food Security and Nutrition Questionnaire

About the respondent

Name, Surname and Institution	Dr Peter Carberry, CSIRO		
Do you answer on behalf of your institution, or as an individual?	On behalf		
Do you agree if this contribution is made available to the public as part of the proceedings?	Yes		
Country of the responding individual/institution Please mention international or regional, the case being	Based in Australia with a significant international research footprint in Africa and Asia/Pacific.		

1. Overview of the issue

Issue <i>in 2 lines</i>	Avoiding loss in current or future production potential.		
Description of the issue in less than 5 lines	Along with increasing food production and reducing the food demand trajectory, avoiding loss in current or future production is a critical component of future food security. This issue involves explicitly avoiding loss.		
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>	<input checked="" type="checkbox"/> Challenge	<input type="checkbox"/> Opportunity	<input type="checkbox"/> It depends
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition <i>In less than 10 lines.</i> Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.	The trajectory of food demand from 1970 to 2050 was quantified in response to the drivers causing projected demand. A 'mega wedge' of the increased food demand from 2010-2050 can be broken into the three smaller food wedges of reducing the food demand trajectory, increasing food productivity and avoiding loss in current or future production. For each food wedge, a set of likely pathways is proposed to meet its challenge.		
Main response proposed to address the issue	Four pathways are proposed to meet this issue: <ul style="list-style-type: none"> • Maintaining control of biotic stresses and biosecurity • Avoiding land and water degradation • Minimising climate change through mitigation • Adapting to unavoidable climate change 		

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Main actor(s) concerned or involved in the response proposed	National Governments and policy makers Agri-industry Research and Development domain
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For the public inquiry fields below are optional

2. Broad typology of the issue

(*)	External driver	Internal to food systems	Both
Is the issue either or both?			Avoiding loss is influenced by market volatility, climate change and aspects across the entire food production system. ✓

(*)	Economic (and productive)	Social and Cultural	Governance (institutions, rights, etc.)	Environmental (resources, etc.)	Other (SPECIFY)
Main nature of the issue				✓	
Nature of the main impact of the issue on FSN	✓				

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	Classification (**)		
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?	Critical point	Systemic issue ✓	
2. Breadth: Are there many people affected?	Few	Many ✓	
3. Scale: local/regional/global?	Local	Region	Global ✓
	<i>Indicate here the precise location</i>	<i>Indicate here the precise region</i>	

For items 4-11 below, please use the classification [— — , — , 0, +, ++]:

Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)

4. Impact on Availability	++
5. Impact on Access	0
6. Impact on Utilization/ nutrition	0
7. Impact on Stability	0
8. Impact on most vulnerable people	++
9. Impact on women	+

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

10. Impact on children	+		
11. Impact on marginalized populations	+		
12. Cost to address the issue	Low	Middle	High <input checked="" type="checkbox"/>

(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

4. Time Scale

<i>Timeframe (*)</i>	<i>Now/Short term (1-5 years)</i>	<i>Medium term (5-10 years)</i>	<i>Long term (10-20 years +)</i>
Moment when the issue will have an impact	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Moment to act to address the issue	<input checked="" type="checkbox"/>		

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.	Low	Middle <input checked="" type="checkbox"/>	High
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6. Additional Supporting Information

Additional information

The projection of global food demand to 2050, with assumptions on population growth, dietary shifts and biofuel expansion, provides an estimate for the amount of additional food needed over the next 40 years to satisfy human needs. This additional food demand, expressed in energy terms (kcal), represents a “mega-wedge” akin to the carbon stabilisation wedges of Pascala and Socolow (2004). For the three food wedges; reducing the food demand trajectory, increasing food productivity and avoiding loss in current or future production, a total of 14 pathways are proposed. Of these, four pathways are proposed specifically to **avoid loss in current or future production potential**:

- 1. Maintaining control of biotic stresses and biosecurity.** While practices for controlling weeds, pests and diseases are critical components of current crop and livestock systems, biotic stresses are continually evolving and research effort must be maintained to retain even current production levels (Lewis, 1997). Maintaining disease resistance in crop varieties and integrated pest and weed management systems that protect against chemical resistance are example imperatives aimed at avoiding future losses of current productivity. Biosecurity efforts contribute in a similar way; without them there would be losses in production which would add to the scale of the food security challenge.
- 2. Avoiding land and water degradation.** Research, management and policy efforts to reduce or avoid land and water degradation will contribute to future global food security by protecting against the loss of current or future productive capacity. This pathway includes efforts aimed at reducing soil degradation processes such as erosion, salinity, acidification, organic matter rundown and compaction (Giller et al., 2011). Degradation of water supplies used in agriculture, such as siltation of dams, is another example of efforts to maintain agricultural productive capacity (CA, 2007).
- 3. Minimising climate change through mitigation.** Climate change potentially reduces current agricultural productivity and in some regions is likely to restrict future production activities. Agricultural emissions contribute gases to the atmosphere that are forcing the global climate. These gases include CH₄ from livestock, N₂O from agricultural soils and fertilisers and CO₂ from land clearing and soil organic matter rundown. Reductions in agricultural greenhouse emissions will in part moderate climate change, acknowledging that major drivers come from

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other sectors. The estimated technical mitigation potential in the agriculture, forestry and land use sectors is 1.5-4.3 Gt CO₂eq per year for technical options, while those including food demand management practices could increase this potential to up to 15.3 GtCO₂eq (Smith et al., 2013). There is a risk however that some agricultural mitigation efforts such as reductions in livestock farming, reductions in N fertiliser use and conversion of agricultural land to carbon forests, might place additional pressures on food security and hamper economic and social land use activities. Hence, activities that can reduce agricultural emissions without reducing agricultural production represent another important pathway to meet the future food security challenge (Havlik et al., 2013; Valin et al., 2013).

- 4. Adapting to unavoidable climate change.** The projected impacts of climate change on agriculture have been estimated to lead to reduced crop and livestock yields, increased prices and trade and an increase in children malnutrition of 20% by 2050 (Nelson et al., 2009). Under these circumstances, efforts that can adapt agricultural practices and systems to the unfolding climate will help reduce the losses of existing and future food production and also curb malnutrition. Nelson et al. (2009) estimated that investments in adaptation practices up to \$7.3 B would be needed to reduce the impacts of climate change on agriculture.

Evidence

The framing for this response draws on the analyses presented in:

Keating, B.A. and Carberry, P.S. (2010) Sustainable production, food security and supply chain implications. *Aspects of Applied Biology*, 102:7-19.

Brian A. Keating, Mario Herrero, Peter S. Carberry, John Gardner and Martin Cole. Food wedges: framing the global food demand and supply challenge towards 2050. *Global Food Security* (in review)

Knowledge gaps

The food security challenge in 2014 is akin to the greenhouse gas stabilisation challenge addressed by Pacala and Socolow (2004). Food security, and in particular the food supply and demand challenge, is a similarly complex challenge in need of being broken down into some more digestible components that aid in planning, policy and investment response. The simple framing of the food supply and demand balance as food wedges, addressed through proposed solution pathways, is not an alternative to comprehensive integrated assessments based on quantitative modelling. Integrated assessments need to be underpinned by continued advances in knowledge, models and data resources and by methods that can explore the synergies and tradeoffs amongst the solution pathways. Likewise within each pathway, innovations in technologies and practices are essential if the proposed solutions are to contribute to future food security.

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HLPE Inquiry

Critical and Emerging Issues for Food Security and Nutrition

Questionnaire

About the respondent

Name, Surname and Institution	Karim Hussein, IFAD, Strategy and Knowledge Department		
Dou you answer on behalf of your institution, or as an individual?	On behalf of Strategy and Knowledge Department, IFAD		
Do you agree if this contribution is made available to the public as part of the proceedings?	Yes		
Country of the responding individual/institution Please mention international or regional, the case being	International organisation		

1. Overview of the issue

Issue <i>in 2 lines</i>	Identifying drivers in the evolution of urban food systems and rural linkages		
Description of the issue <i>in less than 5 lines</i>	Rapid expansion in service and industrial sectors, and with it demand for agriculture and food products, is driving structural urban and rural transformations in developing countries, creating both opportunities and challenges for food systems, rural development, with huge implications for smallholder producers and both rural and urban food security and nutrition. We need to understand better the dynamics of urban transformations and the backward and forward linkages to rural areas and economies.		
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>	Challenge	Opportunity	It can be both a challenge and/or opportunity
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition <i>In less than 10 lines.</i> Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.	Opportunities and challenges in each context are determined by a range of factors, e.g. the urban-rural market integration, migration, inequality, conflicts of interest and access to services and resources etc. The rural-urban nexus can be leveraged for equitable development, growth, food security and nutrition, and poverty reduction through appropriate policies and programmes that foster social and economic inclusion. These issues are being addressed at IFAD in the context of work on horizon scanning and rural transformations in partnership with southern organisations and international research institutions with a track record in this field.		

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

Main response proposed to address the issue	Exploring with a network of international and southern research partners urban-rural linkages in the context of the evolution of urban food systems in developing countries. This is not limited to food systems, markets for agricultural products and their organization, but also takes into account labour markets, demand for non-agricultural products, and the urban service and product supply to rural areas. IFAD has a special interest in urban food systems and their backward linkages – understanding food systems as encompassing, <i>inter alia</i> , composition of demand, composition and organisation of production, processing and distribution, and the technical and economic profiles required of agricultural producers.
Main actor(s) concerned or involved in the response proposed	IFAD, partnering with leading international and southern ARD/policy research institutions with solid experience of issues related to the evolution of urban-rural dynamics and food systems, with a view to building a network for forward-looking analysis and debate on key trends, opportunities and challenges for ARD in a rapidly transforming and urbanising world.

For the public inquiry fields below are optional

2. Broad typology of the issue

(*)	<i>External driver</i>	<i>Internal to food systems</i>	<i>Both</i>
Is the issue either or both?			Yes. Rapid urbanisation, both in middle income and low income countries, is an external driver of rapid change and reorganization within food systems and agricultural value chains as food systems are obliged to meet increased demand and consumption preferences in an effective way. This is a political, social and production imperative.

(*)	<i>Economic (and productive)</i>	<i>Social and Cultural</i>	<i>Governance (institutions, rights, etc.)</i>	<i>Environmental (resources, etc.)</i>	<i>Other (SPECIFY)</i>
Main nature of the issue	Yes	Yes	Yes	Yes	Political economy
Nature of the main impact of the issue on FSN	Yes		Yes		Access to nutritious food and resources

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

3. Attributes of the Issue

	Classification (**)		
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?		Systemic issue	
2. Breadth: Are there many people affected?		Many	
3. Scale: local/regional/global?	Local	Region	Local, regional and Global
	<i>Many contexts</i>	<i>Many contexts</i>	

For items 4-11 below, please use the classification [— — , —, 0, +, ++]:

Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)

4. Impact on Availability	There are strong impacts of urbanization in each area, but whether they are positive or negative overall depends on context, specific urban-rural dynamics and to some degree political economy.		
5. Impact on Access	As above		
6. Impact on Utilization/ nutrition	As above		
7. Impact on Stability	As above		
8. Impact on most vulnerable people	As above		
9. Impact on women	As above		
10. Impact on children	As above		
11. Impact on marginalized populations	As above		
12. Cost to address the issue		Medium	

(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

4. Time Scale

<i>Timeframe (*)</i>	<i>Now/Short term (1-5 years)</i>	<i>Medium term (5-10 years)</i>	<i>Long term (10-20 years +)</i>
Moment when the issue will have an impact	Short, medium and long term	Short, medium and long term	Short, medium and long term
Moment to act to address the issue	Now		

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.	Low-middle		
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6. Additional Supporting Information

<i>Additional information</i>
<i>Evidence</i>
<i>Knowledge gaps</i>
<i>References</i>

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.



HLPE Inquiry

Critical and Emerging Issues for Food Security and Nutrition

Questionnaire

About the respondent

Name, Surname and Institution	Amira Muammar, IFAD, Strategy and Knowledge Department	
Do you answer on behalf of your institution, or as an individual?	On behalf of the Strategy and Knowledge Department	
Do you agree if this contribution is made available to the public as part of the proceedings?	Yes	
Country of the responding individual/institution Please mention international or regional, the case being	International	

1. Overview of the issue

Issue <i>in 2 lines</i>	Public-private and private-private partnerships in food production- what forms and practices work to the benefit of rural communities and small-scale producers?		
Description of the issue <i>in less than 5 lines</i>	Given the transformations in agriculture and rural livelihoods and the pressure placed on resources by growing food demand, what kind of partnerships (division of labour, contractual arrangements, etc.) work best to support the emergence of privatization in agricultural investment and in value chains? How to ensure these are oriented to the objectives of sustainable agriculture and the economic wellbeing of rural communities while improving FSN? What kind of regulation is needed?		
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>	Challenge	Opportunity	It is a challenge and can be an opportunity depending on how it is managed. Thus the need for evidence-based research.
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition <i>In less than 10 lines. Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.</i>	Since the 2008 food price hike, agriculture may have become an increasingly attractive investment and in most parts of the world diminishing state intervention in agriculture has started reducing policy distortions and opening the way for market forces. This creates challenges for traditional farming systems and local or small-scale producers in terms of competition for resources and markets. It also raises issues for sustainable resource use and ultimately food quality and distribution. On the		

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

	<p>other hand, the boost to agricultural investment is a much needed one and there is potential to involve local communities in food value chains, linking them to markets they were unable to access previously. What are the models that work and under what conditions can the dynamics we are seeing now transforming the agricultural sector contribute to pro-poor development while supporting sustainable use of resources and ensuring FSN? How can they help stabilize food prices and food availability?</p>
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Main response proposed to address the issue	<ul style="list-style-type: none"> • An inventory of effective partnerships, including private sector: large and small-scale agricultural suppliers, producers, processors and traders and public sector institutions involved in policy making, financing, regulation • Analysis of scaling up potential
Main actor(s) concerned or involved in the response proposed	<ul style="list-style-type: none"> • HLPE • FAO, in collaboration with the RBAs, WTO, UNIDO • Key private sector representatives

For the public inquiry fields below are optional

2. Broad typology of the issue

(*)	<i>External driver</i>	<i>Internal to food systems</i>	<i>Both</i>
Is the issue either or both?	External (policy frameworks for private investment, financing institutions, multinationals, regional and international market demand)	Internal – the entire food production to market chain is involved.	Yes - both

(*)	<i>Economic (and productive)</i>	<i>Social and Cultural</i>	<i>Governance (institutions, rights, etc.)</i>	<i>Environmental (resources, etc.)</i>	<i>Other (SPECIFY)</i>
Main nature of the issue	Yes	Yes	Yes	Yes	
Nature of the main impact of the issue on FSN	Yes	Yes		Yes	

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

3. Attributes of the Issue

	Classification (**)		
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?		Systemic issue	
2. Breadth: Are there many people affected?		Many	
3. Scale: local/regional/global?	Local	Region	Global
	<i>Indicate here the precise location</i>	<i>Indicate here the precise region</i>	

For items 4-11 below, please use the classification [— — , —, 0, +, ++]:
 Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)

4. Impact on Availability	High, could be positive or negative		
5. Impact on Access	High, positive or negative depending on for whom and various factors		
6. Impact on Utilization/ nutrition	Probably low		
7. Impact on Stability	High, could be positive or negative		
8. Impact on most vulnerable people	High, could be positive or negative		
9. Impact on women	High, could be positive or negative		
10. Impact on children	Probably positive (if sector well regulated)		
11. Impact on marginalized populations	Probably negative		
12. Cost to address the issue	Low		

(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

4. Time Scale

Timeframe (*)	Now/Short term (1-5 years)	Medium term (5-10 years)	Long term (10-20 years +)
Moment when the issue will have an impact	Yes	Yes	Yes
Moment to act to address the issue	Yes		

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.	Low		
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Private comment

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.



HLPE Inquiry

Critical and Emerging Issues for Food Security and Nutrition

Questionnaire

About the respondent

Name, Surname and Institution	Bruce Cogill, Bioversity International	
Dou you answer on behalf of your institution, or as an individual?	On behalf	As individual
Do you agree if this contribution is made available to the public as part of the proceedings?	Yes	No
Country of the responding individual/institution Please mention international or regional, the case being	Italy/ Bioversity International (CGIAR)	

1. Overview of the issue

Issue <i>in 2 lines</i>	Policies and programmes for Sustainable Diets and Food Systems		
Description of the issue <i>in less than 5 lines</i>	Dietary transition, habitat loss, environmental degradation requires policy action to meet dietary, economic and cultural needs		
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>	Challenge	Opportunity	It depends (please specify)
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition <i>In less than 10 lines.</i> Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.	Depends - as we need to understand more about how consumers can influence agricultural and manufacturing decisions (or fork-to-farm) and how changing diets are influencing food systems. The opportunity is to be able to influence policies and programmes to optimize nutrition outcomes from a agricultural and dietary point of view.		

Main response proposed to address the issue	We need to understand the demand side drivers of changing diets in the face of urbanization, climate change and other factors. Consumers are demanding food that is safe, nutritious and sustainable. But not at the expense of economic growth. By modelling food systems and engaging consumers and producers will inform policies and programmes.
Main actor(s) concerned or involved in the response proposed	Academic and research organizations working on sustainable food systems research including on metrics, policy, guidance development including dietary guidelines, food producers and manufacturers. Normative and global agencies like FAO and WHO are essential along with governments, consumers groups and progressive food companies.

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

For the public inquiry fields below are optional

2. Broad typology of the issue

(*)	<i>External driver</i>	<i>Internal to food systems</i>	<i>Both</i>
Is the issue either or both?		There are external factors but this is mostly internal.	Briefly mention how this may be the case

(*)	<i>Economic (and productive)</i>	<i>Social and Cultural</i>	<i>Governance (institutions, rights, etc.)</i>	<i>Environmental (resources, etc.)</i>	<i>Other (SPECIFY)</i>
Main nature of the issue	Sustainable sourcing and production	Gauging behaviours	Policy, normative, guidelines	Ecosystem services with a strong environmental aspect	Consumer driving issues for over and under nutrition
Nature of the main impact of the issue on FSN	Defining frameworks, concepts, indicators, metrics		Guidance and awareness		

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	Classification (**)		
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?	Critical point	Systemic issue	
2. Breadth: Are there many people affected?	Few	Many	
3. Scale: local/regional/global?	Local	Region	Global
	<i>Indicate here the precise location</i>	<i>Indicate here the precise region</i>	

For items 4-11 below, please use the classification [— — , — , 0 , + , ++]:

Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)

4. Impact on Availability	Slightly -ve in the short term
5. Impact on Access	-ve in the short term
6. Impact on Utilization/ nutrition	+ve
7. Impact on Stability	+ve
8. Impact on most vulnerable people	-ve
9. Impact on women	-ve in the short term
10. Impact on children	-ve in the short term
11. Impact on marginalized populations	-ve in the short term
12. Cost to address the issue	Low Middle High

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

4. Time Scale

<i>Timeframe (*)</i>	<i>Now/Short term (1-5 years)</i>	<i>Medium term (5-10 years)</i>	<i>Long term (10-20 years +)</i>
Moment when the issue will have an impact		Given initial investment – medium term	
Moment to act to address the issue	Now		

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.	Low	Middle	High
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6. Additional Supporting Information

Additional information

To provide healthier foods for a changing world requires reassessment of existing production and consumption systems. Changing diets, more sedentary lifestyles, and rapid change in rural areas means that we need to look how a healthy and sustainable diet can inform agricultural decisions right through to how food is processed and marketed. Working with food suppliers, setting nutrition standards for public procurement, supply chain incentives for food production and better governance structures need to be combined with a sound empirical and conceptual basis for measuring food systems.

Evidence

Rockstrom writing in Science (2009) and others have alerted us to the finite nature of natural resources. The push for agricultural intensification has wrought unintended consequences for the health of people and the planet (Khoury et al. 2014). Yet an increasing body of literature has described and questioned models, frameworks and metrics around sustainable agriculture and food systems. The global diet transition has forced Min. Health, the insurance industry and consumers to reassess the real cost of feeding the projected 9 billion in 2050. The WHO Technical Report (916, 2003) provides the evidence for an urgent need for healthier more sustainable diets. Economists and others continue to support this.

Knowledge gaps

Several gaps exist from a common understanding of what is meant by a sustainable food system to knowing what is in the food being eaten (both good and harmful), how it is acquired and its connection to cultural and environmental aspects of its production and consumption. Indicators are lacking and the data to support metrics are incomplete or missing. Sound policies including dietary guidelines are just emerging but need evidence. Links with the food supply are just being understood. Sustainable sourcing of raw materials are being pressed by governments and some food companies but with limited information and guidelines.

References

Rockstrom j. et al. (2009) A safe operating space for humanity. Nature 461; 472-475.
 WHO (2003) Diet, nutrition and the prevention of chronic diseases. WHO Technical Report Series, No. 916. Geneva.
 Khoury CK et al. (2014) Increasing homogeneity in global food supplies and the implications for food security. PNAS Early Edition.
 Regmi A. and B. Meade (2013) Demand side drivers of global food security. Global Food Security Vol 2;166-171.

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.



HLPE Inquiry

Critical and Emerging Issues for Food Security and Nutrition

Questionnaire

About the respondent

Name, Surname and Institution	Miriam Shindler International Maize and Wheat Improvement Center (CIMMYT)	
Dou you answer on behalf of your institution, or as an individual?	On behalf	As individual
Do you agree if this contribution is made available to the public as part of the proceedings?	Yes	No
Country of the responding individual/institution Please mention international or regional, the case being	International organization headquartered in Mexico	

1. Overview of the issue

Issue <i>in 2 lines</i>	Climate change and agriculture		
Description of the issue <i>in less than 5 lines</i>	One thing all farmers throughout the world have to deal with is variability in climates. Resource-poor farmers are the most affected by changing climates. Agriculture itself is also contributing significantly to climate change by emitting greenhouse gases.		
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>	Challenge	Opportunity	It depends (please specify)
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition In less than 10 lines. Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.	Agriculture contributes about 13.7% of global greenhouse gas emissions and is the primary driver of deforestation. Reducing agricultural emissions can help to contribute to climate change mitigation and climatic changes that endanger food security and economic growth.		

Main response proposed to address the issue	Climate-smart agriculture can improve the lives and livelihoods of resource-poor consumers and farmers. Transferring the benefits of sustainable agricultural practices to farmers makes it possible for them to achieve higher and more stable yields in an environmentally sensitive way. Using improved agronomic practices that include residue management, crop rotation and minimum tillage, this approach reduces labor, soil erosion and greenhouse gas emissions. A further step is to provide smallholder farmers with a wealth of information to improve agricultural practices through tools such as ICT-empowered farming, two-wheel tractors, precision agriculture and remote sensing technologies, contributing to sustainable growth in the agriculture sector and a more food-secure
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Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

	future.
Main actor(s) concerned or involved in the response proposed	CIMMYT CGIAR Research Program on Climate Change, Agriculture and Food Security National Research Agricultural Systems (NARS)

For the public inquiry fields below are optional

2. Broad typology of the issue

(*)	<i>External driver</i>	<i>Internal to food systems</i>	<i>Both</i>
Is the issue either or both?	x		Briefly mention how this may be the case

(*)	<i>Economic (and productive)</i>	<i>Social and Cultural</i>	<i>Governance (institutions, rights, etc.)</i>	<i>Environmental (resources, etc.)</i>	<i>Other (SPECIFY)</i>
Main nature of the issue	x	x	x	x	
Nature of the main impact of the issue on FSN	x	x	x	x	

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	<i>Classification (**)</i>		
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?	Critical point		Systemic issue
2. Breadth: Are there many people affected?	Few		Many
3. Scale: local/regional/global?	Local	Region	Global
	<i>Indicate here the precise location</i>	<i>Indicate here the precise region</i>	

For items 4-11 below, please use the classification [— — , —, 0, +, ++]:

Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)

4. Impact on Availability	--
5. Impact on Access	--
6. Impact on Utilization/ nutrition	0

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

7. Impact on Stability	--		
8. Impact on most vulnerable people	--		
9. Impact on women	--		
10. Impact on children	--		
11. Impact on marginalized populations	--		
12. Cost to address the issue	Low	Middle	High

(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

4. Time Scale

<i>Timeframe (*)</i>	<i>Now/Short term (1-5 years)</i>	<i>Medium term (5-10 years)</i>	<i>Long term (10-20 years +)</i>
Moment when the issue will have an impact	X	X	X
Moment to act to address the issue	X		

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.	Low	Middle	High
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6. Additional Supporting Information

<i>Additional information</i>
<i>Evidence</i>
<i>Knowledge gaps</i>
<i>References</i> www.cimmyt.org www.ccafs.cgiar.org

Responses to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.



HLPE Inquiry

Critical and Emerging Issues for Food Security and Nutrition Questionnaire

About the respondent

Name, Surname and Institution	Miriam Shindler International Maize and Wheat Improvement Center (CIMMYT)	
Dou you answer on behalf of your institution, or as an individual?	On behalf	As individual
Do you agree if this contribution is made available to the public as part of the proceedings?	Yes	No
Country of the responding individual/institution Please mention international or regional, the case being	International organization headquartered in Mexico	

1. Overview of the issue

Issue <i>in 2 lines</i>	Discovering genetic resources		
Description of the issue <i>in less than 5 lines</i>	Genetic resources offer one of the greatest untapped potential opportunities for accelerating yield gains and overcoming emerging productivity bottlenecks in a changing climate.		
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>	Challenge	Opportunity	It depends (please specify)
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition In less than 10 lines. Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.	The Food and Agriculture Organization of the United Nations (FAO) predicts that food production must increase by 60 percent by 2050. Better utilizing the native genetic diversity contained in ancestral versions of our crops is crucial to increasing crop productivity, helping to ensure that food remains affordable for all and that agricultural lands do not expand. Given recent developments in technology, it is now possible to read and better utilize the millions of natural gene variations in a major food crop.		

Main response proposed to address the issue	Unleashing the genetic potential of thousands of maize and wheat landraces (ancestral versions) by identifying novel genes underlying essential traits (including heat and drought tolerance) can help meet impending food production challenges. This will be achieved by taking advantage of recent innovations in DNA-sequencing, genome-wide prediction and big-data-mining methods to help breeders accelerate genetic gains through a more effective utilization of the untapped genetic variations stored in maize and wheat gene banks.
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Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

Main actor(s) concerned or involved in the response proposed	CIMMYT Cornell University Diversity Arrays Technology The James Hutton Institute National Agricultural Research Systems (NARS) Universities
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For the public inquiry fields below are optional

2. Broad typology of the issue

(*)	<i>External driver</i>	<i>Internal to food systems</i>	<i>Both</i>
Is the issue either or both?		x	Briefly mention how this may be the case

(*)	<i>Economic (and productive)</i>	<i>Social and Cultural</i>	<i>Governance (institutions, rights, etc.)</i>	<i>Environmental (resources, etc.)</i>	<i>Other (SPECIFY)</i>
Main nature of the issue				x	
Nature of the main impact of the issue on FSN	x	x		x	

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	<i>Classification (**)</i>		
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?	Critical point	Systemic issue	
2. Breadth: Are there many people affected?	Few	Many	
3. Scale: local/regional/global?	Local	Region	Global
	<i>Indicate here the precise location</i>	<i>Indicate here the precise region</i>	

For items 4-11 below, please use the classification [— — , — , 0 , + , ++]:

Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)

4. Impact on Availability	++
5. Impact on Access	0
6. Impact on Utilization/ nutrition	++
7. Impact on Stability	0
8. Impact on most vulnerable people	++
9. Impact on women	++
10. Impact on children	0
11. Impact on marginalized populations	++

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

12. Cost to address the issue	Low	Middle	High
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(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

4. Time Scale

<i>Timeframe (*)</i>	<i>Now/Short term (1-5 years)</i>	<i>Medium term (5-10 years)</i>	<i>Long term (10-20 years +)</i>
Moment when the issue will have an impact		X	X
Moment to act to address the issue	X	X	

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.	Low	Middle	High
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6. Additional Supporting Information

<i>Additional information</i>
<i>Evidence</i>
<i>Knowledge gaps</i>
<i>References</i> www.cimmyt.org www.seedsofdiscovery.org

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.



HLPE Inquiry

Critical and Emerging Issues for Food Security and Nutrition

Questionnaire

About the respondent

Name, Surname and Institution	Miriam Shindler International Maize and Wheat Improvement Center (CIMMYT)	
Dou you answer on behalf of your institution, or as an individual?	On behalf	As individual
Do you agree if this contribution is made available to the public as part of the proceedings?	Yes	No
Country of the responding individual/institution Please mention international or regional, the case being	International organization headquartered in Mexico	

1. Overview of the issue

Issue <i>in 2 lines</i>	Investment in technologies for smallholder farmers		
Description of the issue <i>in less than 5 lines</i>	New technological innovations have the potential to revolutionize the lives of resource-poor farmers and consumers. We need to scale up the deployment of these technologies and make them affordable to all farmers worldwide.		
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>	Challenge	Opportunity	It depends (please specify)
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition In less than 10 lines. Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.	The challenge today is to increase the yields of staple crops on the same amount of land, despite the fact that climate change, population growth, dietary changes and natural resource degradation all pose enormous challenges to agriculture. Technological innovations present one way of improving farming techniques that waste less water, fertilizer, labor and land. These developments are already finding their way to big farms. However, we need to find effective ways to adapt and apply these technologies to the needs of smallholder farmers.		

Main response proposed to address the issue	In partnership with the private sector and national research councils, CIMMYT is already providing smallholder farmers with a wealth of information to improve agricultural practices through tools such as conservation agriculture, GIS-adjusted direct seeding implements and crops with improved photosynthetic efficiency or enhanced disease and drought resistance and instantaneous cellphone-based based crop advisory services.
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Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

Main actor(s) concerned or involved in the response proposed	CIMMYT National agricultural research systems The private sector Farmers organizations NGOs
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For the public inquiry fields below are optional

2. Broad typology of the issue

(*)	<i>External driver</i>	<i>Internal to food systems</i>	<i>Both</i>
Is the issue either or both?	X		Briefly mention how this may be the case

(*)	<i>Economic (and productive)</i>	<i>Social and Cultural</i>	<i>Governance (institutions, rights, etc.)</i>	<i>Environmental (resources, etc.)</i>	<i>Other (SPECIFY)</i>
Main nature of the issue	X	X		X	
Nature of the main impact of the issue on FSN	X	X		X	

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	<i>Classification (**)</i>		
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?	Critical point	Systemic issue	
2. Breadth: Are there many people affected?	Few	Many	
3. Scale: local/regional/global?	Local	Region	Global
	<i>Indicate here the precise location</i>	<i>Indicate here the precise region</i>	

For items 4-11 below, please use the classification [— — , — , 0 , + , ++]:

Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)

4. Impact on Availability	++
5. Impact on Access	0
6. Impact on Utilization/ nutrition	0
7. Impact on Stability	++
8. Impact on most vulnerable people	++
9. Impact on women	++
10. Impact on children	0
11. Impact on marginalized populations	++

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

12. Cost to address the issue	Low	Middle	High
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(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

4. Time Scale

<i>Timeframe (*)</i>	<i>Now/Short term (1-5 years)</i>	<i>Medium term (5-10 years)</i>	<i>Long term (10-20 years +)</i>
Moment when the issue will have an impact	X	X	X
Moment to act to address the issue	X		

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.	Low	Middle	High
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6. Additional Supporting Information

<i>Additional information</i>
<i>Evidence</i>
<i>Knowledge gaps</i>
<i>References</i> www.cimmyt.org www.masagro.mx

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.



HLPE Inquiry

Critical and Emerging Issues for Food Security and Nutrition

Questionnaire

About the respondent

Name, Surname and Institution	Miriam Shindler International Maize and Wheat Improvement Center (CIMMYT)	
Dou you answer on behalf of your institution, or as an individual?	On behalf	As individual
Do you agree if this contribution is made available to the public as part of the proceedings?	Yes	No
Country of the responding individual/institution Please mention international or regional, the case being	International institution headquartered in Mexico	

1. Overview of the issue

Issue <i>in 2 lines</i>	Wheat: A strategic crop for Africa		
Description of the issue <i>in less than 5 lines</i>	African countries currently spend about US\$ 12 billion importing 40 million tons of wheat annually - more than one-fourth of Africa's total food import bill. Increasing wheat production would help to meet demand and provide new income opportunities for farmers.		
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>	Challenge	Opportunity	<p>It depends</p> <p>Demand for wheat in Africa is increasing but self-sufficiency rates are going down.</p> <p>Nonetheless CIMMYT has identified great potential for wheat production in 8 Sub-Saharan countries.</p>
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition <i>In less than 10 lines. Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.</i>	A study was conducted by CIMMYT in 2012 to investigate 'The Potential for Wheat Production in Sub-Saharan Africa: Analysis of Biophysical Suitability and Economic Profitability'. The first step was a biophysical analysis to identify all potential areas where climatic conditions allow rainfed wheat production. The second step was an economic analysis using the assumption of a small open-economy model. Using both data sets CIMMYT		

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	identified 8 key countries that would be suitable for the development of wheat varieties: Angola, Democratic Republic of Congo, Ethiopia, Kenya, Madagascar, Tanzania and Uganda.
Main response proposed to address the issue	<ul style="list-style-type: none"> • Political will - wheat was endorsed as a strategic crop for Africa in November 2012 by the African Union and African Ministers of Agriculture • Strengthening the wheat value chain • Investment in wheat research and development and in a new generation of African scientists • The cost of grain marketing must be lowered for wheat to be profitable • More and efficient fertilizer use
Main actor(s) concerned or involved in the response proposed	<ul style="list-style-type: none"> • CGIAR centers and research programs – CIMMYT, ICARDA, IFPRI and the CG Research Program on WHEAT • African Union Commission • Economic Commission of Africa • African National Agricultural Research Systems • Southern African Development Community (SADC) • The Association for Strengthening Agricultural Research in Eastern and Central Africa (ASARECA) • West and Central Africa Council for Agricultural Research and Development (CORAF)

For the public inquiry fields below are optional

2. Broad typology of the issue

(*)	<i>External driver</i>	<i>Internal to food systems</i>	<i>Both</i>
Is the issue either or both?		x	Briefly mention how this may be the case

(*)	<i>Economic (and productive)</i>	<i>Social and Cultural</i>	<i>Governance (institutions, rights, etc.)</i>	<i>Environmental (resources, etc.)</i>	<i>Other (SPECIFY)</i>
Main nature of the issue	x	x	x		
Nature of the main impact of the issue on FSN	x	x	x		

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

3. Attributes of the Issue

	Classification (**)		
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?	Critical point	Systemic issue	
2. Breadth: Are there many people affected?	Few	Many	
3. Scale: local/regional/global?	Local	Region	Global
	<i>Indicate here the precise location</i>	<i>Sub-Saharan Africa</i>	
For items 4-11 below, please use the classification [— — , —, 0, +, ++]: Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)			
4. Impact on Availability	-		
5. Impact on Access	-		
6. Impact on Utilization/ nutrition	0		
7. Impact on Stability	--		
8. Impact on most vulnerable people	Specify as appropriate		
9. Impact on women	--		
10. Impact on children	--		
11. Impact on marginalized populations	Specify as appropriate		
12. Cost to address the issue	Low	Middle	High

(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

4. Time Scale

Timeframe (*)	Now/Short term (1-5 years)	Medium term (5-10 years)	Long term (10-20 years +)
Moment when the issue will have an impact		X	
Moment to act to address the issue	X		

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.	Low	Middle	High
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6. Additional Supporting Information

<i>Additional information</i>

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

Evidence

Knowledge gaps

References

<http://wheat.org/where-we-work/wheat-for-africa>

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

K9E



HLPE Inquiry

Critical and Emerging Issues for Food Security and Nutrition

Questionnaire

About the respondent

Name, Surname and Institution	Miriam Shindler International Maize and Wheat Improvement Center (CIMMYT)	
Dou you answer on behalf of your institution, or as an individual?	On behalf	As individual
Do you agree if this contribution is made available to the public as part of the proceedings?	Yes	No
Country of the responding individual/institution Please mention international or regional, the case being	International organization headquartered in Mexico	

1. Overview of the issue

Issue <i>in 2 lines</i>	Combating emerging crop diseases		
Description of the issue <i>in less than 5 lines</i>	Maize and wheat diseases – such as Maize Lethal Necrosis (MLN) and virulent wheat rusts such as Ug99 – cause reductions in grain yield and food quality and are capable of causing over 90% crop loss under epidemic conditions.		
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>	Challenge	Opportunity	It depends (please specify)
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition In less than 10 lines. Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.	These crop diseases can have a major impact on the world's poor. Wheat accounts for 30% of the world's production of grain crops. Ug99 has the potential to cause annual losses of US\$3 billion. The effect on rural livelihoods and regional stability could be severe. Maize is 'life' for over 300 million Africans; however 95% of commercially released varieties in East Africa are highly vulnerable to MLN. Since the emergence of the disease in 2011 infection rates have been very high – in some cases causing complete crop loss.		

Main response proposed to address the issue	In Partnership with the Durable Rust Resistance in Wheat project and under the Borlaug Global Rust Initiative, CIMMYT has already had major successes in fighting Ug99. At the CIMMYT/KARI Njoro Ug99 screening center in Kenya, over 250,000 global lines from 32 countries have already been screened against Ug99. Furthermore, nearly 30 Ug99-resistant CIMMYT wheat varieties have been released or are in advanced testing. In the same light a MLN screening facility was opened in Kenya in September 2013. The most effective way to address emerging
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	diseases is using this model. Collaborations, exchange of knowledge, technologies, germplasm and testing (phenotyping) in “hotspots” will result in accelerated deployment of cultivars and control strategies.
Main actor(s) concerned or involved in the response proposed	CIMMYT Borlaug Global Rust Initiative National Agriculture Research Systems (NARS), especially KARI in Kenya Universities

For the public inquiry fields below are optional

2. Broad typology of the issue

(*)	External driver	Internal to food systems	Both
Is the issue either or both?		x	Briefly mention how this may be the case

(*)	Economic (and productive)	Social and Cultural	Governance (institutions, rights, etc.)	Environmental (resources, etc.)	Other (SPECIFY)
Main nature of the issue	x			x	
Nature of the main impact of the issue on FSN	x	x	x	x	

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	Classification (**)		
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?	Critical point		Systemic issue
2. Breadth: Are there many people affected?	Few		Many
3. Scale: local/regional/global?	Local	Region	Global
	<i>Indicate here the precise location</i>	<i>Indicate here the precise region</i>	

For items 4-11 below, please use the classification [— — , — , 0, +, ++]:

Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)

4. Impact on Availability	--
5. Impact on Access	0
6. Impact on Utilization/ nutrition	0

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7. Impact on Stability	--		
8. Impact on most vulnerable people	--		
9. Impact on women	0		
10. Impact on children	0		
11. Impact on marginalized populations	--		
12. Cost to address the issue	Low	Middle	High

(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

4. Time Scale

<i>Timeframe (*)</i>	<i>Now/Short term (1-5 years)</i>	<i>Medium term (5-10 years)</i>	<i>Long term (10-20 years +)</i>
Moment when the issue will have an impact	X	X	X
Moment to act to address the issue	X	X	X

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.	Low	Middle	High
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6. Additional Supporting Information

<i>Additional information</i>
<i>Evidence</i>
<i>Knowledge gaps</i>
<i>References</i> www.cimmyt.org www.globalrust.org

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.



HLPE Inquiry

Critical and Emerging Issues for Food Security and Nutrition

Questionnaire

About the respondent

Name, Surname and Institution	Inter-American Institute for Cooperation on Agriculture (IICA)	
Dou you answer on behalf of your institution, or as an individual?	On behalf	As individual
Do you agree if this contribution is made available to the public as part of the proceedings?	Yes	No
Country of the responding individual/institution Please mention international or regional, the case being	Regional – the Americas	

1. Overview of the issue

Issue <i>in 2 lines</i>	The lack of coordination and articulation of policies and institutional framework for food and nutritional security (FNS) in the countries.		
Description of the issue <i>in less than 5 lines</i>	One aspect that prevents the achievement of food and nutritional security in the countries is the lack of preparedness of governments to address the issue from the political-institutional framework.		
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>	Challenge	Opportunity	It depends (please specify)
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition <i>In less than 10 lines.</i> Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.	IICA, as the agency of the Inter-American system that specializes in agriculture and rural well-being, works closely with the Ministries of Agriculture and other ministries, which have expressed the need for coordination between the different State institutions. Evidence in the press and publications indicate that although some countries have strategies and policies for FNS, a high percentage of the population continues to suffer from malnutrition, poverty, etc.		

Main response proposed to address the issue	International cooperation should focus its efforts on encouraging political-institutional conditions conducive to the formulation and implementation of public policies for food and nutritional security, with an emphasis on the relationship between society and the governments in the countries.
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Main actor(s) concerned or involved in the response proposed	Poor and vulnerable populations, the public sector, international organizations.
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For the public inquiry fields below are optional

2. Broad typology of the issue

(*)	<i>External driver</i>	<i>Internal to food systems</i>	<i>Both</i>
Is the issue either or both?	X		Briefly mention how this may be the case

(*)	<i>Economic (and productive)</i>	<i>Social and Cultural</i>	<i>Governance (institutions, rights, etc.)</i>	<i>Environmental (resources, etc.)</i>	<i>Other (SPECIFY)</i>
Main nature of the issue			X		
Nature of the main impact of the issue on FSN	X	X	X		

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	<i>Classification (**)</i>		
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?	Critical point	Systemic issue	
2. Breadth: Are there many people affected?	Few	Many	
3. Scale: local/regional/global?	Local	Region	Global
	<i>Indicate here the precise location</i>	The Americas	

For items 4-11 below, please use the classification [— — , — , 0, +, ++]:

Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)

4. Impact on Availability (-)	The lack of political and institutional coordination in the countries impedes the effective implementation of initiatives to adequately address the availability of food for the entire population.
5. Impact on Access (-)	The lack of political and institutional coordination in the countries impedes the effective implementation of initiatives that enable people to access safe and nutritious food.
6. Impact on Utilization/ nutrition (-)	The lack of political and institutional coordination in countries is reflected in the prevalence of malnutrition and obesity, and the lack of access to potable water, sanitation, and adequate health services.
7. Impact on Stability (-)	The lack of political and institutional

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	coordination in the countries leads to a lack of measures to ensure food stability for the population in the face of natural disasters, wars, etc.		
8. Impact on most vulnerable people (-)	The lack of political and institutional coordination in the countries leads to a lack of measures focused on achieving food and nutritional security particularly for the most vulnerable people.		
9. Impact on women (-)	The lack of political and institutional coordination in the countries leads to a lack of measures focused on food and nutritional security for pregnant and nursing women.		
10. Impact on children (-)	The lack of political and institutional coordination in the countries leads to a lack of measures focused on food and nutritional security for children, primarily during gestation and the first 1000 days of life.		
11. Impact on marginalized populations (-)	The lack of political and institutional coordination in the countries leads to a lack of measures focused on food and nutritional security for marginalized populations.		
12. Cost to address the issue	Low	Middle	High

(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

4. Time Scale

<i>Timeframe (*)</i>	<i>Now/Short term (1-5 years)</i>	<i>Medium term (5-10 years)</i>	<i>Long term (10-20 years +)</i>
Moment when the issue will have an impact		X	
Moment to act to address the issue	X		

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.	Low	Middle	High
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6. Additional Supporting Information

Additional information

Today there is more political awareness of the importance of taking effective measures to promote food production, to face the increase and volatility of agricultural prices, to adapt to climate variability and climate change, among other challenges, in order to achieve food and nutritional security for the entire population. However, this awareness does not always translate into policy decisions and comprehensive actions that address these challenges. At times, such decisions have been insufficient or have been contradictory (IICA 2012).

International technical cooperation should collaborate with countries in the region to build political and

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institutional conditions for the formulation of State and public policies for food and nutritional security, with an emphasis on society-government relationships. As an effort of international cooperation aimed at developing a comprehensive project to ensure food and nutritional security for present and future generations (Maluf 2008; Rodrigues 2013).

Evidence

Given that by 2050 we will have 9 billion people in the world, along with various factors that threaten the conditions needed to provide food and nutritional security to this population, there is a risk of global food shortages.

Most countries in Latin America and the Caribbean have laws, policies, and strategies for food and nutritional security; however, malnutrition, poverty, etc. continue to persist within the population. For example, Guatemala is listed as the number one country in the Hunger and Nutrition Commitment Index 2012 prepared by the Institute of Development Studies (Hanci 2014), however for the period 2011-2013, the weighted percentage of undernourishment was 30% and chronic child malnutrition affected 48% of children under 5 years between 2012 and 2013. These numbers exceed the percentages of Latin America and the Caribbean for the same period (7.9% and 15.4%, respectively) (FAO *et al.* 2013).

Knowledge gaps

The performance of multilateral cooperation organizations to address institutional gaps around food and nutritional security, as well as cohesion required to support the development of a major project to achieve food and nutritional security at the country and regional levels through a multidisciplinary perspective.

References

IICA (Instituto Interamericano de Cooperación para la Agricultura). 2012. Situación de la seguridad alimentaria en las Américas: documento para alimentar el diálogo de la 42.a Asamblea General de la Organización de Estados Americanos (Online). Consulted on 27 February 2014. Available at:

<http://www.iica.int/Esp/Programas/SeguridadAlimentaria/IICAPublicaciones/B2915e.pdf>

Institute of Development Studies. 2014. Hunger and Nutrition Commitment Index 2012 (Online). Consulted on 27 February 2014. Available at: <http://www.hancindex.org/>

FAO, PRESANCA, PRESISAN II. 2013. Centroamérica en cifras. Datos de seguridad alimentaria nutricional. 51p.

Maluf, 2008a. Os desafios para a formulação e gestão de uma política nacional de abastecimento alimentar. Boletim DRS (42): 12-17

_____. 2008b. Os desafios para a formulação e gestão de uma política nacional de abastecimento alimentar. Boletim DRS (43): 8-12

Rodrigues, R. 2013. Todos sabem, nada acontece. Folha de S.Paulo, Sao Paulo, Br, ene 1.

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.



HLPE Inquiry

Critical and Emerging Issues for Food Security and Nutrition

Questionnaire

About the respondent

Name, Surname and Institution	Inter-American Institute for Cooperation on Agriculture (IICA)		
Dou you answer on behalf of your institution, or as an individual?	On behalf of IICA	As individual	
Do you agree if this contribution is made available to the public as part of the proceedings?	Yes	No	
Country of the responding individual/institution Please mention international or regional, the case being	Regional- the Americas		

1. Overview of the issue

Issue <i>in 2 lines</i>	Food loss throughout the agricultural food chain.		
Description of the issue <i>in less than 5 lines</i>	In Latin America and the Caribbean, the largest portion of food loss occurs in the stages of harvest and post-harvest which not only decreases food availability but also reduces the income and livelihoods of farmers, especially those involved in family farming. They also have a negative impact on the environment by using resources inefficiently such as soil, water and fertilizer.		
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>	Challenge	Opportunity	It depends (please specify)
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition <i>In less than 10 lines.</i> Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.	In 2012 and 2013 IICA conducted a survey to collect preliminary information on the current state of post-harvest loss in Latin America and the Caribbean.		

Main response proposed to address the issue	<p>Develop an agreed methodology to quantify food loss and provide access to systematized information on the LAC countries to determine the extent of the problem and to propose solutions according to the reality of each country.</p> <p>Additionally, stimulate public and private investment to quantify and address the issue from a holistic perspective. For example, the development and dissemination of technology to reduce food loss to meet the needs of small and medium-scale producers.</p>
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Main actor(s) concerned or involved in the response proposed	The entire agricultural food chain from producer to consumer.
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For the public inquiry fields below are optional

2. Broad typology of the issue

(*)	<i>External driver</i>	<i>Internal to food systems</i>	<i>Both</i>
Is the issue either or both?			Both. On the one hand there are weaknesses in the food system that lead to food loss. On the other hand, public policies and institutions in the countries pay little attention to this issue.

(*)	<i>Economic (and productive)</i>	<i>Social and Cultural</i>	<i>Governance (institutions, rights, etc.)</i>	<i>Environmental (resources, etc.)</i>	<i>Other (SPECIFY)</i>
Main nature of the issue	X		X	X	
Nature of the main impact of the issue on FSN	X			X	

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	<i>Classification (**)</i>		
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?	Critical point		Systemic issue
2. Breadth: Are there many people affected?	Few		Many
3. Scale: local/regional/global?	Local	Region	Global
	<i>Indicate here the precise location</i>	Latin American and the Caribbean	

For items 4-11 below, please use the classification [— — , — , 0 , + , ++]:
 Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)

4. Impact on Availability (-)	Food loss that occurs from the field all the way to the consumer diminishes the availability of food.
5. Impact on Access (-)	For poor farmers, food loss in the field means reduced income and thus limits the purchase of adequate quantities of quality food to maintain a balanced diet.

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

6. Impact on Utilization/ nutrition (-)	Inadequate storage and transportation practices not only lead to food loss but also threaten the health consumers, for example, aflatoxins in grains.		
7. Impact on Stability (-)	The lack of measures to reduce food loss threatens the stability of the food supply, especially during periods of shortage.		
8. Impact on most vulnerable people (-)	Food loss directly impacts the poorest families, restricting their diets and threatening their proper nutrition.		
9. Impact on women			
10. Impact on children			
11. Impact on marginalized populations	Specify as appropriate		
12. Cost to address the issue	Low	Middle	High

(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

4. Time Scale

<i>Timeframe (*)</i>	<i>Now/Short term (1-5 years)</i>	<i>Medium term (5-10 years)</i>	<i>Long term (10-20 years +)</i>
Moment when the issue will have an impact	X		
Moment to act to address the issue	X		

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.	Low	Middle	High
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6. Additional Supporting Information

Additional information

In Guatemala, post-harvest losses have been reported in the fruit, vegetable and staple food crop sectors. However, except in the case of staple food crops, where some data is available, not enough information is available to quantify losses nationwide and their impact on the economy (IICA 2012 and IICA 2013).

According to data obtained from the Purchase for Progress Program (P4P), being implemented under the IICA-WFP partnership, losses in corn in Ixcán, Polochic and El Peten region can be attributed to high humidity levels (19-21%) and the traditional practice of storing harvested corn in a structure known as a *troja comun* (a type of grain storage bin), where it is exposed to the elements, insects, diseases and animals. After four or six months in storage, losses range between 40 and 45%. In the case of beans, harvests are sold at once because growers lack the necessary storage facilities and because they require money immediately to support their families and continue farming (IICA 2013).

Paraguay has no studies or official data on post-harvest losses for its principal crops (IICA 2012). However, unofficial data indicate that the crops most affected are horticultural products, with losses ranging from 8 to 15%, strawberries (12%), and cereals and oilseeds (approximately 5%). Small- and medium-scale farmers, and those in the family agriculture sector, account for most post-harvest losses because they do not have access to the infrastructure and technology needed to prevent losses

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caused by pests and diseases, to information and support networks or to different types of insurance available today (IICA 2013).

Throughout the island of St. Lucia, the bulk of post-harvest losses occur around the production of vegetables, pineapples, cocoa, cassava, and bananas. The problem is considered severe with unofficial estimates indicating that approximately 30% of total production is lost after harvesting (IICA 2012 and IICA 2013).

While the post-harvest challenge has many facets which vary from crop to crop, some critical aspects in Saint Lucia are consistent across all crops. One of the main limitations is the lack of adequate storage facilities, refrigerated or otherwise, for agricultural crops after harvest. Most crops go directly from the field to the market and due to their perishable nature, losses increase for the crops with shorter shelf lives. This problem negatively impacts export crops which must await the arrival of transport carriers (by air or ship). Many losses are incurred when there are delays in arrival, since the crops are not in storage facilities while they wait (IICA 2013).

Evidence

IICA conducted a screening survey during November 2012 and a follow-up on August 2013 to gather preliminary information from a sample of countries about the current situation regarding postharvest losses in LAC. Some of the conclusions of the survey are: there is very little official information about how much food is lost along the food chains and there is very little public investment in infrastructure, innovation, etc. to solve the problem.

Knowledge gaps

Latin America and Caribbean countries lack of official data to determine the status of post-harvest loss as well as weaknesses within the food system that lead to such loss. This in turn limits the capacity to propose effective solutions based on the reality of each country and each product-chain.

References

IICA (Instituto Interamericano de Cooperación para la Agricultura). 2012. Post- Harvest Losses in Latin America and the Caribbean: Challenges and Opportunities for Collaboration. San José, CR. 6 p.

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Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.



HLPE Inquiry

Critical and Emerging Issues for Food Security and Nutrition

Questionnaire

About the respondent

Name, Surname and Institution	Inter-American Institute for Cooperation on Agriculture (IICA)	
Dou you answer on behalf of your institution, or as an individual?	On behalf of IICA	As individual
Do you agree if this contribution is made available to the public as part of the proceedings?	Yes	No
Country of the responding individual/institution Please mention international or regional, the case being	Regional – the Americas	

1. Overview of the issue

Issue <i>in 2 lines</i>	The impact that nutrition transition has on efforts to achieve and maintain food and nutritional security in the region.		
Description of the issue <i>in less than 5 lines</i>	Traditionally malnutrition has been understood as an issue impacting poverty and a lack of resources, yet the region is at a critical tipping point where hunger as well as obesity and diet-related diseases are rampant, highlighting an insecure food system.		
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>	Challenge	Opportunity	<p>It depends (please specify)</p> <p>This is a challenge because it points to flaws in the food system that negatively impact public health. It serves as an opportunity to motivate nutrition-sensitive agriculture and multi-sectorial cooperation for food security.</p>
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition <i>In less than 10 lines. Additional supporting or describing information (literature, reports, expert</i>	Public health indicators demonstrate that there is an imbalance in many local food systems as hunger and malnutrition are accompanied by obesity and the prevalence of noncommunicable disease caused by poor diet. There is increasing evidence for promoting nutrition-led agricultural investments		

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<p>report, analysis, etc.) can be provided in section 5 below.</p>	<p>as a solution. Enhancing the role that agriculture plays in addressing nutrition makes healthy food available at accessible prices while impacting economic development.</p>
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<p>Main response proposed to address the issue</p>	<p>Policies that support nutrition-driven agriculture should: improve the nutritional performance of supply chains; reduce food losses and waste and improve food safety measures; reduce the cost of the “basic basket”; help consumers make good dietary choices for better nutrition through education, generate greater demand for healthy food; improve the nutritional quality of foods through fortification; ensure that social safety nets support good nutrition; provide training and capacity building for rural communities or vulnerable groups, especially women; and make food systems more responsive to the needs of mothers and young children-who most often face malnutrition.</p> <p>By making agriculture accountable to improved nutritional outcomes, greater progress is made in strengthening the food system along the entire value chain and in improving food security. Nutritional education and safety net programs have been the standard approach for improving the demand for, or consumption of, healthy food, but there is a need to mainstream nutrition into agricultural systems at each stage of production.</p> <p>Agricultural investments can contribute to improved nutritional outcomes by strengthening the diversity and quality of food items produced and the sector’s ability to store, transport, label, package, and distribute these food sources to consumers. By diversifying agricultural production, the food system has the ability to sell its products to a wider range of consumers who are then able to access a steadier supply of necessary nutrients. Diversifying agricultural production should consider the seasonality of food and address food loss and waste which raise prices and diminish resources.</p>
<p>Main actor(s) concerned or involved in the response proposed</p>	<p>Policy makers play a key role in addressing the challenges of hunger and the over-consumption of unhealthy foods that burden public health systems. This requires cooperation among various sectors including agriculture, public health, education, and commerce. Agricultural producers are relevant actors as far as determining what kinds of products are available in the food system but often this is a circular relationship where their investments are responding to demand. Therefore education and other factors that can impact the kinds of foods consumers demand (such as controls of food marketing, nutrition education, regulations of food standards, market infrastructure, etc.) play an</p>

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	important role in determining what is available and affordable within a food system.
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For the public inquiry fields below are optional

2. Broad typology of the issue

(*)	<i>External driver</i>	<i>Internal to food systems</i>	<i>Both</i>
Is the issue either or both?	X	X	This is clearly an internal issue related to food systems where the lack of healthy food at affordable prices impacts public health; however, it is also an issue that relates to international trade and commerce. For example, certain countries in the region, namely in the Caribbean, are heavily dependent on food imports. Much of these imports are of calorie-dense grains that do not provide enough protein or micronutrients and lead to nutritional imbalances. Other examples include the prevalence of international fast food chains which provide competition for local markets and food-related businesses and yet contribute to poor health.

(*)	<i>Economic (and productive)</i>	<i>Social and Cultural</i>	<i>Governance (institutions, rights, etc.)</i>	<i>Environmental (resources, etc.)</i>	<i>Other (SPECIFY)</i>
Main nature of the issue	X	X	X		
Nature of the main impact of the issue on FSN	X	X	X		

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	Classification (**)
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1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?	Critical point	Systemic issue	
2. Breadth: Are there many people affected?	Few	Many	
3. Scale: local/regional/global?	Local	Region	Global
	<i>National food systems throughout the region</i>	Latin America and the Caribbean	

For items 4-11 below, please use the classification [— — , —, 0, +, ++]:
 Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)

4. Impact on Availability	(0)
5. Impact on Access	(0)
6. Impact on Utilization/ nutrition	(--)
7. Impact on Stability	(--)
8. Impact on most vulnerable people	(--)
9. Impact on women	(--)
10. Impact on children	(--)
11. Impact on marginalized populations	(--)
12. Cost to address the issue	Low Middle High

(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

4. Time Scale

<i>Timeframe (*)</i>	<i>Now/Short term (1-5 years)</i>	<i>Medium term (5-10 years)</i>	<i>Long term (10-20 years +)</i>
Moment when the issue will have an impact	X	X	
Moment to act to address the issue	X		

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.	Low	Middle	High
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6. Additional Supporting Information

Additional information

In addition to serving as a vehicle to generate greater income and livelihood, agricultural development that integrates a comprehensive food system and nutritional perspective is more effective at combating food insecurity because it strengthens both the supply of and demand for high-quality, nutrient-dense foods and improves livelihoods for producers. Value chain integration should aim to make healthy food cheaper relative to highly processed foods and imported goods that are not nutrient-dense. Strategic pricing, support for farmers markets, and school feeding programs that source from local producers are examples of interventions that address local shortages of healthy food by increasing their accessibility.

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Nutrition-sensitive agriculture aims to avoid the common phenomenon where high-quality, nutrient-dense food is more expensive than cheaper, less healthy alternatives.

Evidence

While there has been a decrease in the prevalence of hunger and undernutrition in many places in the region, it still plagues certain communities, particularly in rural areas and for vulnerable groups like indigenous communities, children, and pregnant or nursing women. The simultaneous and dramatic increase in obesity and the prevalence of diet-related preventable diseases (including heart disease and type-2 diabetes) is an indicator that focusing on a food system where a high number of calories are available does not equate to food and nutritional security. As of 2013, the United States, Mexico, and Chile are all ranked within the top 5 most obese countries in the world indicating that economic growth and agricultural productivity alone do not correspond to improved nutritional outcomes (FAO 2013).

In a brief period of time, Chile has undergone major demographic, epidemiological and nutritional transitions. The proportion of malnutrition among children aged less than 6 years decreased from 37% to 2.9% in the period 1960–2000; in contrast, the prevalence of obesity today reaches 20% among 4-year-old children. (Bambs et al. 2008).

The Caribbean region is another striking example. “Obesity has become an epidemic in the Caribbean, with such increasing prevalence that it is now the most important underlying cause of death in the region. Currently, about 25% of adult West Indian women are obese.” (Caribbean Food and Nutrition Institute 2009, p. 195).

“The reduction in Caribbean undernutrition over the last few decades has wrongly led to complacency and to the dangerously false conclusion that there is no urgency to further improve the overall nutritional status of the region.” (Caribbean Food and Nutrition Institute 2009, p. 193-194).

Nine out of 10 people who die from noncommunicable diseases under the age of 60 live in the developing world (World Health Organization 2011). In many developing countries, nearly 70 percent of an individual’s daily caloric intake can come from a single staple food (for example, maize or rice), making it difficult to consume enough vitamins and minerals (Bill and Melinda Gates Foundation 2014).

Knowledge gaps

While there is ample evidence of nutrition transition and the impact that modern and even some traditional diets have on public health outcomes, few studies look at both income and nutrition outcomes of agricultural interventions or attempt to understand the relationship between the two variables. This topic has emerged in recent years and still requires great attention and investigation.

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HLPE Inquiry

Critical and Emerging Issues for Food Security and Nutrition

Questionnaire

About the respondent

Name, Surname and Institution	Inter-American Institute for Cooperation on Agriculture (IICA)		
Dou you answer on behalf of your institution, or as an individual?	On behalf	As individual	
Do you agree if this contribution is made available to the public as part of the proceedings?	Yes	No	
Country of the responding individual/institution Please mention international or regional, the case being	Regional – the Americas		

1. Overview of the issue

Issue <i>in 2 lines</i>	The importance of the environmentally and socially sustainable development of underutilized crops: the case of quinoa		
Description of the issue <i>in less than 5 lines</i>	Many programs designed to encourage the production and consumption of underutilized varieties have not considered the various negative environmental and social effects that result from these initiatives, particularly in poor and vulnerable populations.		
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>	Challenge	Opportunity	It depends (please specify)
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition <i>In less than 10 lines.</i> Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.	Recent news articles as well as various publications have exposed how the worldwide quinoa "boom" affects the fragile ecosystems in which it is grown, especially in the Andean highlands as more sustainable practices are abandoned in order to meet the crops demand abroad. The boom impacts local consumption of quinoa as the competitive price makes is difficult for local producer communities to afford consuming it themselves.		
Main response proposed to address the issue	Comprehensive development proposals that consider the pros and cons at the economic, social, ecological levels before promoting the crop abroad.		

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Main actor(s) concerned or involved in the response proposed	The actors within the food system that produce and consume a particular specialty crop, for example, that of quinoa.
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For the public inquiry fields below are optional

2. Broad typology of the issue

(*)	<i>External driver</i>	<i>Internal to food systems</i>	<i>Both</i>
Is the issue either or both?	X		Briefly mention how this may be the case

(*)	<i>Economic (and productive)</i>	<i>Social and Cultural</i>	<i>Governance (institutions, rights, etc.)</i>	<i>Environmental (resources, etc.)</i>	<i>Other (SPECIFY)</i>
Main nature of the issue	X	X	X	X	
Nature of the main impact of the issue on FSN	X	X	X	X	

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	<i>Classification (**)</i>		
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?	Critical point	Systemic issue	
2. Breadth: Are there many people affected?	Few	Many	
3. Scale: local/regional/global?	Local	Region	Global
	<i>Indicate here the precise location</i>	Andean Region	

For items 4-11 below, please use the classification [— — , — , 0, +, ++]:

Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)

4. Impact on Availability (-)	Because of the negative effects on the agricultural ecosystem and climate change, the long-term availability of quinoa is threatened.
5. Impact on Access (-)	The price increase as a result of increased demand abroad affects access for poor families.
6. Impact on Utilization/ nutrition (-)	Poor families begin to replace the product in their diets with less nutritious options.
7. Impact on Stability (-)	Homogenization in the use of varieties, climate change, and fragile agricultural ecosystems jeopardize the crop in the

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	long-term.			
8. Impact on most vulnerable people (-)	As the price of the crop increases, poor families have less access to it. They being to replace it with other, cheaper food items with lower nutritional value.			
9. Impact on women (-)	As the price of the crop increases, poor families have less access to it. They being to replace it with other, cheaper food items with lower nutritional value.			
10. Impact on children (-)	As the price of the crop increases, poor parents have less access to it, replacing it with other, cheaper food items of lower nutritional value, impacting child nutrition.			
11. Impact on marginalized populations (-)	As the price of the crop increases, marginalized populations (such as indigenous communities), cannot access it or the people who have produced it decide to sell it to be able to purchase a greater quantity of other kinds of foods which are cheaper and have lower nutritional values.			
12. Cost to address the issue	<table border="1"> <tr> <td>Low</td> <td>Middle</td> <td>High</td> </tr> </table>	Low	Middle	High
Low	Middle	High		

(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

4. Time Scale

<i>Timeframe (*)</i>	<i>Now/Short term (1-5 years)</i>	<i>Medium term (5-10 years)</i>	<i>Long term (10-20 years +)</i>
Moment when the issue will have an impact	X		
Moment to act to address the issue	X		

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.	Low	Middle	High
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6. Additional Supporting Information

Additional information

Due to its potent nutritional properties, the demand and international prices for quinoa have increased rapidly in recent years. This is an incentive for producers to produce more and to expand their quinoa growing areas.

However, local and international experts believe that the quinoa "boom" and the current market-oriented mode of production, is causing the degradation of fragile agricultural ecosystems in the Bolivian Altiplano region. This occurs as producers abandon traditional growing practices, such as the use of llama dung as organic fertilizer, and use new practices that threaten soil fertility, such as the use of tractors for land preparation. (Pabón 2013; Jacobsen and Soresen 2010).

Market pressures lead to changes in eating habits. Local quinoa prices also rise as domestic

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production is mostly intended for the international market. Quinoa producers and other members of the local community begin to replace this traditional food of high nutritional value with cheaper, imported alternatives that have lower nutritional values, such as white rice and pasta. (Giuliani *et al.* 2012; Pabón 2013; Hellin and Higman 2005; Mercado 2014).

Evidence

"Survey respondents were asked to compare the amount of quinoa eaten by the family currently and about 15 years ago. Of the 275 households, 147 (53%) responded that they now ate less quinoa; 27 (10%) indicated they ate more; and 101 (37%) indicate they ate about the same amount.

The most common explanation for declining quinoa consumption is that it is a matter of household economics. Quinoa has become a cash crop, so its price is set by export markets. Undoubtedly quinoa's market price has affected households' food consumption decisions. A 46-kg bag of quinoa, depending on its quality and type, could fetch US\$ 25–40. A bag of rice the same size cost US\$ 16–18. It was therefore better to sell the quinoa and buy the rice." (Giuliani *et al.* 2012 p. 118).

In Peru in 2013 between 0-3 kg of quinoa/year/person was consumed. Less than five years ago consumption was 2.5 to 5 kg/year/person (Mercado 2014).

Knowledge gaps

It is important that politicians and aid agencies consider not only the economic effects that may result from an improvement in the production and marketing of underutilized species, but also the social and environmental consequences this may cause in the short and long term.

It is important to pay attention to all of the implications that changing a traditional agriculture system to a commercial one can generate beyond access to markets, production techniques, and innovation. It should also consider the community structure, nutrient levels of the population, the sustainability of natural resources (including genetic diversity), and land tenure, among others.

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HLPE Inquiry

Critical and Emerging Issues for Food Security and Nutrition

Questionnaire

About the respondent

Name, Surname and Institution	Inter-American Institute for Cooperation on Agriculture (IICA)	
Dou you answer on behalf of your institution, or as an individual?	On behalf	As individual
Do you agree if this contribution is made available to the public as part of the proceedings?	Yes	No
Country of the responding individual/institution Please mention international or regional, the case being	Regional – the Americas	

1. Overview of the issue

Issue <i>in 2 lines</i>	Instability of domestic/local food markets.		
Description of the issue <i>in less than 5 lines</i>	The instability of domestic and local food markets, characterized by high volatility, price spikes, and scarcity followed by commodity gluts, creates a disincentive for investment in agricultural production and threatens the accessibility and affordability of healthy foods.		
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>	Challenge	Opportunity	It depends (please specify)
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition <i>In less than 10 lines. Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.</i>	IICA has identified the relevance of this issue through various activities including the use of the following methodologies which were applied and documented in several IICA publications (cited below): the use of accounting methods to measure the impact of price changes on net farm incomes in selected territories and products in several LAC countries; the application of the Latin American and Caribbean Household Food Security Scale to self-assess food security status; focus groups conducted to understand household responses to food insecurity; regional workshops held in conjunction with ECLAC, FAO, and IICA to identify public policy responses and government interventions; and interviews to document national response initiatives to address to market instability.		

Main response proposed to address the issue	A system/platform to evaluate, adapt and scale up, at the national and regional level, good practices to achieve more stability in local LAC food markets. The final goal is to influence the design of State policies in the region. Create a regional price-information system and create a platform for price formation for more transparent and efficient food markets.
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Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

Main actor(s) concerned or involved in the response proposed	It should be a coordinated effort among Ministries of Agriculture, Commerce, etc., local governments, NGO's (operating locally), local universities, research centers, and international organizations like IICA.
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For the public inquiry fields below are optional

2. Broad typology of the issue

(*)	<i>External driver</i>	<i>Internal to food systems</i>	<i>Both</i>
Is the issue either or both?	X	X	International price transmission and local supply and demand conditions

(*)	<i>Economic (and productive)</i>	<i>Social and Cultural</i>	<i>Governance (institutions, rights, etc.)</i>	<i>Environmental (resources, etc.)</i>	<i>Other (SPECIFY)</i>
Main nature of the issue	X		X		
Nature of the main impact of the issue on FSN	X				

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	<i>Classification (**)</i>		
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?	Critical point	Systemic issue	
2. Breadth: Are there many people affected?	Few	Many	
3. Scale: local/regional/global?	Local	Region	Global
	<i>Indicate here the precise location</i>	LAC countries	

For items 4-11 below, please use the classification [— — , — , 0 , + , ++]:

Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)

4. Impact on Availability	(--)
5. Impact on Access	(--)
6. Impact on Utilization/ nutrition	(-)
7. Impact on Stability	(-)
8. Impact on most vulnerable people	(--) populations with high expenditure shares on food, and small agricultural net-food buyers
9. Impact on women	(--)

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10. Impact on children	(--)		
11. Impact on marginalized populations	(--) urban and rural poor		
12. Cost to address the issue	Low	Middle	High

(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

4. Time Scale

<i>Timeframe (*)</i>	<i>Now/Short term (1-5 years)</i>	<i>Medium term (5-10 years)</i>	<i>Long term (10-20 years +)</i>
Moment when the issue will have an impact		X	
Moment to act to address the issue	X		

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.	Low	Middle	High
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6. Additional Supporting Information

Additional information

Price changes impact on agricultural income and food security and nutrition depending on whether populations are rural or urban, if products are tradable or non-tradable, the degree of the country's dependency on imports, input use intensity, and technological level (Paz 2010; Arias and Vargas 2010; IICA and PMA 2011).

The most recent data compiled by UNICEF (2013) shows that in 82 out of 95 developing countries for which data are available the prevalence of child underweight is higher in rural areas than in urban areas. Also, agriculture is highly seasonal so the role of agricultural market development is key to stabilizing food availability in rural areas.

Most rural families surprisingly are net-food buyers, making them also vulnerable to price picks and volatility (FAO 2011).

Evidence

Serious market information gaps at the national and local level, plus policies that stimulated domestic production led to commodity gluts, followed by deficits and price swings, especially in small markets in Central America and the Caribbean. See The Glut Management Fund – Jamaica. The situation was felt in many products in different countries: rice, vegetables, root crops, specifically white and sweet potato; animal feed as a substitute for imported corn, condiments, and, livestock, namely pork, poultry, dairy, eggs and small ruminants (IICA et al. 2012).

Some examples of initiatives to stabilize domestic/local food markets:

- A price floor as an important risk-mitigating instrument provided by the private sector (i.e. Nicaragua, Saint Lucia and many others, see Michelson 2013).
- State procurement system to favor small farmers without distorting local markets (i.e. Proneri-Ecuador).
- Food stamps and conditional income support, as opposed to subsidies that distort food markets (IFPRI-Ecuador).
- Some efforts to build links between school meal planning and farm production planning (Jamaica, Argentina, Brazil, El Salvador).

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- Great potential for Localized Food Systems, especially in rural poor areas. (Boucher and Reyes 2011).

Knowledge gaps

Alternatives for efficient and non-distorting strategic food reserves (recent experiences seen in Ecuador, México and Honduras, see IICA-Honduras 2013).

Hedging instruments against income variability (price, yields and cost of production) when futures markets are absent.

Role and welfare impacts of supermarkets as an option for farmers to reduce market and financial risks.

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HLPE Inquiry
Critical and Emerging Issues for Food Security and Nutrition
Questionnaire

About the respondent

Name, Surname and Institution	Inter-American Institute for Cooperation on Agriculture (IICA)	
Dou you answer on behalf of your institution, or as an individual?	On behalf	As individual
Do you agree if this contribution is made available to the public as part of the proceedings?	Yes	No
Country of the responding individual/institution Please mention international or regional, the case being	Regional – the Americas	

1. Overview of the issue

Issue <i>in 2 lines</i>	The need for nutrition education at all ages to achieve and maintain food and nutritional security (FNS).	
Description of the issue <i>in less than 5 lines</i>	The availability of nutritious food in a food system does not ensure it is properly consumed and FNS are attained. The cost associated with feeding the malnourished, compounded by the cost of treating diet-related disease, is a compelling reason for nutrition education.	
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>	Challenge	Opportunity It depends (please specify)
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition <i>In less than 10 lines. Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.</i>	Nutrition education initiatives that teach how to choose and prepare healthy food and that provide recommendations and protocols for food safety lead to improved diets by helping consumers modify food-related behavior. Education alone cannot ensure that healthy food is available and accessible at all times but it is crucial for proper food utilization and should be included in multidisciplinary approaches to FNS.	

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Main response proposed to address the issue

Nutrition education aims to improve nutritional security by providing information that will lead to behavior change. Nutrition education programs, for example, Food and Nutrition Communication and Education (FNCE) initiatives, must provide people in both rural and urban areas with culturally appropriate information and skills to acquire and to consume nutrient-dense foods. As nutrition transition continues to blur the lines between hunger, malnutrition, obesity, and diet-related noncommunicable diseases, nutrition education should include proper food selection, consumption, and lifestyle, as well as an understanding of where food comes from and the role of the consumer in supporting the agricultural food chain.

There are multiple approaches for food and nutrition communication and education for example through the use of social marketing or by utilizing community-based approaches. To be effective, nutrition education programs and initiatives must use multi-pronged approaches to educate all ages, including in-school programs for children and adolescents, alongside adult education and extension programs to inform producer communities. Comprehensive nutrition education programs help target populations to improve their diets, increase physical activity, and delay or prevent chronic illnesses and obesity. Targeting young people plants the seeds for future food-related behavior and consumer preferences that impact the demand for healthy food. Targeting adults, particularly women, has a more immediate impact, as they are often in charge of dietary choices for the entire family.

Nutrition education can have a lasting impact on the health and wellbeing of women and children, particularly through the promotion of healthy diets in pregnancy (which leads to the birth of healthier babies,) and of the health and economic benefits of breastfeeding. They can also address safer food handling practices and methods to reduce foodborne illnesses, among other behavior-related aspects of food utilization and stability.

Lower-income families are at a distinct disadvantage when trying to consume a healthy diet. Nutrition education can play a significant role in emphasizing both the economic and health benefits of consuming local nutrient-dense foods, while protecting the cultural heritage and dietary traditions of the community.

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Main actor(s) concerned or involved in the response proposed	Communities and populations at risk for hunger and malnutrition. Educators, policy makers and key decision-makers involved in social programming, agricultural extension, and other points of entry to support the implementation of nutrition education. Civil society and local and international cooperation/aid agencies involved in food and nutritional security.
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For the public inquiry fields below are optional

2. Broad typology of the issue

(*)	<i>External driver</i>	<i>Internal to food systems</i>	<i>Both</i>
Is the issue either or both?		X	Briefly mention how this may be the case

(*)	<i>Economic (and productive)</i>	<i>Social and Cultural</i>	<i>Governance (institutions, rights, etc.)</i>	<i>Environmental (resources, etc.)</i>	<i>Other (SPECIFY)</i>
Main nature of the issue		X	X		
Nature of the main impact of the issue on FSN	X	X			

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	<i>Classification (**)</i>		
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?	Critical point	Systemic issue	
2. Breadth: Are there many people affected?	Few	Many	
3. Scale: local/regional/global?	Local	Region	Global
	<i>Indicate here the precise location</i>	<i>The Americas</i>	

For items 4-11 below, please use the classification [— — , — , 0 , + , ++]:

Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)

4. Impact on Availability (—)	The lack of nutrition education in the Americas indirectly impacts the food available within the food system because without an understanding of healthy diets, consumers do not seek out nutrient-dense foods. Standard consumption patterns do not generate a great demand for healthy foods, providing less incentive to farms as they face decisions regarding crop selection, crop diversity, and other methods that improve the nutritional value of food.
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	The lack of nutrition education among consumers negatively impacts the food system as informed consumers do not.
5. Impact on Access (—)	Without proper nutritional knowledge, farmers are limited in their ability to protect the nutritional value of their products during processing and transportation. This represents lost income for food producers. Rather, if they were to possess such knowledge, they could improve nutritional values and reduce waste, earning more income to increase their own access to healthy food.
6. Impact on Utilization/ nutrition (—)	The lack of nutrition education in the region severely limits the proper utilization of food to achieve optimal nutrition outcomes. Nutrition education impacts food use by teaching people the proper proportions of nutrients (fat, protein, carbohydrates, and micro-nutrients) that humans need at various stages of life and impacts how people choose to prepare their food, with the goal of protecting nutritional values. Without this knowledge, people tend to purchase cheap and convenient food rather than healthy alternatives.
7. Impact on Stability (—)	The lack of nutrition education in the region is a severe obstacle to the stability of food supplies and can lead to improper food handling, transporting, and storage techniques, which jeopardizes the nutritional value of certain foods. Without nutrition education, many people do not know how to eat seasonally and locally, which when taught properly, can be an effective cost and health-saving practice.
8. Impact on most vulnerable people (—)	People who are vulnerable to food and nutritional insecurity, particularly low-income families, are most in need of nutrition education. Without it, they are unable to make informed decisions that impact their health, wellbeing, and development.
9. Impact on women (—)	Women often make decisions about household food selection and preparation. When women are uninformed about nutrition and food-related health issues, they are less likely to make the best possible food-related choices for themselves and their families.
10. Impact on children (—)	A lack of nutrition education is critically dangerous to children in the region. Nutrition education has a lasting impact

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	on children, helping them develop life-long habits. Additionally, the promotion of healthy diets in pregnancy and during breastfeeding leads to the birth of healthier babies. School nutrition education programs have a direct impact on the future behavior of children as they make food-related choices. Without the access to nutritional information, children are at a major disadvantage when it comes to avoiding hunger, malnutrition, and diet-related health problems.			
11. Impact on marginalized populations (—)	Marginalized populations that are typically most vulnerable to food and nutritional insecurity, particularly low-income families, are most in need of nutrition education.			
12. Cost to address the issue	<table border="1"> <tr> <td>Low</td> <td>Middle</td> <td>High</td> </tr> </table>	Low	Middle	High
Low	Middle	High		

(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

4. Time Scale

<i>Timeframe (*)</i>	<i>Now/Short term (1-5 years)</i>	<i>Medium term (5-10 years)</i>	<i>Long term (10-20 years +)</i>
Moment when the issue will have an impact	X	X	X
Moment to act to address the issue	X		

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.	Low	Middle	High
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6. Additional Supporting Information

<p><i>Additional information</i></p> <p>Insufficient nutritional knowledge, awareness and skills related to optimal feeding practices are barriers to achieving FNS. The prevalence of diverse foods in a food system alone does not equate to food and nutritional security. And the reverse is also true – nutrition education alone cannot improve food and nutritional security if nutrient-dense food is not available in local markets at affordable prices. Educating people to understand the relationship between food and health and giving them the practical knowledge to make lasting changes in their consumption contributes to a greater demand for nutrient-dense foods in the food system.</p> <p>Without food and nutritional security, people cannot contribute productively to society. To attain good health and nutritional status, people need the knowledge and skills to grow, purchase, process, prepare, and eat a variety of foods, in the right quantities and combinations.</p> <p>Most people do not understand the nutritional value of foods and what makes up a balanced diet. Other constraints include sanitation issues that impact hygienic food preparation and the safe handling of food. Learning to improve food storage and prevent food loss allows families and individuals to extend their resources even further.</p>

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At the producer level, nutrition education plays an important role in decision-making with regard to crop selection, diversification, as well as proper methods for preserving and transporting food to conserve its nutritional value in addition to reducing food waste.

Evidence

According to the FAO's Panorama of Food and Nutrition Security in Latin America and the Caribbean, 2013, the region is not experiencing a food supply deficit. Latin America and the Caribbean produce more food than is required for the caloric consumption of its population. No country in the region lacks sufficient caloric availability for minimum daily requirement per person. (FAO 2013).

However, this does not mean that food and nutritional security have been obtained, given that hunger, malnutrition, obesity, and diet-related illnesses are still prevalent. Nine out of 10 people who die from noncommunicable diseases under the age of 60 live in the developing world (World Health Organization 2011). In many developing countries, nearly 70 percent of an individual's daily caloric intake can come from a single staple food (for example, maize or rice), making it difficult to consume enough vitamins and minerals (Bill and Melinda Gates Foundation 2014). In addition to improving the availability of and access to healthy food, there is an urgent need for nutrition education to empower people to make good food-related decisions.

There are many examples of this in Latin American and the Caribbean:

Costa Rica has seen an increase in overweight and obesity rates. According to the National Nutrition Survey conducted in 2009, 21.4% of children ages 5-12 are considered overweight or obese while 59.7% of women between 20 and 44 years old are overweight or obese and the rate rises to 77.3% for women between 45 and 64. The rate for men is 62.4% (Ministry of Health 2009).

In Chile, the obesity rate among adults is 25.1%, higher than the OECD average of 17.8%. (OECD 2014).

"Obesity has become an epidemic in the Caribbean, with such increasing prevalence that it is now the most important underlying cause of death in the region. Currently, about 25% of adult West Indian women are obese." (Caribbean Food and Nutrition Institute 2009, p. 195).

"Caribbean governments are slow to realize the high economic costs of under-nutrition and more importantly of obesity and its comorbidities... There is inadequate appreciation for the critical and profound influence of poor nutrition as the most important underlying cause of death and disability in the Caribbean." (Caribbean Food and Nutrition Institute 2009, p. 193)

While many of the nutrition education initiatives in the region are new and/or small-scale, public health indicators continually point to its growing importance. Many countries in the region have food and nutritional security policies, laws, or strategies but they are not always comprehensive and their implementation is often sporadic. There is a clear need for curriculum guides and training for educators in nutrition education. According to one report, "a legislative proposal is currently under discussion in Chile to include food and nutrition education at all elementary and secondary school levels." (Dárdano 2011).

Knowledge gaps

Nutrition education for policy-makers is equally important as a FNS intervention. Many policy-makers are misinformed on the causes and consequences of malnutrition and the acute relationship between nutrition indicators and individual and national productivity. If policy-makers were more informed, they would be better able to advocate for and allocate the much-needed resources to address food and nutritional insecurity. Lack of access to education in general is an obstacle to receiving nutritional education. Nutrition education is often not a priority for policy-makers who have to manage scarce resources when deciding how to assist communities that lack proper social infrastructure such as

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roads, water and sanitation services, basic education, etc. The lack of prioritization of nutrition education further perpetuates the cycle of hunger and malnutrition. While there is evidence of the need to provide guidance and information around nutrition and food-related behavior and there are isolated case studies showing its impact (Morris 2012), few published studies look specifically at the impact of nutrition education on food and nutritional security in the regional context which may contribute to the lack of attention this issue has typically been paid from policy-makers.

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Private comment

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HLPE Inquiry

Critical and Emerging Issues for Food Security and Nutrition

Questionnaire

About the respondent

Name, Surname and Institution	Josh Lozman, Bill and Melinda Gates Foundation		
Do you answer on behalf of your institution, or as an individual?	On behalf	As an individual	
Do you agree if this contribution is made available to the public as part of the proceedings?	Yes	No	
Country of the responding individual/institution Please mention international or regional, the case being	Based in the United States with an international scope of work.		

1. Overview of the issue

Issue <i>in 2 lines</i>	Investment in agricultural research and development.		
Description of the issue <i>in less than 5 lines</i>	Stable and increased investment in R&D for agriculture is necessary to meet the productivity growth needed to address critical social, economic and environmental challenges related to food security and nutrition.		
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>	Challenge	Opportunity	It depends (please specify)
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition <i>In less than 10 lines.</i> Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.	The data available on the subject, the Agricultural Science and Technology Indicators (ASTI, International Food Policy Research Institute) has been collecting information on national investment and human resources capacity in ag R&D systems in low and middle-income countries since 2000. The data are collected at the national level, standardized for inflation (2005 PPP\$), and are aggregated over time and across countries.		
Main response proposed to address the issue	Many countries have made substantial progress in support in this area. However, growth in spending on agricultural research and development should be improved substantially and should meet international targets: 1 percent of agricultural GDP and to grow by 5 percent annually. Levels and the quality of funding for ag R&D are as important as the stability and coordination of funding across various actors.		

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Main actor(s) concerned or involved in the response proposed	Governments, donors, private sector.
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For the public inquiry fields below are optional

2. Broad typology of the issue

(*)	<i>External driver</i>	<i>Internal to food systems</i>	<i>Both</i>
Is the issue either or both?	*		Briefly mention how this may be the case

(*)	<i>Economic (and productive)</i>	<i>Social and Cultural</i>	<i>Governance (institutions, rights, etc.)</i>	<i>Environmental (resources, etc.)</i>	<i>Other (SPECIFY)</i>
Main nature of the issue	*	*	*	*	
Nature of the main impact of the issue on FSN	*	*	*	*	

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	<i>Classification (**)</i>		
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?	Critical point	Systemic issue**	
2. Breadth: Are there many people affected?	Few	Many**	
3. Scale: local/regional/global?	Local	Region	Global**
	<i>Indicate here the precise location</i>	<i>Indicate here the precise region</i>	

For items 4-11 below, please use the classification [— — , — , 0 , + , ++]:

Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)

4. Impact on Availability	++
5. Impact on Access	+
6. Impact on Utilization/ nutrition	+
7. Impact on Stability	++
8. Impact on most vulnerable people	++
9. Impact on women	+
10. Impact on children	0
11. Impact on marginalized populations	Specify as appropriate

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12. Cost to address the issue	Low**	Middle	High
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(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

4. Time Scale

<i>Timeframe (*)</i>	<i>Now/Short term (1-5 years)</i>	<i>Medium term (5-10 years)</i>	<i>Long term (10-20 years +)</i>
Moment when the issue will have an impact	*	*	*
Moment to act to address the issue	*	*	

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.	Low	Middle	High
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6. Additional Supporting Information

<p><i>Additional information</i></p> <p>Under investment in agriculture is particularly acute in Sub-Saharan Africa. Average agricultural spending on research and development was at .51 percent as a share of agricultural GDP in 2011. The NEPAD target in this area is 1 percent. Moreover, national expenditures are not growing fast enough. Again, in Sub-Saharan African, of 30 countries assessed, half had declining or stagnating budgets. The target is to grow annually by 5 percent. Finally, these allocations are concentrated in countries with large agricultural research systems, with a handful making up the bulk of global gains.</p>
<p><i>Evidence</i></p>
<p><i>Knowledge gaps</i></p>
<p><i>References</i></p> <p>Beintema, Nienke and Gert-Jan Stads. "Is Africa Investing Enough." <i>Global Food Policy Report 2013</i>. Ed. Andrew Marble, Ed. Heidi Fritschel Washington D.C.: International Food Policy Research Institute, 2014. 53-61.</p>

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HLPE Inquiry

Critical and Emerging Issues for Food Security and Nutrition

Questionnaire

About the respondent

Name, Surname and Institution	Rebecca J. Nelson & Jonathan R. Miller, Cornell University	
Do you answer on behalf of your institution, or as an individual?	On behalf of institution	
Do you agree if this contribution is made available to the public as part of the proceedings?	Yes	
Country of the responding individual/institution Please mention international or regional, the case being	USA	

1. Overview of the issue

Issue <i>in 2 lines</i>	Democratized research and innovation for inclusive and locally relevant food and nutrition interventions.	
Description of the issue <i>in less than 5 lines</i>	Emerging technologies allow for broad-based collection, processing and sharing of information on agriculture, food systems and nutrition, enabling marginalized people to develop context-specific strategies for thriving in diverse socio-ecological realities.	
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>		Both
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition <i>In less than 10 lines. Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.</i>	Survey of policies and practices among research, education and extension programs for generating recommendations for agriculture, food systems and nutrition. Identification of instances where recommendations fail to take sufficient account of diverse socio-ecological contexts.	

Main response proposed to address the issue	<ul style="list-style-type: none"> • Development and deployment of tools and approaches for analysis, prioritization and problem-solving that engage communities in addressing key problems in agriculture and nutrition. • Broad-scale implementation of grassroots innovation processes, such as farmer research networks, data sharing using mobile networks, experimental community gardens, etc. • Wide dissemination of tools that allow for highly localized data collection and analysis.
Main actor(s) concerned or involved in the response proposed	National and local government agencies, communities, development organizations, universities and research institutions. ICT providers to facilitate sharing of ideas, data and information.

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For the public inquiry fields below are optional

2. Broad typology of the issue

(*)	<i>External driver</i>	<i>Internal to food systems</i>	<i>Both</i>
Is the issue either or both?		*	

(*)	<i>Economic (and productive)</i>	<i>Social and Cultural</i>	<i>Governance (institutions, rights, etc.)</i>	<i>Environmental (resources, etc.)</i>	<i>Other (SPECIFY)</i>
Main nature of the issue	*	*	**		
Nature of the main impact of the issue on FSN	*	*	**		

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	Classification (**)		
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?			Systemic issue
2. Breadth: Are there many people affected?			Many
3. Scale: local/regional/global?	Local	Region	Some global tech advances (maps, apps, etc.) could apply
	<i>Local governments and institutions</i>	<i>Developing countries with weak research and development institutions</i>	

For items 4-11 below, please use the classification [— — , — , 0, +, ++]:

Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)

4. Impact on Availability	++
5. Impact on Access	++
6. Impact on Utilization/ nutrition	+
7. Impact on Stability	+
8. Impact on most vulnerable people	++ Empowerment of smallholder farmers
9. Impact on women	+
10. Impact on children	+
11. Impact on marginalized populations	+
12. Cost to address the issue	Middle

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(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

4. Time Scale

<i>Timeframe (*)</i>	<i>Now/Short term (1-5 years)</i>	<i>Medium term (5-10 years)</i>	<i>Long term (10-20 years +)</i>
Moment when the issue will have an impact	*	**	***
Moment to act to address the issue	****	***	*

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.		Middle	
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6. Additional Supporting Information

<p><i>Additional information</i></p> <p>Participatory methods have been used to limited extents for decades in a variety of fields, including plant breeding, pest management and peer-to-peer education. Nonetheless, mainstream approaches in agricultural research remain top-down and largely ineffective, in large part because they fail to account for the heterogeneity of local conditions. With low-cost information and communications technologies now widely available, there is an opportunity to engage otherwise marginalized communities in assessing and addressing the causes of food insecurity and malnutrition.</p>
<p><i>Evidence</i></p> <p>Having worked with diverse national programs in food insecure areas of the world for many years, we conclude that current norms are both failing to provide relevant recommendations and suppressing rural innovation.</p>
<p><i>Knowledge gaps</i></p> <p>There is a need to develop the evidence base for agroecological intensification that uses biodiversity and systems approaches to address agricultural and nutritional challenges. Any recommendations, no matter how place-specific or democratically generated, are only as good as our understanding of complex social and ecological processes.</p>
<p><i>References</i></p> <p>Von Hippel, Eric (2005). "Democratizing Innovation," http://web.mit.edu/evhippel/www/democ1.htm.</p> <p>Schirrmeister, Elna and Philine Warnke (2013). "Envisioning structural transformation — lessons from a foresight project on the future of innovation." <i>Technological Forecasting and Social Change</i>, 80(3): 453–466.</p> <p>Röling, Niels (2013). "Promoting participatory Innovation Systems for Smallholder Development." <i>Brussels Policy Briefing</i> no. 34, http://brusselsbriefings.files.wordpress.com/2013/11/br34_niels-</p>

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Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.



HLPE Inquiry Critical and Emerging Issues for Food Security and Nutrition Questionnaire

About the respondent

Name, Surname and Institution	Wendy Wolford and Marygold Walsh-Dilley, Cornell University	
Dou you answer on behalf of your institution, or as an individual?	On behalf of institution	
Do you agree if this contribution is made available to the public as part of the proceedings?	Yes	
Country of the responding individual/institution Please mention international or regional, the case being	USA	

1. Overview of the issue

Issue <i>in 2 lines</i>	Equitable and inclusive policy and technology formation that attends to structural difference and discrimination.
Description of the issue <i>in less than 5 lines</i>	Access to the resources needed to address food and nutrition security is intimately tied to broader processes of exclusion and marginalization. Inequality must be addressed on multiple scales, e.g. household; regional or national levels; and the global level, as well as in multiple ways, e.g. gender, race/ethnicity/caste, age, or ability.
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>	It depends. This theme is both a challenge and an opportunity. That food is unevenly distributed is arguably the central challenge to food security since there are enough food calories being produced yet many people remain hungry. Inclusion and empowerment of vulnerable peoples offer opportunities to address these distributional patterns.
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition <i>In less than 10 lines.</i> Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.	Community evaluations of insecurity and resilience in multiple countries; in-depth case study research on access to land and political rights in Brazil, Ecuador, Bolivia and Mozambique; meta-review of available literature and experience working with donors, NGOs and state institutions.

Main response proposed to address the issue	Addressing entrenched patterns of inequality will require a multi-dimensional set of interventions aimed both at feeding <i>and</i> empowering vulnerable, excluded, and marginalized populations. This will require: <ul style="list-style-type: none"> • Ensuring access to food for vulnerable populations within a broader social safety net; linking food access to clinical health
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	<p>services and education, e.g. through mobile clinics and school lunches.</p> <ul style="list-style-type: none"> • Democratic reforms towards inclusion and enfranchisement. All members of society should be able to hold their representatives accountable. • Ensure equitable access to land and other resources, establishing equitable ownership rights, redistributing land and other resources. • Establishing and protecting rights to basic needs and resources (food, water, land, education, democratic participation).
Main actor(s) concerned or involved in the response proposed	<ul style="list-style-type: none"> • The state: as guarantor of rights, as mechanism of redistribution. • Civil society as means of ensuring accountability of the state, as a partner in ensuring access and providing resources to vulnerable populations • Private sector, through inclusive value chains with organized civil society partners

For the public inquiry fields below are optional

2. Broad typology of the issue

(*)	<i>External driver</i>	<i>Internal to food systems</i>	<i>Both</i>
Is the issue either or both?			•

(*)	<i>Economic (and productive)</i>	<i>Social and Cultural</i>	<i>Governance (institutions, rights, etc.)</i>	<i>Environmental (resources, etc.)</i>	<i>Other (SPECIFY)</i>
Main nature of the issue	**	*	**		
Nature of the main impact of the issue on FSN	**	**	*		

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	<i>Classification (**)</i>		
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?			Systemic issue
2. Breadth: Are there many people affected?			Many
3. Scale: local/regional/global?	Local <i>Individuals, households, communities</i>	Region <i>Value chains, markets</i>	Global food system infrastructure and orientation

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

For items 4-11 below, please use the classification [— — , — , 0, +, ++]:
 Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)

4. Impact on Availability	0		
5. Impact on Access	- - -		
6. Impact on Utilization/ nutrition	- Cheap foods are often the most lacking in nutritional value		
7. Impact on Stability	-		
8. Impact on most vulnerable people	- - Unequal distribution of foods and resources affect vulnerable populations the most.		
9. Impact on women	- - Women are frequently more vulnerable (disempowered) than men. Women also are linked to children, which tend to be more vulnerable than adults.		
10. Impact on children	- - Children are among the most vulnerable populations, with little chance to make claims or be heard (i.e., little power).		
11. Impact on marginalized populations	- -		
12. Cost to address the issue			High

(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

4. Time Scale

<i>Timeframe (*)</i>	<i>Now/Short term (1-5 years)</i>	<i>Medium term (5-10 years)</i>	<i>Long term (10-20 years +)</i>
Moment when the issue will have an impact	*	*	*
Moment to act to address the issue	***	*	*

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.			High
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6. Additional Supporting Information

Additional information

Differential access to power, including the institutional relations that concentrate power in few hands, is the principal structural contributor to vulnerability. Access to land, the larger political economy that structures the relations between farmers and the national and global economy, war, conflict, civil strife, and disease all play a role in distributing—or concentrating—power, and hence, in shaping vulnerability. There is a general agreement in the vulnerability literature of the types of social differentiation and marginalization that produce or exacerbate vulnerability. We must pay attention to how vulnerabilities are generated and patterned to adequately understand and address inequalities in the global food system.

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

Evidence

Significant case studies that detail the way in which vulnerability reduces access to good food that nourishes people and allows them to maintain productive, meaningful lives.

Knowledge gaps

References

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Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.



HLPE Inquiry

Critical and Emerging Issues for Food Security and Nutrition

Questionnaire

About the respondent

Name, Surname and Institution	Miguel Gomez and Mark Milstein, Cornell University	
Do you answer on behalf of your institution, or as an individual?	On behalf of institution	
Do you agree if this contribution is made available to the public as part of the proceedings?	Yes	
Country of the responding individual/institution Please mention international or regional, the case being	USA	

1. Overview of the issue

Issue <i>in 2 lines</i>	Negative impacts of a lack of access to food markets and the absence of critical markets.	
Description of the issue <i>in less than 5 lines</i>	Lack of access to food markets, for producers and consumers, and missing markets essential to facilitate appropriate food value chain performance (e.g. finance, inputs, marketing services) may put certain communities at risk of food insecurity and malnutrition.	
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>	Challenge	
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition <i>In less than 10 lines.</i> Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.	Food Value Chain analysis can contribute to assess the extent of food insecurity and malnutrition in privately-driven value chains. Economic models explaining poverty traps, together with welfare economics theory can identify the issue and its importance for food security and nutrition.	

Main response proposed to address the issue	<ul style="list-style-type: none"> • Conduct a systematic empirical analysis of food value chains in several regions and for several products, worldwide. This analysis will collect data to assess the interdependencies between food value chain efficiency/equity (including the markets associated to production and distribution such as financial markets, and post-harvest/marketing services) and food security and nutrition outcomes. • Similarly, the study can explore the business innovations that are taking place to incorporate poor farmers into value chains as well as to reach underserved consumers/populations.
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Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

Main actor(s) concerned or involved in the response proposed	<ul style="list-style-type: none"> Donors, food industry, government, academic researchers.
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For the public inquiry fields below are optional

2. Broad typology of the issue

(*)	<i>External driver</i>	<i>Internal to food systems</i>	<i>Both</i>
Is the issue either or both?			BOTH – in some cases policy intervention is required; in other cases, endogenous, business innovation is called for

(*)	<i>Economic (and productive)</i>	<i>Social and Cultural</i>	<i>Governance (institutions, rights, etc.)</i>	<i>Environmental (resources, etc.)</i>	<i>Other (SPECIFY)</i>
Main nature of the issue	*				
Nature of the main impact of the issue on FSN	*				

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	<i>Classification (**)</i>	
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?		Systemic issue
2. Breadth: Are there many people affected?		Many
3. Scale: local/regional/global?		Global

For items 4-11 below, please use the classification [— — , — , 0, +, ++]:

Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)

4. Impact on Availability	--
5. Impact on Access	--
6. Impact on Utilization/ nutrition	0
7. Impact on Stability	-
8. Impact on most vulnerable people	-- Participants in food value chains, including producers, workers in the supply chain systems, and consumers

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

9. Impact on women	0		
10. Impact on children	-		
11. Impact on marginalized populations	? (No answer)		
12. Cost to address the issue			High

(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

4. Time Scale

<i>Timeframe (*)</i>	<i>Now/Short term (1-5 years)</i>	<i>Medium term (5-10 years)</i>	<i>Long term (10-20 years +)</i>
Moment when the issue will have an impact	**	**	**
Moment to act to address the issue	***		

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.			*
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6. Additional Supporting Information

<i>Additional information</i>
<i>Evidence</i>
<i>Knowledge gaps</i>

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

References

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Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.



HLPE Inquiry

Critical and Emerging Issues for Food Security and Nutrition

Questionnaire

About the respondent

Name, Surname and Institution	Rebecca L Schneider, Cornell University	
Do you answer on behalf of your institution, or as an individual?		As individual
Do you agree if this contribution is made available to the public as part of the proceedings?		YES
Country of the responding individual/institution Please mention international or regional, the case being	USA	

1. Overview of the issue

Issue <i>in 2 lines</i>	Chronic water scarcity and mismanagement of surface and ground waters.	
Description of the issue <i>in less than 5 lines</i>	Chronic water scarcity impacts ¼ of the world's population and will increase with climate change and population growth. Mismanagement of water contributes to the global water crisis, with direct but preventable impacts on food availability, disease, ecosystem decay, and conflict.	
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>	Challenge	
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition <i>In less than 10 lines.</i> Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.	This issue was identified through literature reviews, through discussions at conferences including a conference we organized and held in Beijing, China, August 2011 entitled "Blueprint for Sustainable Water Resources", and in various discussions with the strong community of ~65 faculty with water expertise at Cornell University.	

Main response proposed to address the issue	<ul style="list-style-type: none"> • There is an imperative need for a concerted, international program focused on the rapid adoption of sustainable, integrated approaches to surface water and groundwater management. • The overall strategy should be to judiciously manage all freshwater within watersheds, at regional and local levels - save rainfall when and where it occurs, minimize pollution, and avoid losing freshwater through inefficient irrigation or unintended stormwater runoff. • We need to develop strategies to take advantage of the high intensity rainfalls and associated river floods, capturing and storing the excess water for later usage, or for collaborative sharing with drier regions. • Groundwater use needs more informed, aquifer-wide and longer-term planning, including
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	<p>protection of recharge areas, regular monitoring of water table levels, and a system of rule curves linked to pumpage rates to avoid overdraft.</p> <ul style="list-style-type: none"> • Dam and reservoir operations, whether for hydroelectric power, water supply or flood control, must mimic or restore natural environmental flows. • Irrigation currently accounts for ~¾ of global water usage, which will continue to rise given increasing population size and demands, and impacts of more uncertain rainfall. Therefore, a multi-pronged program should be developed which includes more drought resistant genetic varieties, highly efficient drip irrigation, and reclamation of salinized lands, as well as a thoughtful balancing of water-energy interactive impacts. • Finally, water needs to be priced fairly, using tiered systems that ensure basic water needs are met but which also account for externalities and protect the basic ecosystem needs, e.g. not forcing rivers and wetlands to run dry. • We believe that, with good guidance and cross-border collaboration, the vast amount of freshwater around the planet can be managed to sustain both the earth's ecosystems and its people, and provide a powerful strategy to buffer the impacts of climate change.
<p>Main actor(s) concerned or involved in the response proposed</p>	<p>Water is the foundation of every enterprise, which translates to each individual river basin simultaneously being used for diverse and contradictory goals including drinking water supply, flood control, hydroelectric power generation, irrigation supply, fisheries, and waste disposal. The associated suite of relevant stakeholders include engineers, city planners, farmers, and wildlife biologists whose responsibilities and academic training often preclude their ability to communicate with each other in order to develop mutually beneficial goals and strategies. Engineers are often assigned primary leadership roles for water infrastructure projects, but are not trained to recognize or protect the necessary biophysical processes needed to sustain the water resource. It is critical to bring representative leaders from all the relevant disciplines to form an interdisciplinary leadership team which can design an effective international program for the sustainable management of surface and ground-water resources.</p>

For the public inquiry fields below are optional

2. Broad typology of the issue

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

(*)	<i>External driver</i>	<i>Internal to food systems</i>	<i>Both</i>
Is the issue either or both?	*	*	Most directly, humans need to drink water to survive, and then we require water to grow the crops which we eat and water scarcity immediately impacts these priority needs. However expanding outward, diversion of water for industry, hydroelectric power and other uses or water pollution, whether deliberately for sewage disposal or unintentionally, all reduce the availability of water for the direct needs of drinking water supply and irrigation.

(*)	<i>Economic (and productive)</i>	<i>Social and Cultural</i>	<i>Governance (institutions, rights, etc.)</i>	<i>Environmental (resources, etc.)</i>	<i>Other (SPECIFY)</i>
Main nature of the issue	*	*	*	*	
Nature of the main impact of the issue on FSN	*	*	*	*	

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	<i>Classification (**)</i>	
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?	Critical point	Systemic issue
2. Breadth: Are there many people affected?		Many
3. Scale: local/regional/global?		Global

For items 4-11 below, please use the classification [— — , — , 0, +, ++]:

Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)

4. Impact on Availability	--
5. Impact on Access	--
6. Impact on Utilization/ nutrition	--
7. Impact on Stability	-- Water scarcity is directly linked to increasing conflict and violence.
8. Impact on most vulnerable people	-- Impoverished, including both urban dwellers with limited access to water and rural farmers whose livelihoods are water-

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	limited		
9. Impact on women	<p>--</p> <p>Women were identified as the key group to engage in water management because of their daily roles in cooking, cleaning, and crop irrigation (Dublin Water Conference 1992).</p>		
10. Impact on children	<p>--</p> <p>Children are the victims in water scarcity because they are most affected by associated food scarcity and water-borne diseases. Children, particularly girls, also are removed from school in order to transport water long-distances each day.</p>		
11. Impact on marginalized populations	--		
12. Cost to address the issue		Middle	

(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

4. Time Scale

<i>Timeframe (*)</i>	<i>Now/Short term (1-5 years)</i>	<i>Medium term (5-10 years)</i>	<i>Long term (10-20 years +)</i>
Moment when the issue will have an impact	*	*	*
Moment to act to address the issue	*	*	

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.			Very High
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6. Additional Supporting Information

Additional information

Chronic water scarcity is becoming a global concern - limiting drinking water supplies, contributing to diseases associated with contaminated water, and impacting irrigation and crop yields. These problems are being exacerbated by the warming temperatures and shifts in precipitation patterns associated with climate change. However, humans are key contributors to water scarcity through growing population demands and serious mis-management of existing water supplies, i.e. multiple, simultaneous, and non-integrated water practices on individual river systems without consideration of the cumulative impacts or protection of the biophysical processes which maintain water quantity and quality. This mis-management is mirrored below-ground where the increasing dependency on groundwater aquifers has resulted in uncontrolled overdraft, water table declines, and drying out of streams and surface soils. Without strategic course corrections in the very near future, declining global freshwater reserves will result in ecosystem failures, widespread declines in crop production, and societal conflict.

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

Evidence

There is consensus among water professionals and scientists on the concerns about chronic water scarcity globally. The causes are numerous, but it was identified publicly as a “crisis in mis-management” at the 2nd World Water Forum in the Hague, and again at the 4th World Water Forum in Mexico. In particular, despite almost 50 years of observations of declining water table declines in the U.S.’s Ogallala aquifer and elsewhere, only recently have alarms been raised concerning the consequences of severe overdraft where communities have become overly dependent on groundwater to solve their water scarcity problems (FAO 2003). The dominance of water’s use in agriculture, nearly 70% of all water use globally, is also well-recognized (Gleick 1998), but it is worrisome that farmers and engineers alike still assume and accept that ~50% of extracted water is lost before it ever reaches the crop. Nobel-prize winning reports by the Intergovernmental Panel on Climate Change (IPCC, 2007) succinctly presented the anticipated changes in global precipitation patterns and associated water availability, the impacts of which are already being observed in many places, which in turn laid the groundwork for subsequent assessments of water vulnerabilities for Europe, the Mediterranean and other regions globally. Weather extremes, such as heat and drought, have been directly linked to increased societal violence (Hsiang et al. 2013) and the potential for either global conflict or collaboration due to water scarcity is under current discussion at the 23rd annual meeting of the Stockholm International Water Institute. Collaborative, on-going research at Cornell has helped identify a suite of strategies needed for sustainable, ecologically and watershed-based management of water resources that form the foundation toolkit to solve this problem.

Knowledge gaps

We have a solid knowledge foundation concerning the hydrologic processes in surface water bodies and the associated best management strategies to achieve sustainable management. Information on groundwater aquifers, and particularly the assessment of aquifer extent and status, recharge rates, and hydraulic conductivities in developing regions, is still incomplete. However the real problems for improving water management are: a) limited knowledge of equitable water pricing schemes that account for water’s true value, b) strategies to accurately include the balance of externality costs of water pollution and drought against costs of improved watershed management, c) how to successfully educate policy-makers and all stakeholders to increase adoption of improved water resource management.

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Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.



HLPE Inquiry

Critical and Emerging Issues for Food Security and Nutrition

Questionnaire

About the respondent

Name, Surname and Institution	Robert Howarth, Cornell University	
Do you answer on behalf of your institution, or as an individual?	On behalf of institution	
Do you agree if this contribution is made available to the public as part of the proceedings?	Yes	
Country of the responding individual/institution Please mention international or regional, the case being	USA	

1. Overview of the issue

Issue <i>in 2 lines</i>	Pressure on land-resource base and soil degradation	
Description of the issue <i>in less than 5 lines</i>	The expected rise in demand for food, fiber and fuel will increase the pressure on our land resource base; land loss and soil erosion are exacerbating food and nutritional insecurity.	
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>	Challenge	
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition <i>In less than 10 lines. Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.</i>	Large-scale data analysis, meta-review of available literature, expert consultation and long experience in the field.	

Main response proposed to address the issue	Overall, the combination of consumption-oriented measures such as the improvement of diets to enhance efficiency in biomass use and its substitutes, delinking the biofuels and food markets, the reduction of food loss and waste, the control of biomaterials consumption; with improved land management and restoration of degraded land, may allow us to save 161 to 319 million hectares of land by 2050. Addressing healthy diets and soil health / sustainability simultaneously is critical to food and nutrition security.
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Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

Main actor(s) concerned or involved in the response proposed	Agricultural scientists, health and nutrition scientists, geographers, ecologists, biogeochemists, energy analysts.
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For the public inquiry fields below are optional

2. Broad typology of the issue

(*)	External driver	Internal to food systems	Both
Is the issue either or both?	*		

(*)	Economic (and productive)	Social and Cultural	Governance (institutions, rights, etc.)	Environmental (resources, etc.)	Other (SPECIFY)
Main nature of the issue	*	*		*	
Nature of the main impact of the issue on FSN					

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	Classification (**)		
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?			Systemic issue
2. Breadth: Are there many people affected?			Many
3. Scale: local/regional/global?			Global

For items 4-11 below, please use the classification [— — , — , 0 , + , ++]:

Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)

4. Impact on Availability	--
5. Impact on Access	-
6. Impact on Utilization/ nutrition	--
7. Impact on Stability	--
8. Impact on most vulnerable people	--
9. Impact on women	--
10. Impact on children	--
11. Impact on marginalized populations	--

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

12. Cost to address the issue

Middle

(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

4. Time Scale

<i>Timeframe (*)</i>	<i>Now/Short term (1-5 years)</i>	<i>Medium term (5-10 years)</i>	<i>Long term (10-20 years +)</i>
Moment when the issue will have an impact			*
Moment to act to address the issue	*	*	*

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.

Middle

6. Additional Supporting Information

Additional information

According to a 2014 report from UNEP (“Assessing Global Land Use: Balancing Consumption with Sustainable Supply”), limits to further agricultural intensification will be reached within the coming decade or two. Such limits are attributable to growing pressure on the global land and resource base due to the anticipated rise in demand for food, fuel, and fiber as well as the impacts of unsustainable agricultural practices that degrade land and soils, contribute to a loss of biodiversity, and negatively impact the livelihoods of small-scale and family farmers and the ability of rural and urban populations to afford healthy food that meets their nutritional needs.

In conjunction with the negative effects of climate change, land and soil degradation is one of the greatest threats to food security (Azadi et al 2011).

Evidence

Based on a review of 26 global/regional and 54 national/local studies, the International Food Policy Research Institute (IFPRI) concluded that approximately 23% of global soils are being degraded, “and in its severe form leads to the abandonment and shift of 2 to 5 million hectares of cropland a year” (UNEP 2014). Moreover – and perhaps more pressing with regard to questions of food and nutrition security – the IFPRI review found that 38% of agricultural land worldwide was being degraded. 1,200 million hectares of the total 1,900 million hectares of degraded land were found to be “seriously degraded,” leaving approximately 700 million hectares that can potentially be restored at relatively low costs (UNEP 2014).

The major causes of soil degradation include overgrazing (34.5%), deforestation (29.5%), and mismanagement of arable land (35%) (Food and Agriculture Organization (2011). Although technological innovations have allowed for agricultural productivity to increase, the costs of such have included “salinization, soil erosion, eutrophication, and agrochemical contamination” (UNEP 2014). Global trends in crop production intensification have resulted in a substantial increase in N-fertilizer per hectare of cropland (from an index of 100 in 1961 to an index of 650 in 2005) as well as increases in P-fertilizer and K-fertilizer. While primary crops yield have increased, they have not increased in comparable proportion to the increase in fertilizer use and the impacts of increased fertilizers have resulted in eutrophication, acidification of surface waters (resulting in a loss of biodiversity), increased greenhouse gas emissions, and higher levels of nitrates in drinking water (which poses cancer risks) (UNEP 2014).

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

Knowledge gaps

References

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United Nations Environment Program (UNEP). (2014). *Assessing Global Land Use: Balancing Consumption with Sustainable Supply: A Report of the Working Group on Land and Soils of the International Resource Panel.* Bringezu S., Schütz H., Pengue W., O'Brien M., Garcia F., Sims R., Howarth R., Kauppi L., Swilling M., and Herrick J.

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.



HLPE Inquiry

Critical and Emerging Issues for Food Security and Nutrition

Questionnaire

About the respondent

Name, Surname and Institution	Alexander Travis & Daryl Van Nydam, Cornell University	
Do you answer on behalf of your institution, or as an individual?	On behalf of institution	
Do you agree if this contribution is made available to the public as part of the proceedings?	Yes	
Country of the responding individual/institution Please mention international or regional, the case being	USA	

1. Overview of the issue

Issue <i>in 2 lines</i>	Sustainably improving global animal source food production/harvesting to meet increasing needs for balanced nutrition & livelihoods.	
Description of the issue <i>in less than 5 lines</i>	Animal source food consumption is too high in some countries and too low in others, with socioeconomic, environmental, and health consequences. Solutions must be developed to improve both small and large-scale production & reduce environmental impact.	
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>		Both
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition <i>In less than 10 lines. Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.</i>	These issues were identified in consultation with colleagues at Cornell with global experience, attendance at international conferences, and literature reviews. Personal experience and research in sub-Saharan Africa and Asia; integrated research on designing/testing interventions to improve smallholder animal source food (ASF) production and monitor impacts on household nutrition, income and wildlife conservation, as well as improving efficiency of intensive production.	

Main response proposed to address the issue	<ul style="list-style-type: none"> • Perform research and education, and enhance needed local capacities, to improve access to sustainably produced ASF in poor countries • Education campaigns to change ASF consumption practices in wealthy nations to reduce environmental impacts and advance public health, • Innovate production methods that are more efficient economically and environmentally at both smallholder and large, intensified production levels. • Protect water resources • Diversified ASF production (including poultry, fish, small ruminants) requires context-dependent
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	<p>optimization of best practices.</p> <ul style="list-style-type: none"> • Wild ASF harvesting practices must be altered through engagement with industry and consumers to improve sustainability of harvesting of marine and bushmeat resources. • Identify forward-looking solutions to the impact of climate change on ASF production.
Main actor(s) concerned or involved in the response proposed	National and local government agencies, communities, development organizations, universities and research institutions.

For the public inquiry fields below are optional

2. Broad typology of the issue

(*)	<i>External driver</i>	<i>Internal to food systems</i>	<i>Both</i>
Is the issue either or both?			*

(*)	<i>Economic (and productive)</i>	<i>Social and Cultural</i>	<i>Governance (institutions, rights, etc.)</i>	<i>Environmental (resources, etc.)</i>	<i>Other (SPECIFY)</i>
Main nature of the issue	**	*	*	**	
Nature of the main impact of the issue on FSN	**	*	**	**	

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	Classification (**)	
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?		Systemic issue
2. Breadth: Are there many people affected?		Many
3. Scale: local/regional/global?	Local	Region/Global
	<i>Local governments and institutions</i>	<i>Livestock value chains and harvesting practices are both regional and global</i>

For items 4-11 below, please use the classification [— — , — , 0, +, ++]:
 Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)

4. Impact on Availability	++
5. Impact on Access	++
6. Impact on Utilization/ nutrition	++
7. Impact on Stability	++
	At a household level, livestock are a primary

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	<p>coping mechanism/means of savings in much of the world. At a regional level, many people who now engage in cropping will need to switch to livestock production as their region becomes semi-arid. In some areas currently relying on livestock, the species they support will change</p>
8. Impact on most vulnerable people	<p>++ Health and income of smallholder farmers</p>
9. Impact on women	<p>++ Small livestock production (e.g. goats, poultry) is often a women's activity, leading to opportunities to improve household income in a way that promotes utilization by women/children. Impacts of ASF on maternal health are enormous. Iron-deficiency is world's most prevalent nutritional deficiency.</p>
10. Impact on children	<p>++ ASF are an important source of micronutrients as well as iron/protein. The micronutrients in particular have been shown to have enormous impacts on child health and both physical and cognitive development.</p>
11. Impact on marginalized populations	<p>++ Livestock provide the vast majority of agricultural GDP in many arid/semi-arid lands, which are predicted to increase with climate change. These populations are often very marginalized.</p>
12. Cost to address the issue	<p>Context-dependent. Some interventions can make dramatic improvements at very low cost. Systemic changes requiring infrastructure building will be more cost-intensive.</p>

(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

4. Time Scale

<i>Timeframe (*)</i>	<i>Now/Short term (1-5 years)</i>	<i>Medium term (5-10 years)</i>	<i>Long term (10-20 years +)</i>
Moment when the issue will have an impact	**	**	***
Moment to act to address the issue	****	***	*

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.			High
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6. Additional Supporting Information

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

Additional information

Evidence

Knowledge gaps

Many interventions have been performed and much has been published on trying to increase smallholder ASF production. Very little has been published that links improved production with increased consumption by those households.

Aquaculture and relation with local marine environment is an area where much work remains to be done.

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Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.



HLPE Inquiry

Critical and Emerging Issues for Food Security and Nutrition

Questionnaire

About the respondent

Name, Surname and Institution	Robert Howarth, Cornell University	
Do you answer on behalf of your institution, or as an individual?	On behalf of institution	
Do you agree if this contribution is made available to the public as part of the proceedings?	Yes	
Country of the responding individual/institution Please mention international or regional, the case being	USA	

1. Overview of the issue

Issue <i>in 2 lines</i>	Adapting food production to meet the challenges of climate change.	
Description of the issue <i>in less than 5 lines</i>	Climate change will increasingly threaten food security, yet paradoxically agriculture is a major driver of climate change. How can greenhouse gas emissions from agriculture be reduced?	
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>	Challenge	
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition <i>In less than 10 lines.</i> Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.	Climate change is often viewed primarily as driven by carbon dioxide emissions from fossil fuels. However, increasing evidence points to agriculture as a major driver, and one rivalling fossil fuels, because of the growing recognition of the critical importance of methane as a greenhouse gas. There is an urgent need to better characterize greenhouse gas emissions (particularly methane) from agricultural systems, and to design approaches for reducing these emissions.	

Main response proposed to address the issue	<ul style="list-style-type: none"> • Characterize emissions for greenhouse gases (particularly methane) from agricultural systems, emphasizing animal agriculture and rice cultivation because of their importance as sources of methane; • Develop best management practices for reducing greenhouse gas emissions from agriculture; • Explore policy options for encouraging reduced greenhouse gas emissions from agriculture, including provisions for reducing global production of meat and meat products.
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Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

Main actor(s) concerned or involved in the response proposed	Agricultural scientists, ecologists, biogeochemists, agricultural economists
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For the public inquiry fields below are optional

2. Broad typology of the issue

(*)	External driver	Internal to food systems	Both
Is the issue either or both?	*		

(*)	Economic (and productive)	Social and Cultural	Governance (institutions, rights, etc.)	Environmental (resources, etc.)	Other (SPECIFY)
Main nature of the issue	*		*	*	
Nature of the main impact of the issue on FSN					

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	Classification (**)	
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?		Systemic issue
2. Breadth: Are there many people affected?		Many
3. Scale: local/regional/global?		Global

For items 4-11 below, please use the classification [— — , — , 0 , + , ++]:

Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)

4. Impact on Availability	++
5. Impact on Access	+
6. Impact on Utilization/ nutrition	++
7. Impact on Stability	++
8. Impact on most vulnerable people	++
9. Impact on women	++
10. Impact on children	++
11. Impact on marginalized populations	++

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

12. Cost to address the issue		Middle	
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(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

4. Time Scale

<i>Timeframe (*)</i>	<i>Now/Short term (1-5 years)</i>	<i>Medium term (5-10 years)</i>	<i>Long term (10-20 years +)</i>
Moment when the issue will have an impact		*	*
Moment to act to address the issue	*	*	*

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.		Middle	
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6. Additional Supporting Information

Additional information

Evidence

The latest synthesis report from the Intergovernmental Panel on Climate Change (IPCC 2013) concluded that when viewed over the time frame of 10 years following emissions, methane now equals or exceeds carbon dioxide in terms of a driver of global climate change, with global emissions for methane from all sources of 39 Pg CO₂-equivalents vs. 37 Pg for carbon dioxide. This short time frame is a critical one, because of the growing recognition of how methane is particularly important on shorter time frames: unless emissions of methane and black carbon are reduced immediately, the average temperature will rise to dangerously high levels (1.5 to 2 deg. C above the 20th Century baseline) within 15 to 35 years, regardless of carbon dioxide emissions (UNEP/WMO 2011; Shindell et al. 2012). Only by reducing methane emissions and those of black carbon can the planet be afforded some protection over these coming decades of reaching these dangerous temperatures, and potentially creating runaway feedbacks of global warming.

Agriculture is the major source of methane emissions globally, particularly from animal agriculture but also from rice culture (IPCC 2013). However, these emissions remain poorly characterized and therefore uncertain.

Knowledge gaps

- Better characterization of methane emissions from animal agriculture and from rice culture;
- Appropriate management practices for reducing methane emissions.

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

References

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Shindell D, et al. 2012. Simultaneously mitigating near-term climate change and improving human health and food security. *Science* 335: 183-189.

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Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.



HLPE Inquiry

Critical and Emerging Issues for Food Security and Nutrition

Questionnaire

About the respondent

Name, Surname and Institution	Drew Harvell and Ruth Richardson, Cornell University	
Do you answer on behalf of your institution, or as an individual?	On behalf of institution	
Do you agree if this contribution is made available to the public as part of the proceedings?	Yes	
Country of the responding individual/institution Please mention international or regional, the case being	USA	

1. Overview of the issue

Issue <i>in 2 lines</i>	Marine environments and resources are being degraded and lost by human activity.	
Description of the issue <i>in less than 5 lines</i>	The biggest concerns are rising seawater levels, coastal pollution from sewage, agriculture runoff and aquaculture, overfishing, and large dam construction. These all lead to reduced marine life that negatively impacts livelihoods and nutrition.	
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>	Challenge	
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition <i>In less than 10 lines. Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.</i>	Field studies, molecular techniques, chemical analyses, mathematical modeling, literature review and international experts meetings	

Main response proposed to address the issue	<ul style="list-style-type: none"> • Integrate land/water development to break the cycle of segmented pollution (where agricultural run-off pollutes marine areas, which causes fishing communities to intensify agriculture. • Regulate fishing across borders with multi-stakeholder and integrated (ecology, livelihood) development approaches. • Educate consumers as to the most sustainable marine resources • Develop innovative new sanitation systems that will prevent human waste from entering marine territories • Develop less damaging forms of aquaculture production that better mimic the marine environment.
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Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

Main actor(s) concerned or involved in the response proposed	Individuals engaged in marine resource activities, nearby communities involved in polluting activities, local, regional and national governments designing new policies and institutions, multi-lateral research and funding agencies
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For the public inquiry fields below are optional

2. Broad typology of the issue

(*)	<i>External driver</i>	<i>Internal to food systems</i>	<i>Both</i>
Is the issue either or both?	*	*	

(*)	<i>Economic (and productive)</i>	<i>Social and Cultural</i>	<i>Governance (institutions, rights, etc.)</i>	<i>Environmental (resources, etc.)</i>	<i>Other (SPECIFY)</i>
Main nature of the issue	*	*	**	***	
Nature of the main impact of the issue on FSN	**	*	*	***	

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	<i>Classification (**)</i>		
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?			Systemic issue
2. Breadth: Are there many people affected?			Many
3. Scale: local/regional/global?	Local <i>Individuals, households and communities who depend on marine resources</i>	Region <i>Regions and nations threatened by marine pollution, loss of economic resource and rising waters</i>	Global

For items 4-11 below, please use the classification [— — , — , 0, +, ++]:

Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)

4. Impact on Availability	--
5. Impact on Access	-
6. Impact on Utilization/ nutrition	-
7. Impact on Stability	0

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

8. Impact on most vulnerable people	--		
9. Impact on women	--		
10. Impact on children	-		
11. Impact on marginalized populations	--		
12. Cost to address the issue		Middle	

(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

4. Time Scale

<i>Timeframe (*)</i>	<i>Now/Short term (1-5 years)</i>	<i>Medium term (5-10 years)</i>	<i>Long term (10-20 years +)</i>
Moment when the issue will have an impact	*	**	***
Moment to act to address the issue	*		

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.		Middle	
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6. Additional Supporting Information

<i>Additional information</i>
<i>Evidence</i>
<i>Knowledge gaps</i>
<ul style="list-style-type: none"> • How to better treat human sewage and develop best practices of aquaculture.

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

References

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Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.



HLPE Inquiry

Critical and Emerging Issues for Food Security and Nutrition

Questionnaire

About the respondent

Name, Surname and Institution	Chris Watkins Cornell University	
Do you answer on behalf of your institution, or as an individual?	On behalf of University	
Do you agree if this contribution is made available to the public as part of the proceedings?	Yes	
Country of the responding individual/institution Please mention international or regional, the case being	USA	

1. Overview of the issue

Issue <i>in 2 lines</i>	Food wasted in consumption, production, storage and distribution needs to be reduced, recycled and re-used.	
Description of the issue <i>in less than 5 lines</i>	A majority of food wasted occurs in rich countries at the retail or consumption stage; food waste in poor countries tends to occur at the post-harvest processing and storage stages with improperly stored food being a leading cause of disease.	
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>		Both
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition <i>In less than 10 lines. Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.</i>	Research on new cultivars of importance to New York growers, on the effects of postharvest techniques on the nutritional quality of fruit, and to better understand the underlying mechanisms in fruit responses to storage conditions such as temperature, atmosphere, and 1-MCP, and the interaction of these factors with the development of storage disorders.	

Main response proposed to address the issue	<ul style="list-style-type: none"> • Better information to farmers making production decisions so they can match supply to demand. • Better communication with consumers to discourage waste. • Recycling of nutrients in more integrated farm/food systems. • Better storage facilities to prevent mold and spoilage. • Improve transportation systems and refrigeration capacity in developing countries • Work with plant breeders to develop food targeted to reduce waste – food that spoils slowly or is resistant to rot and toxins or is more uniformly appealing to consumers.
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Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

Main actor(s) concerned or involved in the response proposed	Farmers, consumers, local and national governments, extension agents, research institutions and university scientists.
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For the public inquiry fields below are optional

2. Broad typology of the issue

(*)	<i>External driver</i>	<i>Internal to food systems</i>	<i>Both</i>
Is the issue either or both?		*	

(*)	<i>Economic (and productive)</i>	<i>Social and Cultural</i>	<i>Governance (institutions, rights, etc.)</i>	<i>Environmental (resources, etc.)</i>	<i>Other (SPECIFY)</i>
Main nature of the issue	*	*	**	**	
Nature of the main impact of the issue on FSN	*	*	**		

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	<i>Classification (**)</i>	
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?		Systemic issue
2. Breadth: Are there many people affected?		Many
3. Scale: local/regional/global?	Local	Region
	<i>Farmers, private sector, local governments and institutions</i>	<i>Rich and poor countries, very different issues</i>

For items 4-11 below, please use the classification [— — , — , 0, +, ++]:

Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)

4. Impact on Availability	--
5. Impact on Access	--
6. Impact on Utilization/ nutrition	-
7. Impact on Stability	-
8. Impact on most vulnerable people	- Reducing food waste at the household and national level would improve security
9. Impact on women	-
10. Impact on children	-

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

11. Impact on marginalized populations	-		
12. Cost to address the issue		Middle	

(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

4. Time Scale

<i>Timeframe (*)</i>	<i>Now/Short term (1-5 years)</i>	<i>Medium term (5-10 years)</i>	<i>Long term (10-20 years +)</i>
Moment when the issue will have an impact	***	**	***
Moment to act to address the issue	****	***	*

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.		Middle	
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6. Additional Supporting Information

<p><i>Additional information</i></p> <ul style="list-style-type: none"> • Cereals represent more than half of all food lost or wasted, 53%, by calorie content. By weight, fruits and vegetables represent, at 44%, the largest share of global food loss and food waste (World Bank, 2014). • Most losses and waste take place at the consumption (35%), production (24%), and handling and storage (24%) stages of the food value chain (World Bank, 2014). • There are marked differences between developed and developing countries and across regions. Overall, some 56% of total food loss and food waste occurs in the developed world; the remaining 44% across developing regions (World Bank, 2014).
<p><i>Evidence</i></p>
<p><i>Knowledge gaps</i></p>

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

References

World Bank, 2014. *Food Price Watch* (Issue 16/ Year 5).

Tong, C. B., McKay, S. J., Luby, J., Beaudry, R., Contreras, C., Nock, J. F., & Watkins, C. B. (2013). Using mixed effects models to estimate the effect of harvest date and its interactions with post-harvest storage regime on apple fruit firmness. *J. Hort. Sci. Biotechnol.* 88:29-36.

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.



HLPE Inquiry

Critical and Emerging Issues for Food Security and Nutrition

Questionnaire

About the respondent

Name, Surname and Institution	Rebecca Stoltzfus and Sera Lewise Young, Cornell University	
Do you answer on behalf of your institution, or as an individual?	On behalf of institution	
Do you agree if this contribution is made available to the public as part of the proceedings?	Yes	
Country of the responding individual/institution Please mention international or regional, the case being	USA	

1. Overview of the issue

Issue <i>in 2 lines</i>	People need more than adequate calories – they need healthy diets, especially vulnerable people.	
Description of the issue <i>in less than 5 lines</i>	Current food systems do not ensure healthy diets for many vulnerable populations, e.g. pregnant & lactating women, people living with chronic diseases. Although calories are often abundant, healthy and diverse diets rich in micronutrients and fiber are rare.	
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>		Opportunity
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition <i>In less than 10 lines. Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.</i>	These issues were identified in consultation with colleagues at Cornell, attendance at international conferences, and literature reviews in preparation for various manuscripts (see below).	

Main response proposed to address the issue	<ul style="list-style-type: none"> • Link household food security interventions to social and behavior change interventions to address nutrition security for vulnerable persons within households, especially pregnant and lactating women, children under 2 years, people living with chronic diseases and the elderly. • Develop agricultural and market interventions to make diverse and micronutrient-rich diets accessible to vulnerable households. Interventions may include crop diversification, agroecological practices, livestock interventions, improved markets and value chains for fruits and vegetables, targeted food fortification (especially for infant foods), and biofortification. • Creation of social safety net programs that focus on healthy diets for vulnerable populations (e.g.
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	pregnant women, people living with chronic diseases) rather than mere caloric sufficiency.
Main actor(s) concerned or involved in the response proposed	<ul style="list-style-type: none"> • Primary health care workers, including facility-based and community-based staff, and those who design their scopes of work and supervisory structures. • Agriculture extension agents and those who design their scopes of work and supervisory structures. • Policy-makers designing and deciding funding for safety net programs.

For the public inquiry fields below are optional

2. Broad typology of the issue

(*)	External driver	Internal to food systems	Both
Is the issue either or both?	*		

(*)	Economic (and productive)	Social and Cultural	Governance (institutions, rights, etc.)	Environmental (resources, etc.)	Other (SPECIFY)
Main nature of the issue	*	*			Health burden exacerbating food insecurity
Nature of the main impact of the issue on FSN		*			Could reduce adverse health outcomes.

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	Classification (**)		
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?			Systemic issue
2. Breadth: Are there many people affected?			Many
3. Scale: local/regional/global?			Global

For items 4-11 below, please use the classification [— — , —, 0, +, ++]:
 Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)

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4. Impact on Availability	-- Agricultural and market interventions could lead to the production of more diverse crops, which would decrease negative impacts of inadequate diets.
5. Impact on Access	++ Household food security and social safety net interventions would increase access to the most vulnerable, thus decreasing negative impacts of inadequate diets.
6. Impact on Utilization/ nutrition	-- Behavior change interventions could have major impact on improving dietary intake, thus decreasing negative impacts of inadequate diets.
7. Impact on Stability	-- Safety net programs would maintain stable food security access even as health conditions and life stages (pregnancy, old age, TB, HIV) reduce food security, thus decreasing the overall negative impacts of inadequate diets.
8. Impact on most vulnerable people	-- The most vulnerable people are also the most susceptible to unhealthy dietary options
9. Impact on women	-- The three proposed actions would target women as actors and as beneficiaries
10. Impact on children	-- Children would be beneficiaries of the proposed actions.
11. Impact on marginalized populations	-- The suggested interventions are focused on marginalized populations.
12. Cost to address the issue	Depends

(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

4. Time Scale

<i>Timeframe (*)</i>	<i>Now/Short term (1-5 years)</i>	<i>Medium term (5-10 years)</i>	<i>Long term (10-20 years +)</i>
Moment when the issue will have an impact	**	**	**
Moment to act to address the issue	**		

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.			High
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6. Additional Supporting Information

Additional information

Evidence

We know that in many places, calories are often over-abundant; obesity is increasingly associated with poverty. Yet the increasing availability of calories has not been accompanied by an increase in healthy diets, i.e. diets that are diverse, and rich in micronutrients and fiber (Drewnowski 2009).

There is also evidence to suggest that globally, current food systems do not ensure healthy diets for vulnerable populations. For example, pregnant & lactating women (Olson 1999), the elderly (Rose 1999), people living with chronic diseases such as HIV (Wiser et al 2011) and diabetes (Troy et al 2011) tend to experience greater food insecurity than others.

We also know that food insecurity is associated with poor nutritional status, disease, and psychosocial health outcomes among these same vulnerable populations.

Knowledge gaps

We do not know the difference in prevalence of food insecurity by gender, reproductive status, age, or chronic disease status, or the exact mechanisms by which food insecurity is linked with poor health.

More importantly, we do not know how to address the disparities in food insecurity. Specifically, there is a need to identify:

- Effective and sustainable strategies for increasing availability of animal source foods (especially milk and eggs) to poor households;
- Effective strategies for smallholder farmers to diversify;
- How to implement social and behavior change interventions to support healthy diets for women and children at scale;
- Best designs of safety net programs in different contexts, including the use of food or cash transfers;
- Whether and how to reverse the trend toward homogenization of the global food supply;
- Effective strategies for increasing availability of fruits and vegetables globally, and especially to communities that are both poor and living with the double burden of malnutrition (under and over-nutrition).

References

Drewnowski A. Obesity, diets, and social inequalities. *Nutrition Reviews*. 2009 May;67 Suppl 1:S36–9.

Olson CM. Nutrition and health outcomes associated with food insecurity and hunger. *J Nutr*. 1999 Feb;129(2S Suppl):521S–524S.

Rose D. Economic determinants and dietary consequences of food insecurity in the United States. *J Nutr*. 1999 Feb;129(2S Suppl):517S–520S.

Weiser SD, Young SL, Cohen CR, Kushel MB, Tsai AC, Tien PC, et al. Conceptual framework for understanding the bidirectional links between food insecurity and HIV/AIDS. *Am J Clin Nutr*. 2011 Dec;94(6):1729S–39S.

Troy LM, Olson S, Miller EA. *Hunger and Obesity*. Natl Academy Pr; 2011.

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.



HLPE Inquiry

Critical and Emerging Issues for Food Security and Nutrition

Questionnaire

About the respondent

Name, Surname and Institution	Roberta Schoen, National Academy of Sciences Board on Agriculture and Natural Resources National Research Council		
Dou you answer on behalf of your institution, or as an individual?	On behalf	<input checked="" type="checkbox"/> As individual	
Do you agree if this contribution is made available to the public as part of the proceedings?	<input checked="" type="checkbox"/> Yes	No	
Country of the responding individual/institution Please mention international or regional, the case being	Washington DC, USA		

1. Overview of the issue

Issue <i>in 2 lines</i>	Increased foodborne illness and infectious disease risks caused by animal production.		
Description of the issue <i>in less than 5 lines</i>	In many cases, particularly in the developing world, animal production is intensifying without the appropriate physical and management infrastructure needed to reduce increased food safety and infectious disease risks..		
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>	<input checked="" type="checkbox"/> Challenge	<input type="checkbox"/> Opportunity	It depends (please specify)
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition <i>In less than 10 lines. Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.</i>	While foodborne illness remains a challenge in developed economies, several international working groups and National Research Council studies have documented the increasing number of foodborne and zoonotic diseases emerging in conjunction with the expansion of animal production. Zoonotic pathogens have caused the majority of emerging infectious disease events in the last six decades, and the frequency of such events in the last two decades are increasing.		
Main response proposed to address the issue	A more robust infrastructure for veterinary/public health collaboration and involvement in the oversight of animal production is needed for the health and welfare of animal, humans, and in some cases, the natural ecosystems that are affected by production. The One Health paradigm (humans-animals-ecosystem) is most clearly apparent in the food production environment of developing countries.		

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Main actor(s) concerned or involved in the response proposed	Clearly national governments have a role to play in supporting domestic industries. In sub-Saharan Africa, where food-animal production contributes about 30 percent of the agricultural GDP and supports the livelihood of 150 million people, public expenditure on animal R&D is about 10% of all agricultural research spending. However, given the international implications of emerging disease, a global response for both disease surveillance and veterinary support from international organizations and foreign governments is also needed.
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For the public inquiry fields below are optional

2. Broad typology of the issue

(*)	<i>External driver</i>	<i>Internal to food systems</i>	<i>Both</i>
Is the issue either or both?		Consumer demand is a driver within the food system. The price of meat does not reflect the increased disease risk.	

(*)	<i>Economic (and productive)</i>	<i>Social and Cultural</i>	<i>Governance (institutions, rights, etc.)</i>	<i>Environmental (resources, etc.)</i>	<i>Other (SPECIFY)</i>
Main nature of the issue	Producers face additional costs for incorporating biosafety and hygiene into their production systems. Without those safeguards, however, they risk losing animals to disease, and exposing their workforce to disease risks.		Regulations provide a level playing field, so that all producers can pass on the costs to consumers without being undercut by competitors not subject to the same rules		
Nature of the main impact of the issue on FSN	Disease outbreaks are highly disruptive to domestic markets and trade. Infectious disease (zoonotics) can be very costly to an economy. The outbreak of high pathogenic avian influenza in Asia between 2004 and 2009 was estimated to create economic losses of 10 Billion USD. Many animals are lost or must be sacrificed to stop the				Public health.

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	spread of new diseases, which is an economic loss for producers.				
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(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	Classification (**)		
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?	Food animal production		
2. Breadth: Are there many people affected?	Few		✓ Many
3. Scale: local/regional/global?	Local	Region	✓ Global
	<i>Indicate here the precise location</i>	<i>Indicate here the precise region</i>	

For items 4-11 below, please use the classification [— — , —, 0, +, ++]:

Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)

4. Impact on Availability	—		
5. Impact on Access	—		
6. Impact on Utilization/ nutrition	0		
7. Impact on Stability	—		
8. Impact on most vulnerable people	Small producers suffer economic losses and as animal handlers are often the first to be exposed (and die from) to zoonotic disease.		
9. Impact on women	0		
10. Impact on children	0		
11. Impact on marginalized populations	See response to 8 above.		
12. Cost to address the issue	Low	✓ Middle	High

(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

4. Time Scale

Timeframe (*)	Now/Short term (1-5 years)	Medium term (5-10 years)	Long term (10-20 years +)
Moment when the issue will have an impact	✓		
Moment to act to address the issue	✓		

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.	Low	✓ Middle	High
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6. Additional Supporting Information

Additional information

The United Nations estimates that by 2030, approximately 70% more animal protein must be produced to feed a growing world population with increasingly greater expendable income and demand for meat. Animal production is already increasing globally, often in ex-urban areas (urban fringe) in order to take advantage of the proximity of consumers in growing mega-cities

Improper sanitation and handling of manure and water, and lax regulation of animal drugs including antibiotics are among the practices that create an environment that facilitates the emergence and transmission of food borne and infectious disease. This environment poses a threat to animals and humans locally and eventually to animals and humans both regionally and globally

Examples of past outbreaks include BSE (mad cow disease); SARS; Highly pathogenic Avian Influenza (H5N1); and Nipah virus. In many cases, the origins of disease are in regions of the world in which a) food animal production is increasing; b) animal production is either occurring at the ex-urban areas near dense human populations or moving into formerly natural areas so that domestic animals are exposed to wild animal populations; and c) veterinary and public health oversight is weak.

Evidence

National Research Council. *Workforce Needs in Veterinary Medicine*. Washington, DC: The National Academies Press, 2013.

National Research Council. *Sustaining Global Surveillance and Response to Emerging Zoonotic Diseases*. Washington, DC: The National Academies Press, 2009.

Knowledge gaps

Good information is not available on the numbers of animals nor the extent of endemic diseases in food animals produced in many parts of the world. FAO data has not been a reliable source of information in this regard. For economic reasons, many producers and nations do not wish to disclose this information.

Research is needed on the routes through which diseases are transmitted from wild populations to domestic food animals.

Research is needed on the conditions that facilitate the emergence of novel diseases in animal populations.

The availability and use of veterinary support for animal production is not well documented in developing countries.

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

References

National Research Council (NRC). 2013. *Workforce Needs in Veterinary Medicine*. Washington, DC: The National Academies Press.

Newell, D.F., Koopmans, M., Verhoef, L., Duizer, E., Aidara-Kane A., Sprong, H., Opsteegh, M., Langelaar, M., Threlfall, J., Scheutz, F., van der Giessen, J., and Krus, H. 2010. Food-borne diseases—The challenges of 20 years ago still persist while new ones emerge. 2010. *International Journal on Food Microbiology* 139:S3-S15.

NRC. 2012. *Meeting Critical Laboratory Needs for Animal Agriculture: Examination of Three Options*. Washington, DC: The National Academies Press.

NRC. 2012. *Improving Food Safety Through a One Health Approach: Workshop Summary*. Washington, DC: The National Academies Press.

NRC. 2009. *Sustaining Global Surveillance and Response to Emerging Zoonotic Diseases*. Washington, DC: The National Academies Press.

NRC. 2005. *Animal Health at the Crossroads: Preventing, Detecting, and Diagnosing Animal Diseases*. Washington, DC: The National Academies Press.

NRC. 2005. *Critical Needs for Research in Veterinary Science*. Washington, DC: The National Academies Press.

NRC. 2002. *The Emergence of Zoonotic Diseases: Understanding the Impact on Animal and Human Health - Workshop Summary*. Washington, DC: The National Academies Press.

Steinfeld, H., Wassenaar, T., and Jutzi, S. 2006. Livestock production systems in developing countries: status, drivers, trends. *Rev. Sci. Tech. Off. Int. Epiz.* 25(2):505-516.

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HLPE Inquiry

Critical and Emerging Issues for Food Security and Nutrition

Questionnaire

About the respondent

Name, Surname and Institution		
Do you answer on behalf of your institution, or as an individual?	On behalf of ILRI	
Do you agree if this contribution is made available to the public as part of the proceedings?	Yes	
Country of the responding individual/institution Please mention international or regional, the case being	International organization based in Kenya International Livestock Research Institute (ILRI)	

1. Overview of the issue

Issue <i>in 2 lines</i>		
Description of the issue <i>in less than 5 lines</i>	1. Importance of smallholder production and Informal markets for providing animal source food for food security and nutrition; 2. Emerging infectious disease, zoonoses and food borne disease and their impacts on food safety and nutrition.	
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>	<input type="checkbox"/> Challenge	<input checked="" type="checkbox"/> Opportunity It depends: The contribution of smallholder livestock and fish systems is an opportunity but the diseases associated with these systems are a challenge.
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition <i>In less than 10 lines. Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.</i>	As a research institute, we generate evidence using epidemiological and social science methodologies and see peer review <ul style="list-style-type: none"> • Strong evidence that smallholder farmers are major suppliers of animal source foods • Strong evidence that informal markets are major suppliers of animal source foods to poor consumers • Moderate evidence that animal source foods are a critical and neglected component of diets for achieving nutrition security among both the rural and urban poor • Moderate evidence that informal markets are mainly supplied by smallholder farmers • Moderate evidence that animal diseases are an important constraint to quantity and quality of food available and a potential threat to smallholder farmer access • Moderate evidence that emerging disease is a threat to food security and to smallholder access to markets • Strong evidence that zoonotic diseases are a 	

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	<p>threat to health and food utilisation (see papers in section 6 for a summary of evidence for these statements)</p>
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Main response proposed to address the issue	<p>Supporting smallholder production, sustainable intensification and uptake of productivity-enhancing technologies and value addition and business development services, as well as good exits from smallholder production where appropriate</p> <p>Improved targeting for animal source foods, including for young children through health and nutrition messaging, school feeding programs; devising innovative food technologies to support safe use</p> <p>Acknowledging informal markets for food, addressing unhelpful policy and regulation, supporting informal markets to upgrade and professionalize</p> <p>Better surveillance and response to emerging infectious disease</p>
Main actor(s) concerned or involved in the response proposed	<p>Research community to generate evidence</p> <p>Policymakers to support enabling policy</p> <p>Associations of farmers and value chain actors</p> <p>Linking human health, animal health and nutrition (One Health)</p> <p>Development partners and public sector implementers</p>

For the public inquiry fields below are optional

2. Broad typology of the issue

(*)	<i>External driver</i>	<i>Internal to food systems</i>	<i>Both</i>
Is the issue either or both?		Internal	Briefly mention how this may be the case

(*)	<i>Economic (and productive)</i>	<i>Social and Cultural</i>	<i>Governance (institutions, rights, etc.)</i>	<i>Environmental (resources, etc.)</i>	<i>Other (SPECIFY)</i>
Main nature of the issue	Livelihoods for farmers & value chain actors	Food preferences and dietary practices	Informality and avoiding reliance on command and	Externalities of production & value chains; highlighting	Gender dimension as women have important role

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			control regulatory measures; achieving economies of scale for small scale actors	environmental gains achieved with intensification among smallholders	
Nature of the main impact of the issue on FSN	Poverty & ability to afford food	Increasing options for diet diversity	Promoting local production of ASF accessible to the poor	Minimizing trade-offs (real or perceived) with sustainability objectives	Enhancing access to ASF by mothers and caregivers

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	Classification (**)		
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?	Critical point		Systemic issue <input type="checkbox"/>
2. Breadth: Are there many people affected?	Few		Many <input type="checkbox"/>
3. Scale: local/regional/global?	Local	Region <input type="checkbox"/>	Global
	<i>Indicate here the precise location</i>	<i>Developing countries</i>	

For items 4-11 below, please use the classification [— — , — , 0, +, ++]:

Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)

4. Impact on Availability	++		
5. Impact on Access	++		
6. Impact on Utilization/ nutrition	+		
7. Impact on Stability	+		
8. Impact on most vulnerable people	++: HIV+, pregnant + nursing mothers, young children		
9. Impact on women	++		
10. Impact on children	+		
11. Impact on marginalized populations	+: pastoral, remote rural poor		
12. Cost to address the issue	Low	Middle X	High

(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

4. Time Scale

<i>Timeframe (*)</i>	<i>Now/Short term (1-5 years)</i>	<i>Medium term (5-10 years)</i>	<i>Long term (10-20 years +)</i>
Moment when the issue will have an impact		X	X
Moment to act to address the issue	X	X	

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.	Low	Middle	High
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6. Additional Supporting Information

Additional information

See sources below

Evidence

Grace, D, 2012, The deadly gifts of livestock, *Agriculture for Development*, 17:14-16

Herrero M, Grace D, Njuki J, Johnson N, Enahoro D, Silvestri S, Rufino M., (2012) The roles of livestock in developing countries, *Animal: An International Journal of Animal Bioscience*, Animal 1-16.

Grace D, Kang'ethe E, Waltner-Toews, 2012, Participatory and integrative approaches to food safety in developing country cities, *Trop Anim Health Prod*, DOI 10.1007/s11250-012-0200-7

Jones, B., Grace, D., Kock, R., Alonso, S., Rushton, J., Said, M., McKeever, D., Mutua, F., Young, J., McDermott, J., and Pfeiffer, D., 2013, How do agricultural intensification and environmental change affect zoonoses with a wildlife-livestock interface? A systematic review. *Proc Natl Acad Sci U S A.*; 110(21): 8399–8404

Smith J, Sones K, Grace D, MacMillan S, Tarawali S, Herrero M, 2013, Beyond milk, meat and eggs: livestock's role in food security, *Animal Frontiers* 3:6-13.J

Smith J, Tarawali S, Grace D, Sones K, 2013, Feeding the world in 2050: Trade offs, synergies and tough choices for the livestock sector, 2014, *Tropical Grasslands – Forrajes Tropicales* 1, 125–136

Grace D, Gilbert J, Randolph T and Kang'ethe E. 2012. The multiple burdens of zoonotic disease and an ecohealth approach to their assessment. *Tropical Animal Health and Production* 44(S1): 67-73. doi10.1007/s11250-012-0209-y. Available online 12 August 2012

Perry BD, Grace D and Sones K. 2011. Current drivers and future directions of global livestock disease dynamics. *Proceedings of the National Academy of Sciences of the United States of America.*, doi 10.1073/pnas.1012953108

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Knowledge gaps

More comprehensive evidence on the current role and trends of smallholders, informal markets, animal source foods in the diets and livelihoods of the poor

Examples of how transforming value chains can be influenced to support healthy diets as well as livelihoods of the poor

References

See above

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.



HLPE Inquiry

Critical and Emerging Issues for Food Security and Nutrition

Questionnaire

About the respondent

Name, Surname and Institution	Dr Marzella Wüstefeld (Technical Officer) and Dr Francesco Branca, UNSCN Executive Secretary	
Dou you answer on behalf of your institution, or as an individual?	UNSCN	
Do you agree if this contribution is made available to the public as part of the proceedings?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Country of the responding individual/institution Please mention international or regional, the case being	International, UN interagency platform	

1. Overview of the issue

Issue <i>in 2 lines</i>	Reshaping of food systems to contribute to the prevention and control of NCDs		
Description of the issue <i>in less than 5 lines</i>	Food systems need reshaping to contribute to the prevention and control of non-communicable diseases (NCDs), as foods, diet and nutritional status are important determinants of NCDs.		
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>	Challenge	Opportunity	It depends (please specify) Food systems present challenges but also opportunities for achieving food security and nutrition security for all that will contribute to prevent and control NCDs.
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition <i>In less than 10 lines. Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.</i>	<p>NCDs are well-studied and understood, and this gives all Member States an immediate advantage to take action. The UN Political Declaration on NCDs, endorsed by Heads of State and Government in September 2011, recognized the vast body of knowledge and experience regarding the preventability of NCDs and immense opportunities for global action to control them. Therefore, Heads of State and Government committed themselves in the UN Political Declaration on NCDs to establish and strengthen multisectoral national policies and plans.</p> <p>To realize these commitments, the World Health Assembly endorsed the Global Action Plan for the</p>		

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	<p>Prevention and Control of NCDs 2013-2020 in May 2013. The Global Action Plan provides Member States, and international partners with a road map and menu of policy options.</p>
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<p>Main response proposed to address the issue</p>	<p>Heads of State and Government commit to advance the implementation of multisectoral, cost-effective, population-wide interventions in order to reduce the impact of the common non-communicable disease risk factors, including unhealthy diet;</p> <p>Heads of State and Government commit to encourage policies that support the production and manufacture of, and facilitate access to, foods that contribute to healthy diet, and provide greater opportunities for utilization of healthy local agricultural products and foods, thus contributing to efforts to cope with the challenges and take advantage of the opportunities posed by globalization and to achieve food security (Political Declaration).</p> <p>The Global Action Plan proposes policy options intended to make progress towards the voluntary global targets set out in the plan, and which include a halt in the rise of obesity.</p>
<p>Main actor(s) concerned or involved in the response proposed</p>	<p>The Global Plan of Action 2013-2020 reaches out to the food and agriculture community and to the CFS in particular through the UNSCN and FAO. It proposes a non-exhaustive list of actions to accelerate country response to combat unhealthy diet for the prevention and control of NCDs. Desired outcomes with regard to diet include the substitution of health foods for energy-dense micronutrient-poor foods.</p> <p>These include the integration of the action plan into food and nutrition related plans and strategies, like the Global Strategic Framework for Food Security and Nutrition.</p> <p>Main actors include:</p> <ul style="list-style-type: none"> • CFS • Member States • Ministries of agriculture and food • Ministries of trade • Ministries of Health • Food producers, • Food industry • Consumers, Civil Society

For the public inquiry fields below are optional

2. Broad typology of the issue

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

(*)	<i>External driver</i>	<i>Internal to food systems</i>	<i>Both</i>
Is the issue either or both?	There are external drivers like the ongoing negative impacts of the financial and economic crisis, volatile food prices; Important are the increasing global pressure of population growth, urbanization and climate variability.	Global food systems changes have had dramatic implications for NCDs by influencing the nutritional quality of foods that are available, affordable and acceptable to consumers.	Briefly mention how this may be the case

(*)	<i>Economic (and productive)</i>	<i>Social and Cultural</i>	<i>Governance (institutions, rights, etc.)</i>	<i>Environmental (resources, etc.)</i>	<i>Other (SPECIFY)</i>
Main nature of the issue	X	X	X	X	Food insecurity and undernutrition place people at risk of NCDs
Nature of the main impact of the issue on FSN	X	X		X	

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	<i>Classification (**)</i>		
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?	Critical point Adequate food and agriculture policies, Capacities of MoA, Adequate legislations for food quality and trade, etc		Systemic issue It is a systemic issue that concerns the food system as a whole.
2. Breadth: Are there many people affected?	Few		Many X
3. Scale: local/regional/global?	Local	Region	Global X
	<i>Indicate here the precise location</i>	<i>Indicate here the precise region</i>	

The rapidly growing magnitude of the NCD burden affects people of all ages, gender, race and income levels, and furthermore, poor populations and those living in vulnerable situations, in particular in developing countries, bear a disproportionate burden, and women and men are differently affected.

For items 4-11 below, please use the classification [— — , —, 0, +, ++]:
Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)

4. Impact on Availability	--
5. Impact on Access	--

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6. Impact on Utilization/ nutrition	--		
7. Impact on Stability	-- , price stability		
8. Impact on most vulnerable people	-- Specify as appropriate		
9. Impact on women	--		
10. Impact on children	--		
11. Impact on marginalized populations	-- Specify as appropriate poor populations and those living in vulnerable situations, in particular in developing countries, bear a disproportionate burden		
12. Cost to address the issue	Low	Middle Prevention is less costly	High Continuing "business as usual" will result in loss of economic productivity and an escalation of health care costs in all countries.
	The cost of inaction far outweighs the cost of taking action (Global Action Plan, p.10). There are interventions for prevention and control of noncommunicable diseases that are affordable for all countries and give a good return on investment.		

(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

4. Time Scale

<i>Timeframe (*)</i>	<i>Now/Short term (1-5 years)</i>	<i>Medium term (5-10 years)</i>	<i>Long term (10-20 years +)</i>
Moment when the issue will have an impact	X	X	X
Moment to act to address the issue	X		

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.	Low	Middle	High X
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Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

6. Additional Supporting Information

Additional information

The global burden and threat of non-communicable diseases constitutes a major challenge that undermines social and economic development through the world, and inter alia has the effect of increasing inequalities between countries and within populations. Member States, in the WHA, has adopted the Global Action Plan for the Prevention and Control of NCDs for the period 2013-2020.

Dimension: Noncommunicable diseases (NCDs)—mainly cardiovascular diseases, cancers, chronic respiratory diseases and diabetes—are the world’s biggest killers. More than 36 million people die annually from NCDs (63% of global deaths), including more than 14 million people who die too young between the ages of 30 and 70. Low- and middle-income countries already bear 86% of the burden of these premature deaths, resulting in cumulative economic losses of US\$7 trillion over the next 15 years and millions of people trapped in poverty.

Evidence

Appendix 3 of the Global Action Plan is a gold mine of current scientific knowledge and available evidence based on a review of international experience.

Most of these premature deaths from NCDs are largely preventable by enabling health systems to respond more effectively and equitably, and influencing public policies in sectors outside health that tackle shared risk factors—including unhealthy diet.

Knowledge gaps

Which food and agriculture policies have effective impact on nutrition security, diet and nutrition outcomes? The complex role of how food and agricultural policies can effectively address nutrition needs to be better understood. There is considerable conceptual knowledge on this topic, but understanding of how to carry concepts and policy objectives into effective implementation and delivery of food-based approaches that impact nutritional status and diets of populations needs to advance. Policies and programmes are clearly relevant, but the tangible impact of investments, food production, processing, storage, transformation and trade, into improvements in dietary patterns and nutritional outcomes is fragmented.

What are the most appropriate cost-effective policies and interventions to reduce salt, sugar and saturated fats and eliminate industrially produced trans-fats in foods, including interventions discouraging the production and marketing of foods that contribute to unhealthy diet, while taking into account existing legislation and policies, which should be taken forward by the CFS Member States and stake holders.

References

- UN (2011): Political declaration of the high-level meeting of the UN General Assembly on the prevention and control of NCDs, 66th UNGA, New York.
- WHO (2013): Global action plan for the prevention and control of noncommunicable diseases 2013-2020,
- Scaling up action against noncommunicable disease: how much will it cost? Geneva, World Health Organization, 2011, http://whqlibdoc.who.int/publications/2011/9789241502313_eng.pdf.
- The global economic burden of noncommunicable diseases. World Economic Forum and Harvard School of Public Health, 2011.
- FAO (2013) The state of food and agriculture: Food systems for better nutrition.

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.



HLPE Inquiry

Critical and Emerging Issues for Food Security and Nutrition

Questionnaire

About the respondent

Name, Surname and Institution	Dr Marzella Wüstefeld (Technical Officer) and Dr Francesco Branca, UNSCN Executive Secretary	
Dou you answer on behalf of your institution, or as an individual?	UNSCN	As individual
Do you agree if this contribution is made available to the public as part of the proceedings?	Yes <input checked="" type="checkbox"/> X	No
Country of the responding individual/institution Please mention international or regional, the case being	UN System Standing Committee on Nutrition (UNSCN) International, UN interagency platform	

1. Overview of the issue

Issue <i>in 2 lines</i>	Improving nutrition through agriculture and food policies		
Description of the issue <i>in less than 5 lines</i>	What are the nutrition-sensitive approaches that should be integral to policies and programmes for food security and sustainable agriculture to effectively improve nutrition outcomes?		
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>	<input checked="" type="checkbox"/> Challenge X The right mix of the right policy elements to contribute to better nutrition, while also adhering to sustainable production patterns.	<input type="checkbox"/> Opportunity X Identify win-win scenarios.	<input type="checkbox"/> It depends (please specify)
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition <i>In less than 10 lines.</i> Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.	As we rapidly approach the 2015 mark of the Millennium Development Goals, the World Summit goal for all people to have the opportunity to lead a healthy and active life with access to enough nutritious food has yet to be achieved. Efforts to achieve food and nutrition security have been focused on increased food production and economic development. This highlighted a number of shortcomings, particularly where increased economic status does not concurrently reduce food insecurity and malnutrition. Hence, food security needs to remain a major focus of the post-2015 agenda, and the importance of improving nutrition will be central to achieving this. This will require		

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	countries to integrate nutrition objectives explicitly within their national food security and agriculture agenda.
Main response proposed to address the issue	<p>To undertake a scientific and knowledge based analysis to understand what possible win-win situations are and potential harms from macro to household and individual level. This includes analyzing and documenting best practices in nutrition-sensitive food and agriculture policies, addressing:</p> <ul style="list-style-type: none"> - What are the effective approaches and elements in food and agriculture policies to improve nutrition? - What is the effective governance for nutrition-sensitive agriculture? - What kind of surveillance system is required to monitor and evaluate nutrition-sensitive agriculture impact on nutrition? <p>To construct an evidence-based, comprehensive, policy oriented starting point for debates between the various stakeholders of the CFS.</p>
Main actor(s) concerned or involved in the response proposed	<p>Main actors include:</p> <ul style="list-style-type: none"> • CFS stakeholders • Member States • Ministries of Agriculture and Food • Ministries of Trade • Ministries of Health, Planning and Finance etc • National intersectoral coordination mechanisms • Civil Society

For the public inquiry fields below are optional

2. Broad typology of the issue

(*)	External driver	Internal to food systems	Both
Is the issue either or both?	<p>There are external drivers like</p> <p>Economic interests at national and global level</p>	<p>Internal issue, as it relates to the HOW TO make nutrition specific objectives integral to all stages of policy (from planning to operationalization into actions)</p>	<p>Briefly mention how this may be the case</p>

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(*)	<i>Economic (and productive)</i>	<i>Social and Cultural</i>	<i>Governance (institutions, rights, etc.)</i>	<i>Environmental (resources, etc.)</i>	<i>Other (SPECIFY)</i>
Main nature of the issue		X	XX		
Nature of the main impact of the issue on FSN	X	X	XX	X	

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	Classification (**)		
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?	Critical point Adequate integration of nutrition objectives in food and agriculture policies, coordination across sectors, capacities of MoA, etc Needs be accompanied by complementary interventions in other sectors to be more effective.	Systemic issue Looking at the multiple burden of malnutrition, it is a systemic issue that concerns the food system as a whole.	
2. Breadth: Are there many people affected?	Few	Many X	
3. Scale: local/regional/global?	Local	Region LMIC, rural poor	Global It is a global problem
For items 4-11 below, please use the classification [— — , —, 0, +, ++]: Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)			
4. Impact on Availability	-		
5. Impact on Access	--		
6. Impact on Utilization/ nutrition	--		
7. Impact on Stability	--		
8. Impact on most vulnerable people	-- Specify as appropriate Nutritional vulnerable population groups, poor populations in food insecure areas and those living in vulnerable situations		

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	bear a disproportionate burden.		
9. Impact on women	-- as farmers and farm workers, as care givers and mothers, including adolescents		
10. Impact on children	-- mainly from conception to second birthday, first 1000 days of life.		
11. Impact on marginalized populations	-- Specify as appropriate		
12. Cost to address the issue	Low	Middle X	High
	Continuing "business as usual" will result in loss of health, human lives and economic productivity of nations.		

(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

4. Time Scale

<i>Timeframe (*)</i>	<i>Now/Short term (1-5 years)</i>	<i>Medium term (5-10 years)</i>	<i>Long term (10-20 years +)</i>
Moment when the issue will have an impact	X	XX	XXX
Moment to act to address the issue	X	X	X

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.	Low	Middle x	High X
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6. Additional Supporting Information

<p><i>Additional information</i></p> <p>There are multiple burdens of malnutrition that contribute to poor health and development. Children who do not consume adequate calories and micronutrients over long periods (beginning in utero) do not achieve full genetic potential in cognitive, reproductive and immune development. The latest series on nutrition in the Lancet journal (2013) emphasized chronic malnutrition in terms of the overall detrimental effect on society. Micronutrient deficiencies of essential vitamins and minerals are also gaining importance as the scientific community proves links to disease and inhibited development. Many countries with high rates of stunting and micronutrient deficiencies are also confronted, at the same time, with increasing rates of overweight and obesity.</p> <p>Politicians are finally taking nutrition seriously as a major development challenge. In recent years, a number of initiatives have brought attention to the potential of agriculture to contribute to improved nutrition outcomes. The Lancet 2013 series on Maternal and Child nutrition explicitly brought together targeted nutrition specific actions and nutrition sensitive actions as a complement. It identified 10 targeted nutrition specific interventions that, if implemented at 90% coverage, could cut e.g. chronic</p>

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undernutrition (stunting) by 20% and mortality by 15%.

However there are very large associated costs and even then, 80% of chronic undernutrition would remain – this has brought renewed focus on the potential of nutrition sensitive actions, including food and agriculture, and others like social welfare schemes, safety nets.

Affected population groups: The most undernourished populations live in rural areas, where agriculture is a vital activity that provides food for household consumption and serves as the primary source of income. Seventy-five percent of the world's poor are rural (World Bank, 2012). These people are the most dependent on local agriculture for their food security and nutritional needs, and therefore are the most vulnerable to food shortages and shocks. Given the high level of dependency of many of the world's poor and nutritionally vulnerable on agriculture as their primary source of livelihood, the major role of the food and agriculture sector should be to improve household food security and alleviate and prevent malnutrition (Herforth et al 2012; World Bank 2012).

Improvement and growth in the agriculture sector is imperative for combating poverty, hunger, and undernutrition (SOFI 2013). However, because agricultural growth is often focused on increased production of staple foods that are low in nutrients and other cash crops, agricultural growth does not necessarily result in better nutrition. There have been many recent scientific publications, policy documents, and reports examining the role of agriculture in improving nutrition, but clear policy and programmatic recommendations are still lacking overall.

Evidence

The available knowledge supports the proposition that the food and agriculture sector can play a central role in reducing malnutrition and that decisive policy action in this sector can improve nutritional outcomes, especially when accompanied by complementary interventions in education, health and sanitation, and social protection. However knowledge remains incomplete (SOFA 2013).

Knowledge gaps

Agriculture is critically important to nutrition because agriculture's primary role is to produce food for human consumption. This makes it a clear contributor to nutrition and health. And yet not enough is known about the contribution of agriculture policies and programs in reducing the malnutrition burden. There is a need to put light on that link and provide policy guidance for countries on:

- What is the contribution of food and agriculture policies and programmes in reducing the malnutrition burden (undernutrition, micronutrient deficiencies, overnutrition and obesity and noncommunicable diseases)?
- What are the cost-effective and efficient food and agriculture policy measures to improve nutrition?
- What is the effective governance for nutrition-sensitive policies and actions?
- What kind of surveillance system is required to monitor and evaluate effective nutrition-sensitive policies and actions?

References

- Lancet. Maternal and Child Undernutrition Series. Lancet. June 2013. <http://www.thelancet.com/series/maternal-and-child-nutrition>
- Herforth, A, Jones, A and Pinstrip Andersen P (2012) Prioritizing Nutrition in Agriculture and Rural Development: Guiding Principles for Operational Investments. The International Bank for Reconstruction and Development / The World Bank, Washington, DC.
- SCIENCE FORUM 2013: Nutrition and health outcomes: targets for agricultural research. Summary

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

- SOFA State of Food and Agriculture (2013) Food and Agriculture Organization, Rome, Italy.
- SOFI State of Food Insecurity (2013) Food and Agriculture Organization, Rome, Italy.
- UNSCN, 2014 (forthcoming): The nutrition-sensitivity of agriculture and food policies. Synthesis of eight country case studies.
- WHO, 2012: Comprehensive Implementation Plan on infant and young child nutrition as a critical component of a global multisectoral nutrition framework.
- WHO (2013) Global nutrition policy review. What does it take to scale up nutrition action? WHO, Geneva Switzerland.
- World Bank, 2012: Improving Nutrition Through Multisectoral Approaches.

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.



HLPE Inquiry
Critical and Emerging Issues for Food Security and Nutrition
Questionnaire

About the respondent

Name, Surname and Institution	Shenggen Fan, IFPRI	
Do you answer on behalf of your institution, or as an individual?	On behalf	As individual
Do you agree if this contribution is made available to the public as part of the proceedings?	No	Yes
Country of the responding individual/institution Please mention international or regional, the case being	International	

1. Overview of the issue

Issue <i>in 2 lines</i>	While global effort should continue to focus on Africa, malnutrition in emerging middle income economies has not been paid enough attention.		
Description of the issue <i>in less than 5 lines</i>	Emerging middle income countries like India, Indonesia, China, Mexico, and Brazil have experienced rapid economic growth, but malnutrition, both under and overnutrition, remains a grave challenge. Addressing malnutrition is not only a moral issue, but also an economic issue. Investing in reducing malnutrition has high economics returns		
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>	Challenge	Opportunity	It depends (please specify) It is a challenge as majority of hungry people are in emerging economies. It is also an opportunity as economies in these countries will continue to grow.
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition <i>In less than 10 lines. Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.</i>	Household surveys show that hunger level (both energy and micro-nutrients deficiencies) remains very high in India, Pakistan, Indonesia and absolute number of hungry population in China, Vietnam, Thailand, Mexico, Brazil, and South Africa. Equally important is an alarm increase of overweight and obesity. Addressing malnutrition in these countries is not only a moral issue, but it also has high economic return and avoids the middle-income trap.		

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Main response proposed to address the issue	Linking economic growth, particularly agricultural growth, to improvement in nutrition, increasing investment in direct nutrition intervention programs (particularly children and women), making national leaders accountable for improved nutrition for all population instead of solely economic growth.
Main actor(s) concerned or involved in the response proposed	Farmers, consumers, private sector in the whole food chains, global and national agricultural, nutrition and health research and extension systems, national and local leaders, NGOs, etc.

For the public inquiry fields below are optional

2. Broad typology of the issue

(*)	<i>External driver</i>	<i>Internal to food systems</i>	<i>Both</i>
Is the issue either or both?			<p>Briefly mention how this may be the case</p> <p>External drivers include climate change, declining natural resources like water, land and energy, increased use of agricultural and food stuff for nonfood purposes such as biofuel, etc.</p> <p>Internal factors include innovations in technologies, capacity of global, national and local institutions working in the food system, and leadership and accountability in the food system.</p>

(*)	<i>Economic (and productive)</i>	<i>Social and Cultural</i>	<i>Governance (institutions, rights, etc.)</i>	<i>Environmental (resources, etc.)</i>	<i>Other (SPECIFY)</i>
Main nature of the issue					Malnutrition in emerging middle economies are economic, social and cultural,

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					governance, and environmental issues.
Nature of the main impact of the issue on FSN	Because of malnutrition, 2-3% of national GDP lost. By addressing it, economic returns are very high.	Both undernutrition and overnutrition are very much related to social and cultural issues.	Lack of accountability of nutrition outcome at the global, national and local governments has been the most challenging in tackling the problem.	Food waste, overnutrition or unsustainable diet pattern can cause severe environmental consequences and contribute to more greenhouse gas emissions.	

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	Classification (**)		
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?	Critical point	Systemic issue The whole system	
2. Breadth: Are there many people affected?	Few	Many yes	
3. Scale: local/regional/global?	Local	Region	Global Yes, global
	<i>Indicate here the precise location</i>	<i>Indicate here the precise region</i>	
For items 4-11 below, please use the classification [— — , — , 0, +, ++]: Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)			
4. Impact on Availability	+++		
5. Impact on Access	+++		
6. Impact on Utilization/ nutrition	+++		
7. Impact on Stability	+++		
8. Impact on most vulnerable people	+++		
9. Impact on women	+++		
10. Impact on children	+++		
11. Impact on marginalized populations	+++		
12. Cost to address the issue	Low	Middle	High Cost is high, but return is also very high.

(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

4. Time Scale

<i>Timeframe (*)</i>	<i>Now/Short term (1-5 years)</i>	<i>Medium term (5-10 years)</i>	<i>Long term (10-20 years +)</i>
Moment when the issue will have an impact	The impact could happen immediately, but it will last for many years or even decades		
Moment to act to address the issue	immediately		

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.	Low Lack of data, lack of capacity, and lack of knowledge to change investment , policies and strategies.	Middle	High
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6. Additional Supporting Information

<i>Additional information</i>
IFPRI and WFP are currently reviewing hunger and malnutrition issues in middle income countries. I hope after the review, more evidence will be generated for future actions.
<i>Evidence</i>
Timely and reliable data on malnutrition are desperately needed. So far evidence has been built on ad hoc and often one time surveys or estimated numbers.
<i>Knowledge gaps</i>
Linking the whole agricultural or food system to improved nutrition is very much still a knowledge gap. In particular, we need evidence to scale up successes.
<i>References</i>
IFPRI 2013 Global Food Policy Report (http://www.ifpri.org/gfpr/2013) has two chapters on nutrition issues. But they do not focus on emerging middle income countries.

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.



HLPE Inquiry
Critical and Emerging Issues for Food Security and Nutrition
Questionnaire

About the respondent

Name, Surname and Institution	Institute for Agriculture and Trade Policy	
Do you answer on behalf of your institution, or as an individual?	Institution	
Do you agree if this contribution is made available to the public as part of the proceedings?	Yes	
Country of the responding individual/institution Please mention international or regional, the case being	USA	

1. Overview of the issue

Issue <i>in 2 lines</i>	Ensuring multilateral and regional trade agreements support FSN commitments.	
Description of the issue <i>in less than 5 lines</i>	International trade has the potential provide important support in the realization of food security yet in practice often fails to realize this potential.	
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>		Trade offers both threats and opportunities for the realization of FSN
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition <i>In less than 10 lines. Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.</i>	<p>Hundreds of millions of smallholders and farm workers depend on traded commodities for their living. Rather than a for or against argument, the challenge is to understand under what conditions and rules it supports FSN, and why (is trade helping to secure a food supply? Supporting decent livelihoods? Attracting investment capital?), and where it is a threat or actually undermines FSN (dumping; transfer pricing and tax avoidance by foreign investors; exploitative working conditions; etc).</p> <p>Analysis should also consider the linkages between foreign investment and international trade, the effect of global value chains (GVCs) and market power within those chains and the effects of trade for the very significant share (up to 90%) of agricultural activity that is outside any GVC.</p>	

Main response proposed to address the issue	It is proposed that the HLPE undertakes a review of the intersection of food security and trade rules in an effort to learn what experiments are working, where there are failures and how countries can integrate trade into FSN strategies.
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Main actor(s) concerned or involved in the response proposed	Research by HLPE should include policy makers, in particular at local and national levels. Specific methods should be developed to ensure a solid participation of youth organisations, social movements, migration organisations. (In)formal knowledge systems/transfer. Intergenerational approaches would be beneficial. Discussions with governments and intergovernmental bodies on secure access to productive resources, sustainable rural livelihoods policies and risk mitigation responses.
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For the public inquiry fields below are optional

2. Broad typology of the issue

(*)	<i>External driver</i>	<i>Internal to food systems</i>	<i>Both</i>
Is the issue either or both?			Focus on rural employment is internal to the food system, but its evolution also depends on external factors

(*)	<i>Economic (and productive)</i>	<i>Social and Cultural</i>	<i>Governance (institutions, rights, etc.)</i>	<i>Environmental (resources, etc.)</i>	<i>Other (SPECIFY)</i>
Main nature of the issue	X	X	X	X	
Nature of the main impact of the issue on FSN	Rural livelihoods; forex earnings; available food supply; creation of markets in which the participants have grossly unequal demand	Changing diets, homogenization of food produced and consumed to suit demands of global markets. Potential for access to more varied and nutritious diet.	Accountability and participation (trade remains one of the least democratic areas of policy-making in most countries)	Failure of trade rules to properly account for environmental constraints and quality concerns.	

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	<i>Classification (**)</i>	
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?	Critical point	Systemic issue
2. Breadth: Are there many people affected?	Few	Many
3. Scale: local/regional/global?	Local	Region
	<i>Most Indicate here</i>	<i>It is hard to find communities not affected by trade. The implications are local,</i>
		Global

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<i>the precise location</i>	<i>regional and global. The global rules merit particular attention, but national policy-making that integrates trade in FSN strategies is also essential.</i>
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For items 4-11 below, please use the classification [— — , — , 0 , + , ++]:
 Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)

Trade is neither positive nor negative, but its impacts depend on specific rules and market structures, which too often undermines FSN. Consequently, many CSOs have a strongly negative view of international trade, as do many farm organizations outside the largest exporting countries. Developed country policies are often biased in favor of market expansion over FSN (for the most part) adding to the political tensions and accusations of hypocrisy. The result is overall negative for all the groups and issues 4 – 11 below, but this is not a necessary outcome.

4. Impact on Availability			
5. Impact on Access			
6. Impact on Utilization/ nutrition			
7. Impact on Stability			
8. Impact on most vulnerable people			
9. Impact on women			
10. Impact on children			
11. Impact on marginalized populations			
12. Cost to address the issue	LOW*#	Middle	High

(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

***# Cost is low in financial times, but will require human resources and significant political capital.**

4. Time Scale

Timeframe (*)	Now/Short term (1-5 years)	Medium term (5-10 years)	Long term (10-20 years +)
Moment when the issue will have an impact	X	X	X
Moment to act to address the issue	X	X	

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.	Low	Middle	High
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6. Additional Supporting Information

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

Additional information

There is no shortage of analysis, ranging from modeling exercises to household surveys, that considers the role of trade in FSN in some way. What is lacking is a synthesis that provides governments with more practical advice. One set of rules and predicted outcomes from trade is not helpful. The gap is in more nuanced advice, that understands the politics as well as the economics of FSN.

- **Access:** Trade should contribute to economic prosperity through creating rural (and urban) livelihoods, and for many countries can make a positive difference to the economy as a whole, supporting employment in the production, processing and distribution of goods, and in capital formation. In practice there are many challenges for access that arise from poor trade policies, including infrastructure investments that favour international markets over internal markets; dumped imports that undermine or destroy local production and employment; selection of crops that have a global market (eg. biofuel feedstock or animal feed) rather than meeting local demand for food; creation of private standards by the dominant firms that exclude the majority of producers and local firms from value chains, and the difficulties for poor countries to secure food in international markets when prices are high and volatile (as was the case in 2007-2008; 2011 and again in 2012).
- **Stability:** As past HLPE work has shown, and as the G20's decision to establish AMIS acknowledges, international trade has been a source of price volatility in many countries. This has been particularly true since 2007, but even before, when the policies of the EU and US in particular artificially depressed international prices and undermined local and regional economic development through trade as a result. For trade to provide greater stability for food security, as the theory promises, better regulation is required to mitigate the effect of shocks. Grain reserves are one of the responses that is now being explored in many places; as is the possibility of disciplines on grain traders to ensure transparency and predictability, and on exporting countries to avoid supply shocks through arbitrary export taxes and bans.
- **Availability:** Trade should increase the food supply available to a population. In practice, local food preferences are not always traded (eg. millet and cassava), global markets crowd out regional and local exchanges, and the increased choice tends to favour the demands from the richest consumers.
- **Utilization:**

Evidence

There are numerous studies and analyses of trade and FSN, written by economists, anthropologists, political scientists, environmentalists and more. While the role of international trade in FSN is hotly contested (with both strong proponents and detractors), the studies tend to be isolated from one another, using different methodologies and metrics, and emphasizing different aspects of and relationships within food systems. The result is a cacophony that is hard for governments to make sense of, adding to the likelihood that trade policies in practice protect vested interests rather than protecting welfare maximizing outcomes.

Knowledge gaps

Where are there examples of trade successfully integrated into strong FSN outcomes? What kinds of rules favored more positive outcomes? How can the CFS best take up the question of trade, acknowledging the existing institutional division of labour, but also recognizing the importance of trade for FSN and the imperative of better integrating trade and FSN policies and initiatives?

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

References

See below. Also FAO publications – SOFA and SOCO; World Bank Development Report 2008; IFPRI annual reports and trade-specific research (especially around the 2007-2008 crisis); the reports on trade from the UN Special Rapporteur on the Right to Food; UNCTAD reports on commodity markets and on foreign investment.

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HLPE Inquiry

Critical and Emerging Issues for Food Security and Nutrition

Questionnaire

About the respondent

Name, Surname and Institution	Institute for Agriculture and Trade Policy	
Do you answer on behalf of your institution, or as an individual?	On behalf X	As individual
Do you agree if this contribution is made available to the public as part of the proceedings?	Yes X	No
Country of the responding individual/institution Please mention international or regional, the case being	United States of America	

1. Overview of the issue

Issue <i>in 2 lines</i>	Barriers to Local Food Security		
Description of the issue <i>in less than 5 lines</i>	Extensive research shows that locally-based, locally-responsible, locally-tailored governance systems improve food security & sustainability, yet trade rules often prioritize reductions in “barriers to trade” over barriers to local food security.		
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>	Challenge	Opportunity X	It depends (please specify)
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition <i>In less than 10 lines. Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.</i>	Mixed-methods research from theory and empirical case studies have shown that strong, localized governance systems are maximally responsive to their own citizens, including with regards to food. Further, Banerjee and Duflo’s work has used randomized control experiments and reinforces the theoretical-empirical syntheses of Nobel Laureate Elinor Ostrom: local social context is key to addressing poverty, governance and food security.		

Main response proposed to address the issue	<p>“Barriers to trade” have been formally and informally viewed as valid reasons to counter national-level policies for the sake of international trade flows. National and regional food security programs, even if presumptively positive for food security, must not be “trade distorting.” Clearly, this places priorities in the wrong order. Instead, trade rules should be challenged to provide support for food security. Measures that improve food security in one region without demonstrably lowering it in another must be allowed and encouraged under all international trade laws. Based on theory and evidence, democratic national and regional governments respond better to their own citizens’ food security needs than international markets, where effective demand can mean the needs of the hungriest go almost totally unmet (Khan 1985; Davis, 2002; Chappell, 2013). The CFS-HLPE should explore language and actions to support</p>
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	such a shift; given pending trade agreements (TTIP, TPP), the issue of putting locally appropriate, locally-accountable food governance front and center is urgent and emerging.
Main actor(s) concerned or involved in the response proposed	National governments, World Trade Organization, CFS, farmers' organizations and food security NGOs and citizen groups

For the public inquiry fields below are optional

2. Broad typology of the issue

(*)	<i>External driver</i>	<i>Internal to food systems</i>	<i>Both</i>
Is the issue either or both?	X		Briefly mention how this may be the case

(*)	<i>Economic (and productive)</i>	<i>Social and Cultural</i>	<i>Governance (institutions, rights, etc.)</i>	<i>Environmental (resources, etc.)</i>	<i>Other (SPECIFY)</i>
Main nature of the issue			X		
Nature of the main impact of the issue on FSN	X	X	X	X	

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	<i>Classification (**)</i>		
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?	Critical point	Systemic issue X	
2. Breadth: Are there many people affected?	Few	Many X	
3. Scale: local/regional/global?	Local X	Region	Global X
	<i>All localities affected—and overruled—by global trade rules</i>	<i>Indicate here the precise region</i>	

For items 4-11 below, please use the classification [— — , — , 0 , + , ++]:

Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)

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4. Impact on Availability	- affects production decisions (i.e., which markets food is grown for, e.g. Davis, 2002; Patnaik, 1991)		
5. Impact on Access	--		
6. Impact on Utilization/ nutrition	-		
7. Impact on Stability	-		
8. Impact on most vulnerable people	-- (those with least economic demand; see Davis 2002; Khan, 1985)		
9. Impact on women	0/- (Indeterminate/varies; although effects for women may be <i>on net</i> positive, effects for <i>poor women</i> vary; are possibly <i>negative</i> insofar as attention is taken away from locally-adapted empowerment approaches and traditional roles are undermined without being replaced; Dwyer and Bruce, 1998; FAO, 1997; Fontana, 2003)		
10. Impact on children	- (As above, effects for <i>poor</i> children are likely/possibly negative)		
11. Impact on marginalized populations	0/- (Indeterminate/varies: neutral or negative for poor, marginalized populations; Fontana, 2003; Hansen-Kuhn, 2011; Rodrik, 2011; World Bank, 2003)		
12. Cost to address the issue	Low	Middle X	High

(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

4. Time Scale

Timeframe (*)	Now/Short term (1-5 years)	Medium term (5-10 years)	Long term (10-20 years +)
Moment when the issue will have an impact	X	X	
Moment to act to address the issue	X		

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.	Low	Middle X	High
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6. Additional Supporting Information

Additional information

“Barriers to trade” arguments for overruling national and local food security measures must rest at least in part on the idea that freer trade promotes economic growth and access to cheaper foods. Yet both of these ideas have been questioned by experienced senior researchers. Rodrik (2011, 2013), for example, writes of asking any hypothetical economics professor “Is free trade good? [...] the professor is likely to be stymied by the question. “What do you mean by ‘good?’” he will ask. “And good for whom?” The professor would then [produce] a heavily hedged statement: “So if the long list of conditions I have just described are satisfied, and **assuming we can tax the beneficiaries to compensate the losers**, freer trade has the potential to increase everyone’s well-being.” If he were in an expansive mood, the professor might add that the effect of free trade on an economy’s growth rate is not clear, either, and depends on an altogether different set of requirements” (emphasis added). Rodrik’s 2011 book, *The Globalization Paradox*, more explicitly lays out his case that the effects of freer trade (fewer barriers) varies from country to country and correspondingly must take more “custom-tailored” and democratic approaches to trade in order to achieve positive outcomes. (Otero, 2011, produces a similar finding in the specific case of NAFTA and Mexico.) Further, the FAO State of World Food Insecurity 2012 was *titled* “Economic growth is necessary **but not sufficient** to accelerate reduction of hunger and malnutrition” (emphasis added).

Conversely, Ostrom won the Nobel Prize for her work showing that properly configured, strong, locally-empowered governance produced the most sustainable systems and good distributional outcomes in countless cases, and that power exerted by larger forces—regional, national, and international elites—often undermined these cases’ effectiveness. Fung and Wright (2003) explore case studies with similar implications. Banerjee and Duflo (2011) have found in parallel that the appropriate, most effective anti-poverty interventions have huge localized variety; Pritchett and Sandefur (2013) reinforce this from a theoretical perspective. Davis (2002) shows how international demand at times has actually emptied rural areas of affordable food, and Banerjee and Duflo also show that cheap food does not necessarily lead to better outcomes if specific, local populations of the poor’s perspectives are not directly incorporated and addressed. (Grace et al., 2014, recently found parallel evidence in Kenya.)

Evidence

Lappe et al. (2013) review the cases of seven countries that on the net reduced hunger by an estimated 183 million people between 1990/92 and 2010/12 (Ghana, Thailand, Vietnam, Indonesia, Brazil, China, and Bangladesh). Successful increases in food security in these countries owed to measures including egalitarian land reform, rural school meals programs, various forms of support for small farmers, and support for gender empowerment and education. Smith and Haddad (2000) similarly found a fundamentally important role for empowering women in reducing hunger; the FAO (2006) and Ghosh (2010), among others, confirm the importance of egalitarian rural land redistribution and education. By the same token, all of these factors are intensely local and cultural, and must be dealt with in specific manners that are nationally, regionally, and culturally appropriate.

For a specific example, World Bank economists have asserted that NAFTA “probably had little impact on small farmers in [Mexican] Southern states who have suffered a long history of social, political and economic neglect”, even though statistics from the Mexican government have indicated that as many as two million farmers were displaced from agriculture as a result of dramatic increases in imports of corn. But research on PROCAMPO, an income transfer payment program for Mexican farmers, has found positive effects for small farmers receiving the payments, including multiplier effects (Garcia-Salazar et al., 2011). Food security programs in Brazil have similarly included income support for farmers, as well as multi-level food policy councils that study and advise at levels from the local to the national (Aranha, 2010; Rocha, 2009; Rocha et al., 2012).

A “barriers to trade” perspective limits the ability of governments to properly tailor agriculture, education, and food security initiatives for local conditions, despite widespread consensus from a variety of studies that local context is crucial (Banerjee and Duflo, 2011; Borras, 2007; Fenwick, 2009; Fontana, 2003; Pritchett and Sandefur, 2013; Stevens et al., 2003).

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Knowledge gaps

Research directly assessing the effects of strong local governance, and what we have called “barriers to localization,” specifically with respect to food security is lacking. However, theory and evidence from development and welfare economics more generally, using many different methods, gives every reason to think that allowing greater latitude for local and national policies to support food security will increase the ability to deploy effective food security policies. Thus, this is an emerging issue, but one we have the opportunity to address before continued damage is done.

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HLPE Inquiry

Critical and Emerging Issues for Food Security and Nutrition

Questionnaire

About the respondent

Name, Surname and Institution	Institute for Agriculture and Trade Policy		
Do you answer on behalf of your institution, or as an individual?	On behalf		
Do you agree if this contribution is made available to the public as part of the proceedings?	Yes		
Country of the responding individual/institution Please mention international or regional, the case being	United States of America		

1. Overview of the issue

Issue <i>in 2 lines</i>	Impacts of industrialized meat production and its global supply chain on food security		
Description of the issue <i>in less than 5 lines</i>	The true costs and benefits of the industrial model of meat production must be assessed in terms of their impacts on food security, land use change, nutrition and rural livelihoods.		
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>	Challenge X	Opportunity	It depends (please specify)
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition <i>In less than 10 lines.</i> Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.	Much has been learned about the environmental, public health and social impacts of industrialized meat production in industrialized countries. Yet, an in depth assessment of how this model is impacting global food security, nutrition and rural livelihoods in the developing world is still lacking. There needs to be a much better understanding about the food security impacts, the real costs and tradeoffs linked to this model and its global supply chain in order to create optimal food, agriculture and nutrition policies for all.		

Main response proposed to address the issue	It is proposed that the HLPE undertake research on this topic, examining the supply chain, buyer power and the real costs of this production, including on land and water use, sustainability of rural livelihoods dependent on this model and on the tradeoffs involved for public health and nutrition of both rural and urban consumers. This will enable the CFS to make sound recommendations for policy actions that intersect with other critical areas identified by the CFS, such as responsible agricultural investment, investment in smallholder agriculture, water and food security and climate change.
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Main actor(s) concerned or involved in the response proposed	The HLPE should undertake this research. Research should build on existing studies and include discussions with rural producers and workers in the supply chain of the meat industry, environmental and public health experts in industrialized countries as well emerging economies. It should also include discussions with rural communities in developing countries where feed is sourced or where large-scale operations are emerging, including pastoralist communities and those dependent on small-scale livestock production.
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For the public inquiry fields below are optional

2. Broad typology of the issue

(*)	<i>External driver</i>	<i>Internal to food systems</i>	<i>Both</i>
Is the issue either or both?	X	X	Some form of industrialization taking place in meat production is an internal dynamic in food systems—but how this is managed, regulated and what objectives it fulfills is externally driven by governments and the industry that dominate international feed and meat markets.

(*)	<i>Economic (and productive)</i>	<i>Social and Cultural</i>	<i>Governance (institutions, rights, etc.)</i>	<i>Environmental (resources, etc.)</i>	<i>Other (SPECIFY)</i>
Main nature of the issue	X	X	X	X	Public health and nutrition
Nature of the main impact of the issue on FSN	X	X	X	X	Public health and nutrition

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	<i>Classification (**)</i>		
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?	Critical point		Systemic issue
2. Breadth: Are there many people affected?	Few		Many
3. Scale: local/regional/global?	Local	Region	Global (supply chain)
	Where industrial meat facilities are located	Latin America where soy and soybean meal and increasingly corn is sourced for	

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		feed; United States; Eastern Europe and Africa as potential feed sourcing regions; China and India as emerging economies investing increasingly in industrialized meat and dairy production	
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For items 4-11 below, please use the classification [— — , — , 0, +, ++]:

Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)

4. Impact on Availability	--
5. Impact on Access	-
6. Impact on Utilization/ nutrition	0
7. Impact on Stability	--
8. Impact on most vulnerable people	Very negative for small and independent producers and workers in the system (often migrants or immigrants)
9. Impact on women	- (many rural and poor urban women raise livestock for dairy and meat)
10. Impact on children	0
11. Impact on marginalized populations	Very negative for communities who are displaced when land is converted to feed crops; pastoralist communities
12. Cost to address the issue	Middle

(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

4. Time Scale

<i>Timeframe (*)</i>	<i>Now/Short term (1-5 years)</i>	<i>Medium term (5-10 years)</i>	<i>Long term (10-20 years +)</i>
Moment when the issue will have an impact	X	X	
Moment to act to address the issue	X	X	

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.	Middle
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6. Additional Supporting Information

Industrialized meat production, the scale and manner in which it operates can affect food security in the following interconnected ways:

- **Availability:** replacing food crops for feed is a highly inefficient way of dealing with hunger and malnutrition. It takes several kilograms of feed to obtain 1 kg of meat. Now, food grains are competing with both feed and fuel, compounding this challenge. Both direct and indirect land use change, when agricultural activity is displaced and forests or mixed-use lands are converted into monocultures for feed, cause food insecurity as marginalized populations are forced to shift into more precarious environments and livelihoods, impact their ability to procure food.
- **Access:** direct and indirect land use change due to feed production and or industrialized meat production (water and soil pollution) also affect access to productive resources for producing food by affecting rights to land and biodiversity; increased competition between feed, fuel and foodgrains, land and water is also making food prices more volatile, particularly affecting those who spend a higher proportion of their income on food.
- **Stability:** given climate-related supply shocks, increased food price volatility and competition between food, feed and fuel while land and water resources remain finite, the feed requirements for large scale meat production can affect food grain prices thereby impacting both the stability of access and supply of food crops; mass production of genetically uniform animals also makes them far less-resilient, more vulnerable to climatic shifts and diseases which can rapidly impact the meat supply
- **Utilization:** there is a growing disparity between over-consumption of meat and dairy products amongst the middle class in urban areas, while rural communities consume far less in developing countries; numerous food safety issues related to industrial production process result in product recalls, large scale contamination cases, severe illnesses, antibiotic resistance and even deaths—this is compounded by the lack of adequate food safety regulatory infrastructure in many countries that have or are in the process of adopting this production process; Problems related to availability, access and stability (above) may also be resulting in people switching to less nutritious foods

Evidence

In 2009, FAO said the world needed to increase global food production by 70 percent in order to feed 9 billion people by 2050. This assumption that all can be fed by growing more food has been rigorously challenged by various food and agriculture experts. Land, water and energy constraints in an era of climate change compel us to examine what we eat and how we produce, distribute and consume food. Globalized, large-scale industrial meat production and unsustainable levels of meat consumption drive massive conversion of land to cereal and oilseed production explicitly for animal feed. Feed for industrial meat therefore forms a critical part of the equation of *how much* and *what* to feed the world by 2050 and who makes these decisions.

World Cereal Production in 2013-14 is expected to reach a record 2.46 billion tons.³ Remarkably, 34 percent of that (833 million tons) will be used for animal feed, a rise of nearly 5 percent compared to the previous year. Only 12 percent of total cereals produced are globally traded, of which a large proportion is feed—particularly corn, oilseeds and soybean meal. More than half of the world's corn and nearly 20 percent of its wheat production will go towards feed in 2013-14. Eighty-five percent of the world's soy crop was already being used for meat production in 2007-08.

The FAO projects that per capita global meat consumption will be 52 kg by 2050 for over 9 billion people.⁸ That's 480 million tons of meat compared to 293 million tons in 2010.⁹ Most of this demand is expected to come from developing countries with China and India in the lead. However, OECD countries continue to consume far more meat than the rest of the planet. In 2009, the U.S. consumed 120 kg of meat per person, Australia and New Zealand (118 kg), Argentina (113 kg), Canada and Western Europe (102 kg) and (85 kg).¹⁰ This compares to China's per capita of 59 kg.¹¹ According to Rabobank International, global meat

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demand is projected to grow by 44 percent from 2010 to 2030, with poultry growing by 60 percent, pork by 43 percent and beef and sheep by 25 percent and 35 percent, respectively.¹² The per capita figure, however, hides the growing disparity between diets of the richer and poor and the urban and rural in developing countries who compete for the land used for feed and the grains that are fed to animals for slaughter.

(See: Sharma, S 2014. *The Need for Feed: China's Demand for Industrialized Meat and Its Impacts*. IATP)

Knowledge gaps

As developing countries, particularly emerging economies, shift towards industrialized countries' model of industrial meat production, we must learn much more about the impact that these shifts are having on their small producers and marginalized populations in terms of rural livelihoods and land use in these countries (and where feed is sourced); we must understand better what impact it is having on existing land and water resources and on public health due to potential increases in antibiotic resistance and obesity; how are these decisions impacting other food and agriculture policy decisions in these countries as they impact food security and what are the ramifications/challenges for global food security? It is also important to examine how the increased global consolidation and concentration of meat companies is driving changes in meat and feed prices and how this is impacting rural livelihoods and workers in the supply chain.

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K18A



Enquête du Groupe d'experts de haut niveau (HLPE) Questions cruciales et émergentes pour la sécurité alimentaire et la nutrition

Questionnaire

Renseignements concernant le contributeur

Nom, prénom et institution	CHERBUT Christine, INRA (Institut National de la Recherche Agronomique)	
Répondez-vous au nom de votre institution ou à titre privé?	Au nom de: l'INRA	À titre privé:
Acceptez-vous que cette contribution soit mise à la disposition du public dans le cadre des actes de la consultation?	Oui	Non
Pays de la personne ou de l'institution qui répond. Veuillez mentionner, le cas échéant, «international» ou «régional».	France	

1. Aperçu de la question/du phénomène

Énoncé <i>en 2 lignes</i> .	Transitions alimentaires et nutritionnelles, de la diversité des situations locales aux tendances globales		
Description <i>en moins de 5 lignes</i> .	Besoins et disponibilités alimentaires s'inscrivent dans des tendances globales (transitions démographiques et urbanisation, restructuration des filières agroalimentaires, accroissement de la demande agricole non-alimentaire...), mais dont les déterminants et les conséquences sont fortement différenciés au niveau des régions et des territoires, ainsi que des catégories de population		
La question/le phénomène est-il un <i>défi</i> et/ou une <i>opportunité</i> pour la sécurité alimentaire et la nutrition? <i>Veuillez cocher la case appropriée.</i>	Défi Oui	Opportunité	Autre (veuillez préciser)
Méthode et approche utilisées pour déterminer la question/le phénomène et évaluer son importance pour la sécurité et la nutrition. <i>En moins de 10 lignes.</i> Des informations complémentaires ou descriptives (publications, rapports, rapports d'experts, analyses, etc.) peuvent être fournies dans la section 5 ci-dessous.	Si les manifestations de ces transitions commencent à être documentées (obésité et double fardeau, demande en biomasse énergie par ex.), les connaissances existantes sont actuellement insuffisantes ou trop segmentées (santé / agriculture / environnement) pour éclairer les décisions dans ces contextes différenciés. Un effort important de recherche, combinant prospective, modélisation et plateformes de bases de données, est nécessaire.		

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Principale action proposée pour résoudre le problème (ou saisir l'opportunité).	<p>Un effort mondial de recherche pluridisciplinaire et articulante les échelles est nécessaire, notamment sur :</p> <ul style="list-style-type: none"> - l'évolution des régimes et des pratiques alimentaires, - les comportements des ménages en matière de production, d'accès à l'alimentation et de gestion des instabilités, - les dynamiques territoriales, incluant les dynamiques de marchés agricoles et alimentaires régionaux et internationaux et leurs régulations, - les conditions, aux différentes échelles, d'équilibre ou de déséquilibre entre les offres agricoles et alimentaires et les demandes alimentaires, - les questions de gouvernance à tous les niveaux.
Principal(aux) acteur(s) concerné(s) ou participant à l'action proposée.	Acteurs de la recherche

Les champs suivants sont facultatifs pour l'enquête publique

2. Typologie élargie de la question/du phénomène

(*)	<i>Facteur déterminant externe</i>	<i>Interne aux systèmes alimentaires</i>	<i>Les deux</i>
Le phénomène est-t-il l'un, l'autre ou les deux?			L'articulation des problématiques et échelles est au cœur du défi de la production de connaissances pour l'aide à la décision

(*)	<i>Économique (et productive)</i>	<i>Sociale et culturelle</i>	<i>Gouvernance (institutions, droits, etc.)</i>	<i>Environnemental (ressources, etc.)</i>	<i>Autre PRÉCISER Sanitaire</i>
Nature du phénomène	oui	oui	oui	oui	oui
Nature de l'impact du phénomène sur la sécurité alimentaire et la nutrition	oui	oui	oui	oui	oui

(*) Veuillez cocher les cases. Des informations complémentaires ou descriptives (publications, rapports, rapports d'experts, analyses, etc.) peuvent être fournies dans la section 6 ci-dessous.

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3. Attributs du phénomène

	Classification (**)		
1. Étendue: Est-il pertinent pour les systèmes alimentaires et nutritionnels dans leur ensemble ou pour des parties spécifiques de ces systèmes?	Question systémique		
2. Portée: Combien de personnes touche-t-il?	Beaucoup		
3. Échelle: locale/régionale/mondiale?	Locale	Régionale	Mondiale
	<i>oui</i>	<i>oui</i>	
Pour les points 4 à 11 ci-dessous, veuillez utiliser l'échelle [— — , —, 0, +, ++]: Impact très négatif (— —) / négatif (—) / faible (0) / positif (+) / très positif (++)			
4. Impact sur la disponibilité	Les transitions alimentaires et nutritionnelles sont à la fois une conséquence et un déterminant de ces différents points. L'enjeu est tout d'abord de réunir les connaissances et de mettre au point les outils permettant de déterminer les impacts de ces transitions sur les différentes composantes de la sécurité alimentaires. Il est ensuite d'évaluer le potentiel de leviers d'action techniques ou économiques permettant de dévier certaines trajectoires pour assurer l'objectif de sécurité alimentaire.		
5. Impact sur l'accès			
6. Impact sur l'utilisation/la nutrition			
7. Impact sur la stabilité			
8. Impact sur les personnes les plus vulnérables			
9. Impact sur les femmes			
10. Impact sur les enfants			
11. Impact sur les populations marginalisées			
12. Coût de la résolution du problème (ou pour saisir l'opportunité)		Moyen	

(**) Veuillez cocher les cases ou classer les impacts et fournir des données synthétiques si besoin est. Des informations complémentaires ou descriptives peuvent être fournies dans la section 6 ci-dessous.

4. Période

Horizon (*)	Actuellement/ À court terme (1-5 ans)	À moyen terme (5-10 ans)	À long terme (10-20 ans ou plus)
Moment où le phénomène aura un impact	oui	Oui	oui
Moment où il faudra intervenir pour traiter la question	oui	Oui	oui

(*) Veuillez cocher les cases. Des informations complémentaires ou descriptives (publications, rapports, rapports d'experts, analyses, etc.) peuvent être fournies dans la section 6 ci-dessous.

5. Degré de confiance

Solidité de la base de connaissances actuellement disponible	Faible	Moyenne :inc omplète et hétérogène	Élevée
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6. Informations complémentaires

Informations complémentaires

Des actions de prospective et d'expertise ont été réalisées ou sont en cours : AgriMonde et AgriMonde Terra (collaboration Cirad-Inra), comportements alimentaires, changement d'affectations des sols, etc. Ces exercices ont permis de commencer à identifier des besoins de recherche et de données.

Éléments probants

Avancées dans la modélisation des tendances et des équilibres globaux (modèles de marchés agricoles, du secteur des biocarburants), de l'instabilité des prix agricoles et des politiques de stabilisation. Etudes de plus en plus nombreuses relatives à l'accès à l'alimentation (politiques publiques nationales de subvention et de rationalisation, programmes internationaux, etc.)

Lacunes en matière de connaissances

Articulation entre transitions alimentaires d'une part, restructuration des filières agroalimentaires et secteur de la bioéconomie d'autre part. L'impact de nouvelles formes de bioénergies sur les marchés des produits et coproduits agricoles doit être mieux évalué, ainsi que les conséquences de l'évolution du gradient animal-végétal. La question des pertes et gaspillages dans les chaînes logistiques, de collecte, transformation, distribution et au niveau du consommateur, doit être mieux connectée aux référentiels de connaissances existants en agronomie et économie.

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HLPE Inquiry

Critical and Emerging Issues for Food Security and Nutrition

Questionnaire

About the respondent

Name, Surname and Institution	Rob Atwill, Western Institute for Food Safety and Security, UC Davis		
Do you answer on behalf of your institution, or as an individual?	On behalf		
Do you agree if this contribution is made available to the public as part of the proceedings?	Yes		
Country of the responding individual/institution Please mention international or regional, the case being	United States		

1. Overview of the issue

Issue <i>in 2 lines</i>	Consistent access to food that is safe to consume		
Description of the issue <i>in less than 5 lines</i>	An indispensable component of food security is reliable access to food that is safe to consume. Once food is adulterated with microbial, chemical, or physical hazards, its nutritional benefit can be reduced and result in food insecurity. Food safety is particularly an issue with foods of animal origin or produce consumed raw.		
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>	<input checked="" type="checkbox"/> Challenge	<input checked="" type="checkbox"/> Opportunity	It depends (please specify)
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition <i>In less than 10 lines. Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.</i>	Various methods can be used to quantify the role of foodborne illness in elevating enteric disease and reducing food security in a population. For example, epidemiological case-control or cohort studies, food surveillance and monitoring, and outbreak and traceback investigation all contribute to an estimate of the annual incidence density of foodborne illness in a population.		

Main response proposed to address the issue	In regions where little information is present yet resources are available, the key issue is to first determine (1) the primary hazards causing the majority of foodborne illness, (2) primary food matrices that harbor the contaminant, and (3) determine how the contaminant is introduced into the food supply chain. Once these 3 factors are determined, focused intervention strategies can be developed and implemented. If such a detailed assessment cannot be performed due to lack of resources, a food safety audit resulting in actionable recommendations can be conducted with the hope that improved food sanitation, good preharvest agricultural practices, and improved hygiene will
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	reduce the incidence of foodborne illness.
Main actor(s) concerned or involved in the response proposed	Generally speaking public-private partnerships between the food-agricultural private sector and the local governmental ag. and public health sector should be the main actors implementing the response above. While NGOs are helpful, the private business sector must commit to a food safety ethic which is practiced throughout the food production and distribution network, with appropriate governmental oversight for negligent parties.

For the public inquiry fields below are optional

2. Broad typology of the issue

(*)	<i>External driver</i>	<i>Internal to food systems</i>	<i>Both</i>
Is the issue either or both?		X	Briefly mention how this may be the case

(*)	<i>Economic (and productive)</i>	<i>Social and Cultural</i>	<i>Governance (institutions, rights, etc.)</i>	<i>Environmental (resources, etc.)</i>	<i>Other (SPECIFY)</i>
Main nature of the issue		X	X		
Nature of the main impact of the issue on FSN					

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	<i>Classification (**)</i>		
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?	Critical points		
2. Breadth: Are there many people affected?	Few relative to all consumers		
3. Scale: local/regional/global?	Local		
	<i>Along the food production-distribution continuum</i>		

For items 4-11 below, please use the classification [— — , — , 0, +, ++]:

Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)

4. Impact on Availability	0
5. Impact on Access	—

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6. Impact on Utilization/ nutrition	-- --		
7. Impact on Stability	--		
8. Impact on most vulnerable people	-- --		
9. Impact on women	--		
10. Impact on children	-- --		
11. Impact on marginalized populations	-- --		
12. Cost to address the issue		Middle	

(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

4. Time Scale

<i>Timeframe (*)</i>	<i>Now/Short term (1-5 years)</i>	<i>Medium term (5-10 years)</i>	<i>Long term (10-20 years +)</i>
Moment when the issue will have an impact	X		
Moment to act to address the issue	X		

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.			High
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6. Additional Supporting Information

<i>Additional information</i>
<i>Evidence</i>
<i>Knowledge gaps</i>
<i>References</i>

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HLPE Inquiry

Critical and Emerging Issues for Food Security and Nutrition

Questionnaire

About the respondent

Name, Surname and Institution	Mark Bell, UC Davis	
Do you answer on behalf of your institution, or as an individual?	<u>On behalf</u>	As individual
Do you agree if this contribution is made available to the public as part of the proceedings?	<u>Yes</u>	No
Country of the responding individual/institution Please mention international or regional, the case being	USA	

1. Overview of the issue

Issue <i>in 2 lines</i>			
Description of the issue <i>in less than 5 lines</i>	The need to generate and communicate credible, relevant information with farmers in developing countries is fraught with challenges both at the research and the delivery ends. Researchers sensitized to the farmers needs and communication avenues that capture a demand led system are required.		
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>	Challenge	Opportunity	<u>It depends</u> (please specify)
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition <i>In less than 10 lines. Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.</i>	The issue is widely recognized amongst any and all sectors that works with farmers in developing countries.		

Main response proposed to address the issue	Much if the answer lies in building capacity so people can implement demand-led research and delivery systems. Creating awareness of the importance of markets and highlighting the role of the multiple players in the system are required.
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Main actor(s) concerned or involved in the response proposed	US universities with the appreciation and awareness of the context and needs and opportunities facing most national programs and farmers in less developed countries. NARES NGOs Input suppliers
--	---

For the public inquiry fields below are optional

2. Broad typology of the issue

(*)	External driver	Internal to food systems	Both
Is the issue either or both?			Good Extension is intimately linked to market access Farmers need incentives to produce based on Market "pull"

(*)	Economic (and productive)	Social and Cultural	Governance (institutions, rights, etc.)	Environmental (resources, etc.)	Other (SPECIFY)
Main nature of the issue	Y	Y	Y	Y	
Nature of the main impact of the issue on FSN					

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	Classification (**)		
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?	Critical point	Systemic issue	
2. Breadth: Are there many people affected?	Few	Many	
3. Scale: local/regional/global?	Local	Region	Global
	<i>Indicate here the precise location</i>	<i>Indicate here the precise region</i>	

For items 4-11 below, please use the classification [— — , — , 0 , + , ++]:

Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)

4. Impact on Availability	++
5. Impact on Access	++
6. Impact on Utilization/ nutrition	++
7. Impact on Stability	++
8. Impact on most vulnerable people	++

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

9. Impact on women	++		
10. Impact on children	++		
11. Impact on marginalized populations	++		
12. Cost to address the issue	Low	<u>Middle</u>	<u>High</u>

(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

4. Time Scale

<i>Timeframe (*)</i>	<i>Now/Short term (1-5 years)</i>	<i>Medium term (5-10 years)</i>	<i>Long term (10-20 years +)</i>
Moment when the issue will have an impact	Y		
Moment to act to address the issue	Y		

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.	Low	Middle	<u>High</u>
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6. Additional Supporting Information

<p><i>Additional information</i></p> <p>The definition of Extension has grown to include both a range of public and private sectors who are key within a successful research and development system.</p>
<p><i>Evidence</i></p> <p>Just go and ask at any village.</p>
<p><i>Knowledge gaps</i></p> <p>Good extension and development approaches involve multiple skills and multiple players. The gaps are many – especially in regards practical approaches to implement demand-led needs-driven research and delivery.</p> <p>Another “gap” is the linkage between the many research and extension/delivery organizations.</p>
<p><i>References</i></p> <p>See http://www.meas-extension.org/resources/publications</p>

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.



HLPE Inquiry
Critical and Emerging Issues for Food Security and Nutrition
Questionnaire -- Improving Homestead and Small Scale
Chicken Production

About the respondent

Name, Surname and Institution	David Bunn, University of California, Davis	
Dou you answer on behalf of your institution, or as an individual?	On behalf of UC Davis	
Do you agree if this contribution is made available to the public as part of the proceedings?	Yes	
Country of the responding individual/institution Please mention international or regional, the case being	California, USA	

1. Overview of the issue

Issue <i>in 2 lines</i>	Improving homestead and small farm chicken production to improve food security, nutrition and livelihoods of the rural poor.	
Description of the issue <i>in less than 5 lines</i>	Homestead and small-scale poultry production has tremendous potential for alleviation of malnutrition, improving food security and providing income for the rural poor in Africa, Asia and Latin America. Chicken and eggs provide the key micronutrients most needed by pregnant and lactating women and infants in the first 1000 days. The income from chickens and eggs is often one of the few significant income sources for women, often providing funds for family needs and emergencies. Raising local scavenging chickens is low risk, where modest improvements can have a major impact.	
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>		Opportunity
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition <i>In less than 10 lines. Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.</i>	This issue analysis is based on experience in field studies on the topic, literature review and participation in international workshops and discussions.	

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Main response proposed to address the issue	In Africa, Asia and Central America implement training programs for animal health workers, agricultural extension advisors, women farmer organizations and for veterinary supply shops on Newcastle disease vaccination and basic poultry husbandry relevant to the small scale scavenging poultry systems and small scale commercial production.
Main actor(s) concerned or involved in the response proposed	Veterinary supply shops, district veterinary officers, animal health workers, agricultural extension field staff, and women farmers associations.

For the public inquiry fields below are optional

2. Broad typology of the issue

(*)	<i>External driver</i>	<i>Internal to food systems</i>	<i>Both</i>
Is the issue either or both?	Limited access to ND vaccine.	Limited chicken health and husbandry information.	External and internal issues as described to the left.

(*)	<i>Economic (and productive)</i>	<i>Social and Cultural</i>	<i>Governance (institutions, rights, etc.)</i>	<i>Environmental (resources, etc.)</i>	<i>Other (SPECIFY)</i>
Main nature of the issue	Small scale poultry is often the first economic enterprise of rural poor, particularly among women.	Women are the primary caretakers of homestead and small farm poultry production.	Requires involvement of local livestock or veterinary ministries to provide information about access to ND vaccine.	Compared to livestock scavenging chicken production has little environmental impact and requires few inputs.	
Nature of the main impact of the issue on FSN	Improve chicken production provides income and nutrition for rural households	Few cultural barriers to chicken production.			

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	<i>Classification (**)</i>	
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?	Chickens and Eggs provide key	In rural communities of

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	micronutrients to combat malnutrition among rural poor	developing countries malnutrition and stunting is widespread.
2. Breadth: Are there many people affected?		Affects most rural communities in developing countries
3. Scale: local/regional/global?	Local	Region
	<i>Village and household level</i>	<i>Problem across Africa, Asia and Latin America</i>
		Global-

For items 4-11 below, please use the classification [— — , —, 0, +, ++]:
Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)

4. Impact on Availability	++
5. Impact on Access	++
6. Impact on Utilization/ nutrition	++
7. Impact on Stability	+
8. Impact on most vulnerable people	Impact directly on the rural poor households
9. Impact on women	Critical for income and nutrition for women who typically raise poultry and earn income from poultry.
10. Impact on children	Critical for children for income and nutrition.
11. Impact on marginalized populations	Is particularly targeted to marginalized rural communities, ethnic groups and women.
12. Cost to address the issue	Low Cost

(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

4. Time Scale

<i>Timeframe (*)</i>	<i>Now/Short term (1-5 years)</i>	<i>Medium term (5-10 years)</i>	<i>Long term (10-20 years +)</i>
Moment when the issue will have an impact	3-24 months.		
Moment to act to address the issue	ASAP		

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.			High
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Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

6. Additional Supporting Information

Additional information

Evidence

Knowledge gaps -- New vaccines for Newcastle disease and locally appropriate vaccines and disease prevention strategies for chicken.

References

1. Ahlers C., Alders R.G., Bagnol B., Cambaza A.B., Harun M., Mgonezulu R., Msami H., Pym B., Wegener P., Wethli E. and Young M. 2009. Improving village chicken production: a manual for field workers and trainers. ACIAR Monograph No. 139. Australian Centre for International Agricultural Research: Canberra, 194 pp.

2. Riise AP, Permin A, McAinsh CV, Frederiksen L. Keeping Village Poultry, A technical manual on small-scale poultry production. Network for Smallholder Poultry Development. 2004.

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HLPE Inquiry

Critical and Emerging Issues for Food Security and Nutrition

Questionnaire

About the respondent

Name, Surname and Institution	Kathryn Dewey, Christine Stewart, Edye Kuyper UC Davis	
Do you answer on behalf of your institution, or as an individual?	On behalf	
Do you agree if this contribution is made available to the public as part of the proceedings?	Yes	
Country of the responding individual/institution Please mention international or regional, the case being	United States of America	

1. Overview of the issue

Issue <i>in 2 lines</i>	How to ensure adequate dietary diversity while simultaneously meeting increased demand for food (calories) and coping with climate change.		
Description of the issue <i>in less than 5 lines</i>	Animal source foods, fruits and vegetables are often underrepresented in the diets of low-income populations. Monotonous diets contribute to undernutrition, which is associated with poor child growth and later cognitive function. Among adults, low fruit and vegetable consumption is one of the leading risk factors for chronic disease.		
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>	Challenge	Opportunity	√ It depends Addressing the issue will be challenging, yet it presents an opportunity to improve health
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition <i>In less than 10 lines.</i> Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.	A landscape analysis of existing literature and interventions related to food security and nutrition highlighted inadequate attention to dietary diversity as a key gap. Dietary diversity is a measureable outcome that is strongly related to nutrient adequacy. Our expertise in assessing dietary adequacy based on patterns of food consumption also influenced our focus on this topic. Improved dietary diversity can achieve more than one nutritional goal, making attention to this issue a “low-hanging fruit”.		

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Main response proposed to address the issue	Effective strategies to improve access to and availability, utilization and stability of diverse diets should be identified and replicated or modified so as to be contextually appropriate, and accompanied by rigorous implementation research that can inform policy and funding decisions. Macro- and micro-level policies that improve the dietary diversity of the most nutritionally vulnerable groups (young children, adolescent girls, and women of reproductive age) need to be prioritized.
Main actor(s) involved in the response proposed	Dr. Christine Stewart Dr. Kathryn Dewey Edye Kuyper, MS

For the public inquiry fields below are optional

2. Broad typology of the issue

(*)	<i>External driver</i>	<i>Internal to food systems</i>	<i>Both</i>
Is the issue either or both?			

(*)	<i>Economic (and productive)</i>	<i>Social and Cultural</i>	<i>Governance (institutions, rights, etc.)</i>	<i>Environmental (resources, etc.)</i>	<i>Other (SPECIFY)</i>
Main nature of the issue					
Nature of the main impact of the issue on FSN					

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	<i>Classification (**)</i>		
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?	Critical point	Systemic issue	
2. Breadth: Are there many people affected?	Few	Many	
3. Scale: local/regional/global?	Local	Region	Global
	<i>Indicate here the precise location</i>	<i>Indicate here the precise region</i>	

For items 4-11 below, please use the classification [— — , — , 0, +, ++]:

Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)

4. Impact on Availability	
5. Impact on Access	
6. Impact on Utilization/ nutrition	
7. Impact on Stability	

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8. Impact on most vulnerable people	+ women, infants and young children		
9. Impact on women			
10. Impact on children			
11. Impact on marginalized populations	+ women, infants and young children		
12. Cost to address the issue	Low	Middle	High

(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

4. Time Scale

<i>Timeframe (*)</i>	<i>Now/Short term (1-5 years)</i>	<i>Medium term (5-10 years)</i>	<i>Long term (10-20 years +)</i>
Moment when the issue will have an impact	√	√	√
Moment to act to address the issue	√		

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.	Low	√ Middle	High
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6. Additional Supporting Information

<i>Additional information</i>
<p><i>Evidence</i></p> <p>Consumption of a varied diet, and particularly one that includes animal source foods, fruits, and vegetables, is associated with reduced incidence of micronutrient malnutrition and undernutrition. Similarly, adequate intake of fruits and vegetables is associated with reduced incidence of chronic disease. In the period from 1960-2009, agricultural crop homogeneity increased globally and production of globally dominant cereal and oilseed crops expanded, potentially reducing the diversity of foodstuffs available to consumers. When combined with physical inactivity, dietary risk factors (particularly the low intake of fruits, vegetables, whole grains, nuts and seeds) cause 10% of the global burden of disease, measured in disability adjusted life years.</p>
<p><i>Knowledge gaps</i></p> <p>Strategies to increase dietary diversity require approaches that address the entire food system, including production, processing, distribution and consumption. Consumers must possess adequate resources to procure diets that ensure adequate intake of fruits, vegetables, and animal-source foods. Policies should be identified and implemented that support a food systems approach to increasing production of foods not adequately represented in local diets, and to reduce consumer barriers to accessing and utilizing these foods. Interventions to change consumer preferences can influence demand for and supply of diverse foodstuffs, and efforts to achieve these impacts need to be appropriately targeted, coordinated, and evaluated. The impact of increased consumer demand on agricultural production activities has not been adequately explored.</p>
<p><i>References</i></p> <p>Arimond M, Ruel MT. Dietary diversity is associated with child nutritional status: evidence from 11 demographic and health surveys. <i>The Journal of nutrition</i>. 2004;134(10):2579-2585.</p> <p>Food and Agriculture Organization of the United Nations and CABI. <i>Combating Micronutrient Deficiencies: Food-based Approaches</i>. Rome, Italy: UNFAO, 2011.</p>

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

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Khoury CK, Bjorkman AD, Dempewolf H, Ramirez-Villegas J, Guarino L, Jarvis A, et al. Increasing homogeneity in global food supplies and the implications for food security. *Proceedings of the National Academy of Sciences of the United States of America*. 2014.

Masset E, Haddad L, Cornelius A, Isaza-Castro J. Effectiveness of agricultural interventions that aim to improve nutritional status of children: systematic review. *BMJ*. 2012;344:d8222.

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Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.



HLPE Inquiry

Critical and Emerging Issues for Food Security and Nutrition

Questionnaire

About the respondent

Name, Surname and Institution	Elizabeth Mitcham, University of California, Davis		
Dou you answer on behalf of your institution, or as an individual?	On behalf	As individual <input checked="" type="checkbox"/>	
Do you agree if this contribution is made available to the public as part of the proceedings?	Yes <input checked="" type="checkbox"/>	No	
Country of the responding individual/institution Please mention international or regional, the case being	United States		

1. Overview of the issue

Issue <i>in 2 lines</i>	Postharvest Losses		
Description of the issue <i>in less than 5 lines</i>	High loss in both quality and quantity of produce after harvest due to physical, biological and environmental damage.		
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>	Challenge <input checked="" type="checkbox"/>	Opportunity	It depends
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition <i>In less than 10 lines.</i> Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.	Food losses at farm, wholesale and retail level has been determined by surveying farmers and by sampling of value chains. Losses include mechanical damage, decay and water loss. Losses range from 10 to 60% depending on the commodity and country. Results in a significant loss of food available for consumption and lost income potential.		

Main response proposed to address the issue	Build postharvest training and services centers to provide a local place to wash, sort and package produce after harvest, a place to purchase needed supplies, and a place to conduct training on postharvest handling. Farmers must be linked to markets to have an incentive to reduce losses. Providing farmers access to transportation options to get their crop to market and/or access to inexpensive cool storage gives farmers more power in sales transactions. Educate farmers and handlers on best postharvest practices. Assure inputs are available locally at a reasonable price, including clippers, packaging, thermometers, water sanitizers.
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Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

Main actor(s) concerned or involved in the response proposed	Using a participatory market chain analysis, bring together growers, middle men and buyers to discuss needs and capabilities. Work with government to reduce tariffs on import of supplies or with local manufacturers who may be able to build supplies in some cases. Postharvest trainers to provide training of farmers at the local level.
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For the public inquiry fields below are optional

2. Broad typology of the issue

(*)	<i>External driver</i>	<i>Internal to food systems</i>	<i>Both</i>
Is the issue either or both?		x	Briefly mention how this may be the case

(*)	<i>Economic (and productive)</i>	<i>Social and Cultural</i>	<i>Governance (institutions, rights, etc.)</i>	<i>Environmental (resources, etc.)</i>	<i>Other (SPECIFY)</i>
Main nature of the issue		x		x	
Nature of the main impact of the issue on FSN	x				

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	<i>Classification (**)</i>		
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?	Critical point x	Systemic issue	
2. Breadth: Are there many people affected?	Few	Many x	
3. Scale: local/regional/global?	Local	Region	Global x
	<i>Indicate here the precise location</i>	<i>Indicate here the precise region</i>	

For items 4-11 below, please use the classification [— — , — , 0, +, ++]:

Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)

4. Impact on Availability	- -
5. Impact on Access	- -
6. Impact on Utilization/ nutrition	- -
7. Impact on Stability	0
8. Impact on most vulnerable people	- - Postharvest crop losses negatively and disproportionately impact subsistence farmers
9. Impact on women	- -

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

10. Impact on children	- -		
11. Impact on marginalized populations	0 Specify as appropriate		
12. Cost to address the issue	Low	Middle x	High

(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

4. Time Scale

<i>Timeframe (*)</i>	<i>Now/Short term (1-5 years)</i>	<i>Medium term (5-10 years)</i>	<i>Long term (10-20 years +)</i>
Moment when the issue will have an impact	X		
Moment to act to address the issue	X		

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.	Low	Middle	High x
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6. Additional Supporting Information

<i>Additional information</i>												
Food Loss Measurements Along the Post Harvest Chain in Four Countries												
Country	Commodity	Quality Losses (% mechanical damage)			Comments	Quality Losses (% decay)			Comments	Percent sorted out and discarded		
		Farm	Wholesale	Retail		Farm	Wholesale	Retail		Farm	Wholesale	Retail
Ghana	Tropical Fruits	6.15	19.67	16.33		4.60	-	-		9.25	18.35	21.30
	Soft Vegetables	30.30	15.17	17.17		10.36	6.58	6.08		18.04	10.74	16.72
Benin	Leafy Greens	34.5	89.5	79		47	-	-		17.3	-	17.3
	Soft Vegetables	22	17.25	20.6		24	19.6	17.75		14.45	18.7	18.7
Rwanda	Tropical Fruits	8.5	26	31.75		5	11.7	19.75		8.9	11.15	12.8
	Leafy Greens	18.5	15	32.5		7.5	12.5	13.5		8.3	2	25
	Soft Vegetables	2	11	12.5		6	7	6.5		7.8	10.7	14.7
India	Tropical Fruits	11.325	6.825	9.25		4.9	5.5	6.625		13.425	11.6	11.025
	Soft Vegetables	10.25	6	9.75		6.75	7.5	8.1		8.15	9.65	8.6

Source: World Food Logistics Organization Report 2012
Identification of Appropriate Postharvest Technologies for Improving Market Access

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

Table 2. FAO STAT 2009 Percent Food Waste Reported in FTF and other Countries

Country	Tomatoes	Onions	Plantains	Vegetables, total	Tropical/Sub- tropical Fruits	Citrus Fruits	Starchy Roots
Percent Food Waste of Total Production (%)							
Honduras	14.8	23.1	15.9	6.6	11.4	15.2	10.2
Guatemala	15.1	11.5	17.6	7.3	27	-	1.8
Dominican Republic	9.4	12.8	10.1	12.8	9.9	9.9	10.2
Haiti	-	16.7	15.1	11.4	18.1	4.7	19.9
Cambodia	-	-	-	10	8.2	10.8	5
Bangladesh	9.9	10.2	-	10	9.9	11	10
Nepal	-	-	-	9.8	5.1	5.1	15
Chile	25	10	-	18.5	3.9	10.1	5
Colombia	4	22.5	10	9.4	7.8	12.5	7.1
Benin	5.1	5.5	-	6.3	9.8	-	11.9
Ghana	10.1	16.3	9.9	10.1	9.9	10.1	25.3
India	10	5	-	6.1	14.1	10	14.1
Rwanda	-	-	10	6.1	9.5	-	4.1
Ave Loss (%)	11.49	13.36	12.66	9.57	11.12	9.94	10.74

Source: FAOSTAT Balance Sheets
www.faostat.fao.org/

Note: FAO STAT reports on food waste include loss at all stages between the level at which production is recorded and the household, i.e. losses during storage and transportation. Losses occurring during the pre-harvest and harvesting stages are excluded. The waste of both edible and inedible parts of the commodity occurring in the household, e.g. in the kitchen, also is excluded.

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Table 3. Postharvest Losses of Fruits and Vegetables in Some Developing Countries						
Country	Commodity	Losses (%)	Method used	Point of Loss Measured	Type of Loss Measured	Reference
Ghana	Tomato	20	Interviews			Bani et al, 2006
Benin	Mangoes Tomatoes	17 (early April) 70 (mid June)- due to fruit flies	Sampling Sampling	Pre-harvest	Pest/ disease	Vayssieres et al, 2008 IITA, 2008
Kenya	Banana (imported from Uganda)	18.2- 45.8	Sampling	Transport, Storage	Mechanical, Decay	George & Mwangangi, 1994
Nigeria	Yam	12.4	Survey			Okoh, 1997
India	Onion, citrus, mango	30, 27, 26	Sampling			Roy, 1993
	Tomato	30.3- 39.6	Sampling			Pal et al, 2002
	Cabbage	15- 20	Interviews			Gajbhiye et al, 2008
Pakistan	Tomato	20	Survey			Mujib et al, 2007
	Tomato, potato, onion	22, 12, 9	Sampling	Farm, Wholesale, Retail	Physical damage, decay	Zulfiqar et al, 2005
China	Chinese cabbage	22.7- 61.6	Interviews	Farm	Physical damage, pest/ disease	Wang & Bagshaw, 2001
	Cabbage, Broccoli, Onions	16-19, 14- 22, 12-13	Sampling	Retail, Wholesale		Shufang Zheng, Wu Li, Lipu Gao, and Ping Wu 2001
Oman	Fresh produce	3- 19	Survey			Opara, 2003
Jordan	Tomato, eggplant, pepper, squash	8, 19.4, 23, 21.9	Sampling			El-Assi, 2002
	Tomatoes, Eggplant	18, 18	Sampling	Farm, Wholesale, Retail, Transport		Mohammad Awaidah, 2010
Tanzania	Sweet potato	20- 86	Sampling	Transport	Physical damage	Tomlins et al, 2000
	Mangoes, oranges, pineapples and lime	17-63	Sampling	Farm, Transport, Packing	Physiological and mechanical damage; quality	Kereth et al 2013
Brazil	Mangoes	28	Survey			Choudhury & Costa, 2004
Costa Rica	Mangoes	14.1 (dry season) 84.4 (rainy season) - due to Anthracnose	Sampling @WS market	Pre-harvest	Pest/ disease	Arauz et al, 1994

Evidence

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

Knowledge gaps

Need more information on availability and costs of required inputs for postharvest handling in each region. Are there policy issues that increase costs, such as import tariffs?

References

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The Postharvest Education Foundation. 2013. Gathering Data to Address Postharvest Loss Challenges: Commodity Systems Assessment Methodology. PEF White Paper No. 13-02

Kitinoja, Lisa. 2013. [Innovative Small-scale Postharvest Technologies for Reducing Losses in Horticultural Crops](#)

Kitinoja, Lisa and H.Y. Al Hassan. 2012. [Identification of Appropriate Postharvest Technologies for Small Scale Horticultural Farmers and Marketers in Sub-Saharan Africa and South Asia - Part 1. Postharvest Losses and Quality Assessments](#)

Kader, A.A., L. Kitinoja, A. M. Hussein, O. Abdin, A. Jabarin, and A. E. Sidahmed. 2012. [Role of Agro-industry in Reducing Food Losses in the Middle East and North Africa Region](#)

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.



HLPE Inquiry

Critical and Emerging Issues for Food Security and Nutrition

Questionnaire

About the respondent

Name, Surname and Institution:	Thomas P. Tomich, University of California, Davis USA College of Agricultural and Environmental Sciences W.K. Kellogg Endowed Chair in Sustainable Food Systems Director, UC Davis Agricultural Sustainability Institute (ASI) Director, UC Sustainable Agriculture Research and Education Program (SAREP) Professor of Community Development, Environmental Science & Policy	
Do you answer on behalf of your institution, or as an individual?		As individual
Do you agree if this contribution is made available to the public as part of the proceedings?	Yes	
Country of the responding individual/institution Please mention international or regional, the case being	USA	

1. Overview of the issue

Issue <i>in 2 lines</i>	How to implement a systems approach to food and agricultural challenges of the 21st Century?	
Description of the issue <i>in less than 5 lines</i>	Food/agricultural strategy faces multiple drivers of change, including climate change and other aspects of global change. Contemporary agriculture itself contributes significantly to some of these stressors. This also raises organizational issues.	
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>	Challenge	
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition <i>In less than 10 lines. Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.</i>	Integrated ecosystem assessment Knowledge systems for sustainable development Sustainability science	

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

Main response proposed to address the issue	Spanning the full range of knowledge generation, innovations in practices, community level institutions, public policies at various scales, and including private sector initiatives as well as public institutions, civil society, and partnerships among them
Main actor(s) concerned or involved in the response proposed	This is a very broad list, spanning the food system

For the public inquiry fields below are optional

2. Broad typology of the issue

(*)	<i>External driver</i>	<i>Internal to food systems</i>	<i>Both</i>
Is the issue either or both?	Several	Many state variables, including ecosystem health and human wellbeing	Conceptual frameworks/ontologies linking various drivers, state variables, and responses

(*)	<i>Economic (and productive)</i>	<i>Social and Cultural</i>	<i>Governance (institutions, rights, etc.)</i>	<i>Environmental (resources, etc.)</i>	<i>Other (SPECIFY)</i>
Main nature of the issue	X	X	X	X	The point is to integrate across these
Nature of the main impact of the issue on FSN	X	X	X	X	Various, but one of the key challenges is understanding potential tradeoffs

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	<i>Classification (**)</i>		
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?		Systemic issue	
2. Breadth: Are there many people affected?		Many	
3. Scale: local/regional/global? Yes, and across scales	Local	Region	Global

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	<i>Indicate here the precise location</i>	<i>Indicate here the precise region</i>	
For items 4-11 below, please use the classification [— — , —, 0, +, ++]: Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)			
4. Impact on Availability	Indeterminate: these are all key performance criteria / key indicator groups for overall food system performance		
5. Impact on Access			
6. Impact on Utilization/ nutrition			
7. Impact on Stability			
8. Impact on most vulnerable people			
9. Impact on women			
10. Impact on children			
11. Impact on marginalized populations			
12. Cost to address the issue	Low, if it can build on others	Middle	High

(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

4. Time Scale

Timeframe (*)	Now/Short term (1-5 years)	Medium term (5-10 years)	Long term (10-20 years +)
Moment when the issue will have an impact	Timeframe indeterminate, some aspects are “fast” variables, others are “slow” variables		
Moment to act to address the issue	As with IPCC, the point may be to build capacity for ongoing assessment, analysis, foresight		

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.	Across this range: integrated assessment practice includes systematic ways to address both qualitative and quantitative uncertainty
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6. Additional Supporting Information

<i>Additional information</i>
One (of many) specific examples of ongoing efforts to apply systems analysis and informatics to both conceptual and practical food systems challenges can be viewed at: http://asi.ucdavis.edu/research/ss

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

Evidence: Various assessments and other sources listed as references below

Knowledge gaps As per the references listed below, there has been much progress on methods (thanks to IPCC, MA, IAASTD, and others). However, as Sachs et al observe “We lack timely monitoring capability for even the most basic assessment of environmental and social impacts of agricultural systems at policy relevant scales.” We also have very little understanding of thresholds and discontinuities in key food system functions. This hampers our ability to assess opportunities and threats, to build on experience to inform policy and practice, and also to create consensus on priorities for R&D (although see Pretty et al in references).

References

Various publications of IPCC, Millennium Ecosystem Assessment, IAASTD

“Agrimonde” scenarios and analysis by INRA and CIRAD

N Ash et al., eds. 2010. Ecosystems and Human Well-being – A Manual for Assessment Practitioners.. Washington, DC: Island Press, 264 pp.

J Pretty et al. 2010. “The top 100 questions of importance to the future of global agriculture.” International Journal of Agricultural Sustainability 8 (4): 219-236.

J Sachs et al. 2010. “Monitoring the world’s agriculture.” Nature 466 (29): 558-560.

T Tomich et al. 2011. “Agroecology: a review from a global change perspective.” Annual Review of Environment and Resources 36:193-222. DOI 10.1146/annurev-environ-012110-121302

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

K20A



Enquête du Groupe d'experts de haut niveau (HLPE) Questions cruciales et émergentes pour la sécurité alimentaire et la nutrition

Questionnaire

Renseignements concernant le contributeur

Nom, prénom et institution	BRICAS Nicolas, CIRAD	
Répondez-vous au nom de votre institution ou à titre privé?	Au nom du Cirad	
Acceptez-vous que cette contribution soit mise à la disposition du public dans le cadre des actes de la consultation?	Oui	
Pays de la personne ou de l'institution qui répond. Veuillez mentionner, le cas échéant, «international» ou «régional».	France mais le Cirad est un centre de coopération internationale	

1. Aperçu de la question/du phénomène

Énoncé <i>en 2 lignes</i> .	Quelles sont les conditions pour que le développement agricole soit favorable à la sécurité alimentaire et nutritionnelle ?		
Description <i>en moins de 5 lignes</i> .	Contrairement à une idée répandue, le développement agricole n'entraîne pas automatiquement l'amélioration de l'alimentation et de la nutrition. Il peut parfois même avoir des effets négatifs. Cette relation est encore peu étudiée et mérite plus d'attention pour identifier à quelles conditions on peut obtenir un effet d'entraînement positif.		
La question/le phénomène est-il un <i>défi</i> et/ou une <i>opportunité</i> pour la sécurité alimentaire et la nutrition? <i>Veuillez cocher la case appropriée.</i>	Défi	Opportunité	A la fois risque et opportunité
Méthode et approche utilisées pour déterminer la question/le phénomène et évaluer son importance pour la sécurité et la nutrition. <i>En moins de 10 lignes.</i> Des informations complémentaires ou descriptives (publications, rapports, rapports d'experts, analyses, etc.) peuvent être fournies dans la section 5 ci-dessous.	Les projets ou les politiques de développement sont rarement évalués ex-ante dans leurs effets sur la sécurité alimentaire et nutritionnelle. Les études d'évaluation ex-post existantes ont tendance à se focaliser sur des projets de développement localisés (et moins sur le niveau des politiques), sur les problèmes de sous-nutrition (au détriment de la prise en compte des problèmes de surnutrition et de double fardeau), en ayant recours à des méthodologies très spécifiques. Elles ont néanmoins l'intérêt de montrer que les effets des projets de développement agricole ne sont pas systématiquement positifs.		

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

Principale action proposée pour résoudre le problème (ou saisir l'opportunité).	Intégrer des analyses des effets sur la sécurité alimentaire et nutritionnelle dans toutes ses dimensions, depuis la conception jusqu'au suivi et à l'évaluation des projets comme des politiques de développement agricole. Former les professionnels du développement agricole aux effets sur la sécurité alimentaire et nutritionnelle des actions dans leur domaine. Inversement, former les nutritionnistes à la façon dont les interventions agricoles peuvent contribuer à la nutrition, ceci dans un souci de coordination intersectorielle
Principal(aux) acteur(s) concerné(s) ou participant à l'action proposée.	Acteurs des politiques et des projets de développement agricole Ecoles agronomiques Nutritionnistes Economistes agricoles Acteurs du système agro-alimentaire

Les champs suivants sont facultatifs pour l'enquête publique

2. Typologie élargie de la question/du phénomène

(*)	<i>Facteur déterminant externe</i>	<i>Interne aux systèmes alimentaires</i>	<i>Les deux</i>
Le phénomène est-t-il l'un, l'autre ou les deux?	Le développement agricole peut avoir des effets sur la régularité des revenus, sur la santé, sur les soins, etc. et affecter ainsi la nutrition.	Le développement agricole a des effets sur les disponibilités, les prix et la qualité des aliments et leur régularité	

(*)	<i>Économique (et productive)</i>	<i>Sociale et culturelle</i>	<i>Gouvernance (institutions, droits, etc.)</i>	<i>Environnemental (ressources, etc.)</i>	<i>Autre PRÉCISER</i>
Nature du phénomène					
Nature de l'impact du phénomène sur la sécurité alimentaire et la nutrition	Disponibilités. Prix des aliments Régularité des prix et des revenus	Santé des agriculteurs /trices Budget-temps et donc soin	Relations de genre, au sein des familles (ainés/ cadets, hommes et femmes, ...) pour les décisions agricoles, budgétaires, de santé et alimentaires. Accès au soin	Accès à un environnement sanitaire de qualité : eau, pesticides, biodiversité....	

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

(*) Veuillez cocher les cases. Des informations complémentaires ou descriptives (publications, rapports, rapports d'experts, analyses, etc.) peuvent être fournies dans la section 6 ci-dessous.

3. Attributs du phénomène

	Classification (**)		
13. Étendue: Est-il pertinent pour les systèmes alimentaires et nutritionnels dans leur ensemble ou pour des parties spécifiques de ces systèmes?	Point critique		Question systémique
14. Portée: Combien de personnes touche-t-il?	Peu		Beaucoup
15. Échelle: locale/régionale/mondiale?	Locale	Régionale	Mondiale
	<i>Indiquez ici le lieu exact</i>	<i>Indiquez ici la région exacte</i>	
Pour les points 4 à 11 ci-dessous, veuillez utiliser l'échelle [— — , —, 0, +, ++]: Impact très négatif (— —) / négatif (—) / faible (0) / positif (+) / très positif (++)			
16. Impact sur la disponibilité	oui		
17. Impact sur l'accès	oui		
18. Impact sur l'utilisation/la nutrition	Oui		
19. Impact sur la stabilité	Oui		
20. Impact sur les personnes les plus vulnérables	Oui par accroissement des inégalités		
21. Impact sur les femmes	Oui		
22. Impact sur les enfants	Oui		
23. Impact sur les populations marginalisées	Le cas échéant précisez		
24. Coût de la résolution du problème (ou pour saisir l'opportunité)	Faible	Moyen	Élevé

(**) Veuillez cocher les cases ou classer les impacts et fournir des données synthétiques si besoin est. Des informations complémentaires ou descriptives peuvent être fournies dans la section 6 ci-dessous.

4. Période

Horizon (*)	Actuellement/ À court terme (1-5 ans)	À moyen terme (5-10 ans)	À long terme (10-20 ans ou plus)
Moment où le phénomène aura un impact			
Moment où il faudra intervenir pour traiter la question			

(*) Veuillez cocher les cases. Des informations complémentaires ou descriptives (publications, rapports, rapports d'experts, analyses, etc.) peuvent être fournies dans la section 6 ci-dessous.

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5. Degré de confiance

Solidité de la base de connaissances actuellement disponible	Faible	Moyenne	Élevée
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6. Informations complémentaires

Informations complémentaires

Action contre la Faim (ACF) et le Cirad viennent de réaliser une revue de la littérature scientifique sur les relations entre développement agricole et la nutrition :

<http://www.actioncontrelafaim.org/fr/content/identifier-et-limiter-les-risques-des-interventions-agricoles-sur-la-nutrition>

Éléments probants

Plusieurs « chemins » qui relient le développement agricole et la nutrition ont été identifiés

Lacunes en matière de connaissances

Encore peu d'études sur les relations entre le développement agricole et la sécurité alimentaire et nutritionnelle.

Bibliographie

http://www.actioncontrelafaim.org/sites/default/files/publications/fichiers/risques_ida_nutrition_final_log_oacf_cirad.doc

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

K20B



Enquête du Groupe d'experts de haut niveau (HLPE) Questions cruciales et émergentes pour la sécurité alimentaire et la nutrition

Questionnaire

Renseignements concernant le contributeur

Nom, prénom et institution	Nicolas BRICAS, Cirad	
Répondez-vous au nom de votre institution ou à titre privé?	Au nom du Cirad	
Acceptez-vous que cette contribution soit mise à la disposition du public dans le cadre des actes de la consultation?	Oui	
Pays de la personne ou de l'institution qui répond. Veuillez mentionner, le cas échéant, «international» ou «régional».	France mais le Cirad est un centre de coopération internationale	

1. Aperçu de la question/du phénomène

Énoncé <i>en 2 lignes</i> .	Rôle du secteur agro-alimentaire (SAA) dans la sécurité alimentaire et nutritionnelle (SAN)		
Description <i>en moins de 5 lignes</i> .	Le secteur de la transformation, du stockage, de la commercialisation, de la logistique, de la distribution, de la restauration joue, par plusieurs leviers, un rôle important sur la SAN. Or ce secteur est en pleine mutation sans que l'on mesure bien les conséquences de ces changements sur la SAN		
La question/le phénomène est-il un <i>défi</i> et/ou une <i>opportunité</i> pour la sécurité alimentaire et la nutrition? <i>Veuillez cocher la case appropriée.</i>	Défi	Opportunité	La mutation du SAA constitue à la fois un risque et une opportunité pour la SAN.
Méthode et approche utilisées pour déterminer la question/le phénomène et évaluer son importance pour la sécurité et la nutrition. <i>En moins de 10 lignes. Des informations complémentaires ou descriptives (publications, rapports, rapports d'experts, analyses, etc.) peuvent être fournies dans la section 5 ci-dessous.</i>	Il existe une littérature fragmentée sur les enjeux du SAA sur différents déterminants de la SAN mais pas de synthèse sur la question.		
Principale action proposée pour résoudre le problème (ou saisir l'opportunité).	Réaliser une synthèse sur les différents rôles du SAA sur la SAN et sur les enjeux de sa mutation.		

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

Principal(aux) acteur(s) concerné(s) ou participant à l'action proposée.	Opérateurs et entreprises de la transformation, du stockage, de la commercialisation, de la logistique, de la distribution, de la restauration. Pouvoirs publics nationaux et collectivités locales concernés par ce secteur
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Les champs suivants sont facultatifs pour l'enquête publique

2. Typologie élargie de la question/du phénomène

(*)	Facteur déterminant externe	Interne aux systèmes alimentaires	Les deux
Le phénomène est-t-il l'un, l'autre ou les deux?		Le SAA et un des composants essentiels des systèmes alimentaires, nettement moins étudié que le secteur de la production agricole.	Expliquez brièvement

(*)	Économique (et productive)	Sociale et culturelle	Gouvernance (institutions, droits, etc.)	Environnemental (ressources, etc.)	Autre PRÉCISER
Nature du phénomène	Industrialisation rapide	Standardisation	Rôle moteur du secteur privé	Industrialisation	
Nature de l'impact du phénomène sur la sécurité alimentaire et la nutrition	Risque sur les emplois Effets mal connus sur les pertes post-récolte	Pertes de diversité culturelle ?	Marginalisation des petits opérateurs dans les politiques alimentaires	Effets mal connus sur consommation énergie fossile. Effets sur biodiversité	

(*) Veuillez cocher les cases. Des informations complémentaires ou descriptives (publications, rapports, rapports d'experts, analyses, etc.) peuvent être fournies dans la section 6 ci-dessous.

3. Attributs du phénomène

	Classification (**)	
25. Étendue: Est-il pertinent pour les systèmes alimentaires et nutritionnels dans leur ensemble ou pour des parties spécifiques de ces systèmes?	Aval des filières	Mais rôle d'entraînement sur l'ensemble du système alimentaire
26. Portée: Combien de personnes touche-t-il?		Beaucoup d'emplois directs et indirects
27. Échelle: locale/régionale/mondiale?	Locale	Mondiale
	Lié à l'urbanisation	

Pour les points 4 à 11 ci-dessous, veuillez utiliser l'échelle [— — , — , 0 , + , ++]:

Impact très négatif (— —) / négatif (—) / faible (0) / positif (+) / très positif (++)

28. Impact sur la disponibilité	Oui via pertes post-récolte
29. Impact sur l'accès	Oui via les prix des aliments

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

30. Impact sur l'utilisation/la nutrition	Oui via qualité nutritionnelle et sanitaire des aliments		
31. Impact sur la stabilité	Oui via la conservation des aliments que la transfo permet		
32. Impact sur les personnes les plus vulnérables	Oui, les femmes, principales actrices du SAA à petites échelles		
33. Impact sur les femmes	Oui		
34. Impact sur les enfants	Pas directement		
35. Impact sur les populations marginalisées	Risques de marginalisation d'activités sous l'effet d'une industrialisation rapide		
36. Coût de la résolution du problème (ou pour saisir l'opportunité)	Faible	Moyen	Élevé

(**) Veuillez cocher les cases ou classer les impacts et fournir des données synthétiques si besoin est. Des informations complémentaires ou descriptives peuvent être fournies dans la section 6 ci-dessous.

4. Période

<i>Horizon (*)</i>	<i>Actuellement/ À court terme (1-5 ans)</i>	<i>À moyen terme (5-10 ans)</i>	<i>À long terme (10-20 ans ou plus)</i>
Moment où le phénomène aura un impact	Dans les pays où l'industrialisation est déjà avancée	Dans les pays où elle commence	
Moment où il faudra intervenir pour traiter la question			

(*) Veuillez cocher les cases. Des informations complémentaires ou descriptives (publications, rapports, rapports d'experts, analyses, etc.) peuvent être fournies dans la section 6 ci-dessous.

5. Degré de confiance

Solidité de la base de connaissances actuellement disponible	Faible	Moyenne	Élevée
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Replies to the questionnaire are expected by **15 March 2014** by e-mail at cfs-hlpe@fao.org.

6. Informations complémentaires

Informations complémentaires

Éléments probants

Lacunes en matière de connaissances

Bibliographie

ESNOUF C., RUSSEL M. et BRICAS N. (Eds) 2011. **Pour une alimentation durable. Réflexion stratégique duALIne.** Paris, Editions Quae, 288 p. [[Ouvrage en pdf](#)]

ESNOUF C., RUSSEL M. & BRICAS N. (Eds), 2013. **Food System Sustainability. Insight from DuALIne.** Cambridge University Press. 312 p.

BRICAS N. et BROUTIN C., 2008. Les micro-activités agro-alimentaires et commerciales et la réduction de la pauvreté en Afrique sub-saharienne. *In*: 1st Conference of the Geneva Trade & Development Forum (GTDF), Crans-Montana, Switzerland, 17-20 septembre, 21 p. [[Texte intégral](#)]

BRICAS N. and BROUTIN C., 2008. Food processing and retail micro-activities and poverty reduction in sub-Saharan Africa . *In*: 1st Conference of the Geneva Trade & Development Forum (GTDF), Crans-Montana, Switzerland, 17-20 september, 18 p. [[Full text](#)]

BROUTIN C. et BRICAS N., 2006. **Agroalimentaire et lutte contre la pauvreté en Afrique subsaharienne; le rôle des micro et petites entreprises.** Paris, Ed. du Gret, 128 p.



**Enquête du Groupe d'experts de haut niveau (HLPE)
Questions cruciales et émergentes pour la sécurité
alimentaire et la nutrition**

Questionnaire

Renseignements concernant le contributeur

Nom, prénom et institution	Nicolas Bricas, Cirad	
Répondez-vous au nom de votre institution ou à titre privé?	Au nom du Cirad	
Acceptez-vous que cette contribution soit mise à la disposition du public dans le cadre des actes de la consultation?	Oui	
Pays de la personne ou de l'institution qui répond. Veuillez mentionner, le cas échéant, «international» ou «régional».	France mais le Cirad est un centre de coopération internationale	

1. Aperçu de la question/du phénomène

Énoncé <i>en 2 lignes</i> .	A quelles conditions la sécurisation sanitaire des aliments contribue à l'amélioration de la sécurité alimentaire et nutritionnelle (SAN) ?		
Description <i>en moins de 5 lignes</i> .	La population pauvre, notamment en ville, consomme souvent des aliments de qualité sanitaire insuffisante avec des effets importants sur la nutrition et la santé. Mais les conditions de la sécurisation sanitaire des aliments, et notamment les rythmes de mise en œuvre de normes de qualité, impactent fortement l'évolution des formes de production agricole et de transformation agro-alimentaire, menaçant potentiellement les débouchés et certaines activités des petits opérateurs agricole et agro-alimentaire.		
La question/le phénomène est-il un <i>défi</i> et/ou une <i>opportunité</i> pour la sécurité alimentaire et la nutrition? <i>Veuillez cocher la case appropriée.</i>	Défi	Opportunité	A la fois risque et opportunité
Méthode et approche utilisées pour déterminer la question/le phénomène et évaluer son importance pour la sécurité et la nutrition. <i>En moins de 10 lignes.</i> Des informations complémentaires ou descriptives (publications, rapports, rapports d'experts, analyses, etc.) peuvent être fournies dans la section 5 ci-dessous.	Eclairer les controverses sur les risques pour l'emploi et les revenus des petits opérateurs agricole et agro-alimentaire des interventions et politiques de sécurisation sanitaire des aliments. Développer des analyses sur les rythmes de sécurisation sanitaire et de leurs effets sur la capacité d'adaptation des petits opérateurs agricole et agro-alimentaire.		

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Principale action proposée pour résoudre le problème (ou saisir l'opportunité).	Adapter les rythmes de mise en place de normes de qualité sanitaire des aliments à la capacité d'évolution du secteur agricole et agro-alimentaire pour limiter les risques de marginalisation et favoriser les effets d'entraînement.
Principal(aux) acteur(s) concerné(s) ou participant à l'action proposée.	Pouvoirs publics en charge du contrôle et de la législation sur la qualité sanitaire. Opérateurs privés des secteurs agricole et agro-alimentaires.

Les champs suivants sont facultatifs pour l'enquête publique

2. Typologie élargie de la question/du phénomène

(*)	<i>Facteur déterminant externe</i>	<i>Interne aux systèmes alimentaires</i>	<i>Les deux</i>
Le phénomène est-t-il l'un, l'autre ou les deux?		Evolution de la réglementation et des normes de qualité sanitaire des aliments	Expliquez brièvement

(*)	<i>Économique (et productive)</i>	<i>Sociale et culturelle</i>	<i>Gouvernance (institutions, droits, etc.)</i>	<i>Environnemental (ressources, etc.)</i>	<i>Autre PRÉCISER</i>
Nature du phénomène	Normalisation et réglementation				
Nature de l'impact du phénomène sur la sécurité alimentaire et la nutrition	Amélioration de la santé des consommateurs Risque de marginalisation des petits opérateurs				

(*) Veuillez cocher les cases. Des informations complémentaires ou descriptives (publications, rapports, rapports d'experts, analyses, etc.) peuvent être fournies dans la section 6 ci-dessous.

3. Attributs du phénomène

	<i>Classification (**)</i>	
37. Étendue: Est-il pertinent pour les systèmes alimentaires et nutritionnels dans leur ensemble ou pour des parties spécifiques de ces systèmes?	Qualité sanitaire des aliments	Question systémique car la QSA est un facteur déterminant de la nutrition.
38. Portée: Combien de personnes touche-t-il?		Beaucoup

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

39. Échelle: locale/régionale/mondiale?			Mondiale
Pour les points 4 à 11 ci-dessous, veuillez utiliser l'échelle [— — , —, 0, +, ++]: Impact très négatif (— —) / négatif (—) / faible (0) / positif (+) / très positif (++)			
40. Impact sur la disponibilité	0		
41. Impact sur l'accès	Oui si sécurisation sanitaire impacte les prix		
42. Impact sur l'utilisation/la nutrition	++		
43. Impact sur la stabilité	0		
44. Impact sur les personnes les plus vulnérables	Les populations pauvres sont les plus exposées aux risques sanitaires		
45. Impact sur les femmes	0		
46. Impact sur les enfants	++		
47. Impact sur les populations marginalisées	?		
48. Coût de la résolution du problème (ou pour saisir l'opportunité)	Faible	Moyen	Élevé

(**) Veuillez cocher les cases ou classer les impacts et fournir des données synthétiques si besoin est. Des informations complémentaires ou descriptives peuvent être fournies dans la section 6 ci-dessous.

4. Période

<i>Horizon (*)</i>	<i>Actuellement/ À court terme (1-5 ans)</i>	<i>À moyen terme (5-10 ans)</i>	<i>À long terme (10-20 ans ou plus)</i>
Moment où le phénomène aura un impact			
Moment où il faudra intervenir pour traiter la question			

(*) Veuillez cocher les cases. Des informations complémentaires ou descriptives (publications, rapports, rapports d'experts, analyses, etc.) peuvent être fournies dans la section 6 ci-dessous.

5. Degré de confiance

Solidité de la base de connaissances actuellement disponible	Faible	Moyenne	Élevée
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6. Informations complémentaires

Informations complémentaires

Il y a d'un côté besoin d'améliorer la qualité sanitaire des aliments pour les populations les plus pauvres et vulnérables car l'insécurité sanitaire est un facteur très important de la nutrition, notamment des enfants.

Mais les conditions de cette sécurisation font courir des risques pour les petits opérateurs de la production agricole et des filières agro-alimentaires si la réglementation ou la normalisation s'effectue à un rythme trop rapide pour qu'ils aient le temps de s'adapter à ces contraintes.

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

La sécurisation sanitaire est un levier important de l'industrialisation du secteur agro-alimentaire. C'est en son nom notamment que s'implantent les supermarchés et que s'industrialise la transformation, au risque, si elles sont trop rapides, de marginaliser les petits opérateurs.

Éléments probants

Lacunes en matière de connaissances

Certains auteurs comme Swinnen, mais plutôt sur les marchés à l'exportation, défendent la thèse que les standards de qualité imposés aux petits producteurs ont plutôt des effets d'entraînement positifs sur l'évolution de leurs activités. Cette thèse est controversée par d'autres auteurs montrant des effets de marginalisation.

Bibliographie

Alpha A., Broutin C., Hounhouigan J. et Anihouvi V., 2009. Normes de qualité pour les produits agroalimentaires en Afrique de l'Ouest. Paris, AFD, 203 p.
<https://www.afd.fr/webdav/site/afd/shared/PUBLICATIONS/RECHERCHE/Archives/Notes-et-documents/49-notes-documents.pdf>

DAVIRON B. & VAGNERON I., 2008. Market Access for Small farmers : the new standard challenge. In : G.Kochendörfer-Lucius. and B.Pleskovic (Eds) Agriculture and Development. The World Bank, Washington D.C., Inwent, pp. 41-48.

Parmi de nombreux articles de Tom Reardon sur la question :

T Reardon, JM Codron, L Busch, J Bingen, C Harris, 2000. Global change in agrifood grades and standards: agribusiness strategic responses in developing countries - The International Food and Agribusiness Management Review, 2(3-4) : 421-435



**Enquête du Groupe d'experts de haut niveau (HLPE)
Questions cruciales et émergentes pour la sécurité
alimentaire et la nutrition**

Questionnaire

Renseignements concernant le contributeur

Nom, prénom et institution	Nicolas Bricas, Cirad	
Répondez-vous au nom de votre institution ou à titre privé?	Au nom du Cirad	
Acceptez-vous que cette contribution soit mise à la disposition du public dans le cadre des actes de la consultation?	Oui	
Pays de la personne ou de l'institution qui répond. Veuillez mentionner, le cas échéant, «international» ou «régional».	France mais le Cirad est un centre de coopération internationale	

1. Aperçu de la question/du phénomène

Énoncé <i>en 2 lignes</i> .	Evolution des modèles d'alimentation animale et conséquences sur les prix alimentaires		
Description <i>en moins de 5 lignes</i> .	Le développement de productions agricoles destinées à l'alimentation des animaux d'élevage permet-elle de réduire les prix des produits animaux ou contribue-t-il à augmenter la tension sur les marchés alimentaires ?		
La question/le phénomène est-il un <i>défi</i> et/ou une <i>opportunité</i> pour la sécurité alimentaire et la nutrition? <i>Veuillez cocher la case appropriée.</i>	Défi	Opportunité	Les deux
Méthode et approche utilisées pour déterminer la question/le phénomène et évaluer son importance pour la sécurité et la nutrition. <i>En moins de 10 lignes.</i> Des informations complémentaires ou descriptives (publications, rapports, rapports d'experts, analyses, etc.) peuvent être fournies dans la section 5 ci-dessous.	Analyse économique de différents scénarios d'évolution des modèles d'alimentation des animaux d'élevage : <ul style="list-style-type: none"> - Conséquences sur les volumes de production animale et donc les prix. - Conséquences sur la consommation des plus vulnérables et donc sur leur nutrition - Conséquences sur les prix internationaux des céréales et des protéines végétales 		
Principale action proposée pour résoudre le problème (ou saisir l'opportunité).	Besoins d'analyses dépassionnées pour étudier les effets positifs et négatifs des modèles d'élevage sur la SAN.		

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

Principal(aux) acteur(s) concerné(s) ou participant à l'action proposée.	Economistes Spécialistes de l'élevage
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Les champs suivants sont facultatifs pour l'enquête publique

2. Typologie élargie de la question/du phénomène

(*)	Facteur déterminant externe	Interne aux systèmes alimentaires	Les deux
Le phénomène est-t-il l'un, l'autre ou les deux?		Modes d'élevage et d'alimentation des animaux	Expliquez brièvement

(*)	Économique (et productive)	Sociale et culturelle	Gouvernance (institutions, droits, etc.)	Environnemental (ressources, etc.)	Autre PRÉCISER
Nature du phénomène	Economique				
Nature de l'impact du phénomène sur la sécurité alimentaire et la nutrition	Effets sur la disponibilité et sur les prix des produits animaux et des céréales et protéines végétales				

(*) Veuillez cocher les cases. Des informations complémentaires ou descriptives (publications, rapports, rapports d'experts, analyses, etc.) peuvent être fournies dans la section 6 ci-dessous.

3. Attributs du phénomène

	Classification (**)		
49. Étendue: Est-il pertinent pour les systèmes alimentaires et nutritionnels dans leur ensemble ou pour des parties spécifiques de ces systèmes?	Point critique		Question systémique
50. Portée: Combien de personnes touche-t-il?	Beaucoup		
51. Échelle: locale/régionale/mondiale?	Locale	Régionale	Mondiale
	<i>Indiquez ici le lieu exact</i>	<i>Indiquez ici la région exacte</i>	

Pour les points 4 à 11 ci-dessous, veuillez utiliser l'échelle [— — , — , 0 , + , ++]:

Impact très négatif (— —) / négatif (—) / faible (0) / positif (+) / très positif (++)

52. Impact sur la disponibilité	++
53. Impact sur l'accès	++
54. Impact sur l'utilisation/la nutrition	+ (apports en fer notamment)

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

55. Impact sur la stabilité	+ (tensions sur les marchés = + d'instabilité)		
56. Impact sur les personnes les plus vulnérables	Sur les populations à conso de produits animaux très faibles		
57. Impact sur les femmes	0		
58. Impact sur les enfants			
59. Impact sur les populations marginalisées	Le cas échéant précisez		
60. Coût de la résolution du problème (ou pour saisir l'opportunité)	Faible	Moyen	Élevé

(**) Veuillez cocher les cases ou classer les impacts et fournir des données synthétiques si besoin est. Des informations complémentaires ou descriptives peuvent être fournies dans la section 6 ci-dessous.

4. Période

<i>Horizon (*)</i>	<i>Actuellement/ À court terme (1-5 ans)</i>	<i>À moyen terme (5-10 ans)</i>	<i>À long terme (10-20 ans ou plus)</i>
Moment où le phénomène aura un impact			
Moment où il faudra intervenir pour traiter la question			

(*) Veuillez cocher les cases. Des informations complémentaires ou descriptives (publications, rapports, rapports d'experts, analyses, etc.) peuvent être fournies dans la section 6 ci-dessous.

5. Degré de confiance

Solidité de la base de connaissances actuellement disponible	Faible	Moyenne	Élevée
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6. Informations complémentaires

<i>Informations complémentaires</i>
<i>Éléments probants</i>
<i>Lacunes en matière de connaissances</i>
<i>Bibliographie</i>

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

K20E



Enquête du Groupe d'experts de haut niveau (HLPE) Questions cruciales et émergentes pour la sécurité alimentaire et la nutrition

Questionnaire

Renseignements concernant le contributeur

Nom, prénom et institution	Nicolas Bricas, Cirad	
Répondez-vous au nom de votre institution ou à titre privé?	Au nom du Cirad	
Acceptez-vous que cette contribution soit mise à la disposition du public dans le cadre des actes de la consultation?	Oui	
Pays de la personne ou de l'institution qui répond. Veuillez mentionner, le cas échéant, «international» ou «régional».	France mais le Cirad est un centre de coopération internationale	

1. Aperçu de la question/du phénomène

Énoncé <i>en 2 lignes</i> .	Gouvernance de la sécurité alimentaire et nutritionnelle par les régions urbaines	
Description <i>en moins de 5 lignes</i> .	Un nouveau type d'acteur émerge depuis quelques années dans le champ de la gouvernance de la sécurité alimentaire et nutritionnelle : les collectivités locales des villes et des régions urbaines. Elles construisent des politiques alimentaires locales, souvent alternatives, s'appuyant sur leurs ressources foncières, leur maîtrise de la restauration scolaire, les formes d'urbanisme qu'elles orientent.	
La question/le phénomène est-il un <i>défi</i> et/ou une <i>opportunité</i> pour la sécurité alimentaire et la nutrition? <i>Veuillez cocher la case appropriée.</i>		Opportunité
Méthode et approche utilisées pour déterminer la question/le phénomène et évaluer son importance pour la sécurité et la nutrition. <i>En moins de 10 lignes.</i> Des informations complémentaires ou descriptives (publications, rapports, rapports d'experts, analyses, etc.) peuvent être fournies dans la section 5 ci-dessous.	Les organisations internationales « Cités et Gouvernements Locaux Unis » (CGLU) et l'Organisation des Régions Unies (ORU-Fogar) fédèrent les initiatives de ces collectivités, notamment sur la sécurité alimentaire et nutritionnelle.	
Principale action proposée pour résoudre le problème (ou saisir l'opportunité).	Mieux tenir compte du rôle de ces collectivités locales dans les débats internationaux sur la SAN.	

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

Principal(aux) acteur(s) concerné(s) ou participant à l'action proposée.	Municipalités, régions fédérées au sein de CGLU et de l'ORU-Fogar
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Les champs suivants sont facultatifs pour l'enquête publique

2. Typologie élargie de la question/du phénomène

(*)	Facteur déterminant externe	Interne aux systèmes alimentaires	Les deux
Le phénomène est-t-il l'un, l'autre ou les deux?	Ces acteurs n'ont pas pour origine le système alimentaire, mais en deviennent un acteur important		Expliquez brièvement

(*)	Économique (et productive)	Sociale et culturelle	Gouvernance (institutions, droits, etc.)	Environnemental (ressources, etc.)	Autre PRÉCISER
Nature du phénomène			Emergence de nouveaux acteurs		
Nature de l'impact du phénomène sur la sécurité alimentaire et la nutrition			Nouvelles formes de gouvernance, plus participatives et plus intersectorielles qu'à l'échelle nationale		

(*) Veuillez cocher les cases. Des informations complémentaires ou descriptives (publications, rapports, rapports d'experts, analyses, etc.) peuvent être fournies dans la section 6 ci-dessous.

3. Attributs du phénomène

	Classification (**)		
61. Étendue: Est-il pertinent pour les systèmes alimentaires et nutritionnels dans leur ensemble ou pour des parties spécifiques de ces systèmes?	Point critique		Question systémique
62. Portée: Combien de personnes touche-t-il?	Peu		Beaucoup
63. Échelle: locale/régionale/mondiale?	Locale	Régionale	Phénomène mondial
	Nombreuses villes du Monde	Nombreuses régions du Monde	

Pour les points 4 à 11 ci-dessous, veuillez utiliser l'échelle [— — , — , 0 , + , ++]:

Impact très négatif (— —) / négatif (—) / faible (0) / positif (+) / très positif (++)

64. Impact sur la disponibilité	
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Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

65. Impact sur l'accès	Filets de sécurité des collectivités locales		
66. Impact sur l'utilisation/la nutrition	Via les cantines scolaires		
67. Impact sur la stabilité			
68. Impact sur les personnes les plus vulnérables	Via les filets de sécurité		
69. Impact sur les femmes			
70. Impact sur les enfants	Via les cantines scolaires		
71. Impact sur les populations marginalisées	Le cas échéant précisez		
72. Coût de la résolution du problème (ou pour saisir l'opportunité)	Faible	Moyen	Élevé

(**) Veuillez cocher les cases ou classer les impacts et fournir des données synthétiques si besoin est. Des informations complémentaires ou descriptives peuvent être fournies dans la section 6 ci-dessous.

4. Période

<i>Horizon (*)</i>	<i>Actuellement/ À court terme (1-5 ans)</i>	<i>À moyen terme (5-10 ans)</i>	<i>À long terme (10-20 ans ou plus)</i>
Moment où le phénomène aura un impact			
Moment où il faudra intervenir pour traiter la question			

(*) Veuillez cocher les cases. Des informations complémentaires ou descriptives (publications, rapports, rapports d'experts, analyses, etc.) peuvent être fournies dans la section 6 ci-dessous.

5. Degré de confiance

Solidité de la base de connaissances actuellement disponible	Faible	Moyenne	Élevée
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6. Informations complémentaires

<i>Informations complémentaires</i> http://www.regionsunies-fogar.org/index.php?act=14
<i>Éléments probants</i>
<i>Lacunes en matière de connaissances</i>
<i>Bibliographie</i>



**Enquête du Groupe d'experts de haut niveau (HLPE)
Questions cruciales et émergentes pour la sécurité
alimentaire et la nutrition**

Questionnaire

Renseignements concernant le contributeur

Nom, prénom et institution	BRICAS Nicolas, CIRAD	
Répondez-vous au nom de votre institution ou à titre privé?	Au nom du Cirad	
Acceptez-vous que cette contribution soit mise à la disposition du public dans le cadre des actes de la consultation?	Oui	
Pays de la personne ou de l'institution qui répond. Veuillez mentionner, le cas échéant, «international» ou «régional».	France mais le Cirad est un centre de coopération internationale	

1. Aperçu de la question/du phénomène

Énoncé <i>en 2 lignes</i> .	Quelles politiques pour les stocks de sécurité alimentaires ?	
Description <i>en moins de 5 lignes</i> .	Dans le nouveaux contexte de marchés alimentaires internationaux plus tendus et d'accroissement du risque climatique, la question des stocks de sécurité alimentaire ré-émerge. Elle fait controverse sur ses modalités et des risques de distorsion de marché : stockage privé ou public, centralisé ou non, modes de gouvernance, etc.	
La question/le phénomène est-il un <i>défi</i> et/ou une <i>opportunité</i> pour la sécurité alimentaire et la nutrition? <i>Veuillez cocher la case appropriée.</i>	Défi	Opportunité
Méthode et approche utilisées pour déterminer la question/le phénomène et évaluer son importance pour la sécurité et la nutrition. <i>En moins de 10 lignes. Des informations complémentaires ou descriptives (publications, rapports, rapports d'experts, analyses, etc.) peuvent être fournies dans la section 5 ci-dessous.</i>	Besoin d'un éclairage des décideurs politiques sur l'état du débat et des expériences. Typiquement rôle du HLPE!	
Principale action proposée pour résoudre le problème (ou saisir l'opportunité).	Faire une synthèse sur les avantages et risques pour la sécurité alimentaire et nutritionnelle de différents scénarios de stockage de sécurité.	

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

Principal(aux) acteur(s) concerné(s) ou participant à l'action proposée.	Experts des stocks de sécurité et de leur gestion politique. Décideurs politiques
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Les champs suivants sont facultatifs pour l'enquête publique

2. Typologie élargie de la question/du phénomène

(*)	Facteur déterminant externe	Interne aux systèmes alimentaires	Les deux
Le phénomène est-t-il l'un, l'autre ou les deux?	Les formes de stockage de sécurité dépendent en partie du secteur financier, externe au système alimentaire	Le stockage est un des éléments du système alimentaire	Expliquez brièvement

(*)	Économique (et productive)	Sociale et culturelle	Gouvernance (institutions, droits, etc.)	Environnemental (ressources, etc.)	Autre PRÉCISER
Nature du phénomène	x		x		
Nature de l'impact du phénomène sur la sécurité alimentaire et la nutrition	Organisation et coût du stockage		Gouvernance et régulation du stockage		

(*) Veuillez cocher les cases. Des informations complémentaires ou descriptives (publications, rapports, rapports d'experts, analyses, etc.) peuvent être fournies dans la section 6 ci-dessous.

3. Attributs du phénomène

	Classification (**)		
73. Étendue: Est-il pertinent pour les systèmes alimentaires et nutritionnels dans leur ensemble ou pour des parties spécifiques de ces systèmes?	Point critique		Question systémique
74. Portée: Combien de personnes touche-t-il?	Peu		Beaucoup
75. Échelle: locale/régionale/mondiale?	Locale	Régionale	Besoin de régulation globale
	Existe à l'échelle locale	Existe à l'échelle régionale	

Pour les points 4 à 11 ci-dessous, veuillez utiliser l'échelle [— — , —, 0, +, ++]:
Impact très négatif (— —) / négatif (—) / faible (0) / positif (+) / très positif (++)

76. Impact sur la disponibilité	++
77. Impact sur l'accès	
78. Impact sur l'utilisation/la nutrition	

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

79. Impact sur la stabilité	++		
80. Impact sur les personnes les plus vulnérables	+		
81. Impact sur les femmes			
82. Impact sur les enfants			
83. Impact sur les populations marginalisées	Le cas échéant précisez		
84. Coût de la résolution du problème (ou pour saisir l'opportunité)	Faible	Moyen	Élevé

(**) Veuillez cocher les cases ou classer les impacts et fournir des données synthétiques si besoin est. Des informations complémentaires ou descriptives peuvent être fournies dans la section 6 ci-dessous.

4. Période

<i>Horizon (*)</i>	<i>Actuellement/ À court terme (1-5 ans)</i>	<i>À moyen terme (5-10 ans)</i>	<i>À long terme (10-20 ans ou plus)</i>
Moment où le phénomène aura un impact			
Moment où il faudra intervenir pour traiter la question			

(*) Veuillez cocher les cases. Des informations complémentaires ou descriptives (publications, rapports, rapports d'experts, analyses, etc.) peuvent être fournies dans la section 6 ci-dessous.

5. Degré de confiance

Solidité de la base de connaissances actuellement disponible	Faible	Moyenne	Élevée
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6. Informations complémentaires

<i>Informations complémentaires</i>
<i>Éléments probants</i>
<i>Lacunes en matière de connaissances</i>
<i>Bibliographie</i> Littérature très abondante et controversée sur le sujet.

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.



HLPE Inquiry

Critical and Emerging Issues for Food Security and Nutrition

Questionnaire

About the respondent

Name, Surname and Institution	FAO - Social Protection Division (ESP)	
Do you answer on behalf of your institution, or as an individual?	X On behalf	As individual
Do you agree if this contribution is made available to the public as part of the proceedings?	X Yes	No
Country of the responding individual/institution Please mention international or regional, the case being	International	

1. Overview of the issue

Issue <i>in 2 lines</i>	Migration is vital to rural livelihoods and promotes improvements in all dimensions of food security		
Description of the issue <i>in less than 5 lines</i>	Migration is often triggered by poverty, food insecurity, and lack of income-generating opportunities. Migration is a key source of livelihoods and can therefore promote improvements in all dimensions of food security, and impacts will be context-specific. Transformation processes in agriculture and rural areas influence migration patterns.		
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>	Challenge	Opportunity	It depends (it can be both a challenge and an opportunity)
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition <i>In less than 10 lines.</i> Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 6 below.	Migration is vital to the livelihoods of many rural households. Migration is not simply a means for individuals to escape poor living conditions, but often a household strategy. The remittances that many migrants send home are an important means for improving household food security and often a crucial supplement to the family's overall income. Depending on the type of migration, it can have both positive and negative impacts on rural development, food security, and poverty reduction (see Section 6).		
Main response proposed to address the issue	In its Strategic Framework, FAO has renewed its commitment to work on migration issues. They are explicitly reflected under the programme of action for Strategic Objective 3 'Reduce Rural Poverty', and there are linkages to Strategic Objective 1 'Contribution to the eradication of hunger, food insecurity and malnutrition in all its forms'. In particular, FAO focuses on addressing the root causes of migration as well as improving the impact		

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	<p>of migration on rural livelihoods.</p> <p>Building on its strong technical expertise and close relation with governments and agricultural stakeholders, FAO will work on:</p> <ul style="list-style-type: none"> ▪ Enhance evidence about the impact of migration and remittances on food security and rural livelihoods; ▪ Provide technical support and capacity development to governments to enhance policy coherence and better incorporate migration into agriculture, food security and rural development policies, strategies and programmes; ▪ Strengthen policy dialogue between governments and rural stakeholders, including producers' organizations and migrant networks, on innovative mechanisms facilitating the investment of remittances in productive activities in agriculture and rural areas; ▪ Improve coordination across key sectors and stakeholders (government, civil society and private sector) for formulating and implementing policy options, with particular attention to address the root causes of migration and enhance the impact of remittances on household food security; ▪ Contribute more systematically to existing global cooperation mechanisms¹, and engage with key partners (e.g., IFAD, IOM, and ILO) in promoting migration for development.
<p>Main actor(s) concerned or involved in the response proposed</p>	<p>Effective partnerships are central to maximizing the benefits of migration and minimizing its risks. International, regional and bilateral agreements should be pursued to better manage migration flows and address the different needs of countries of origin, destination and transit.</p> <p>The role of migrants as key actors of development should not be understated. Migrants should be given adequate voice and protection to claim for their rights, and be put in the conditions to effectively contribute to the livelihoods of their families, communities and countries both at origin and destination.</p> <p>FAO will expand the work on migration in</p>

¹ Global Migration Group and the Global Forum on Migration and Development, as well as the Global Knowledge Partnership on Migration and Development (KNOMAD), the Global Remittances Working Group, the UN Task Team for the Post-2015 Development Agenda and the UN General Assembly's Open Working Group on Sustainable Development Goals. Further, the International Year of Family Farming offers an opportunity to raise awareness on migration and family farming.

collaboration with partners. It will engage in particular with other UN agencies, but also with partners from the private sector and civil society, to develop specific programmes:

- **IFAD:** FAO envisages strengthening its collaboration with IFAD on favouring innovative financial instruments to support the channeling of remittances towards productive activities in the agricultural sector and to support entrepreneurship development in rural areas, especially for women and youth.
- **World Bank:** FAO has started collaboration with the World Bank to carry out rapid assessment of migration and its impact on agriculture and rural development. More collaboration could be envisaged within the recently launched KNOMAD.
- **ILO:** Together with the ILO, FAO will promote good practices in terms of seasonal migration schemes for rural workers. This could include matching seasonal migration schemes with robust co-development programmes to promote the investment of remittances in farm and off-farm activities. FAO and ILO would further work together to raise the awareness of Governments, local authorities and communities on the need to promote decent work for migrants, for instance by providing migrant workers with pre-departure information about their rights and potential risks, as well as creating mechanisms for them to access social protection and social services.
- **IOM:** Collaboration is being pursued with IOM in the area of international migration and linkages with transnational groups. In this regard, IOM would mobilize associations of migrants willing to invest in agricultural projects in their countries of origin, while FAO would identify favourable models of agricultural investment in concerned countries, followed by capacity building activities and policy support.

For the public inquiry fields below are optional

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

2. Broad typology of the issue

(*)	<i>External driver</i>	<i>Internal to food systems</i>	<i>Both</i>
Is the issue either or both?			<p>External: As societies and economies undergo structural transformations, the movement of people among and within countries is inevitable.</p> <p>Internal: Migration is a key household livelihoods strategy and can make significant contributions to all four dimensions of food security.</p>

(*)	<i>Economic (and productive)</i>	<i>Social and Cultural</i>	<i>Governance (institutions, rights, etc.)</i>	<i>Environmental (resources, etc.)</i>	<i>Other (SPECIFY)</i>
Main nature of the issue	X	X	X	X	
Nature of the main impact of the issue on FSN	X	X	X	X	

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	<i>Classification (**)</i>		
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?	Critical point	Systemic issue	
2. Breadth: Are there many people affected?	Few	Many	
3. Scale: local/regional/global?	Local	Region	Global
	<i>Indicate here the precise location</i>	<i>Indicate here the precise region</i>	

For items 4-11 below, please use the classification [— — , —, 0, +, ++]:

Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)

4. Impact on Availability	+		
5. Impact on Access	++		
6. Impact on Utilization/ nutrition	+		
7. Impact on Stability	++		
8. Impact on most vulnerable people	+		
9. Impact on women	++		
10. Impact on children	++		
11. Impact on marginalized populations			
12. Cost to address the issue	Low	Middle	High

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

4. Time Scale

<i>Timeframe (*)</i>	<i>Now/Short term (1-5 years)</i>	<i>Medium term (5-10 years)</i>	<i>Long term (10-20 years +)</i>
Moment when the issue will have an impact	X	X	X
Moment to act to address the issue	X	X	

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.	Low	Middle	High
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6. Additional Supporting Information

Additional information

Migration and remittances can promote improvements in all dimensions of food security. Being a source of income diversification, migration contributes to strengthen stability of access to food in sending households. Remittances, by adding to the household income, enable poor households to access more, higher quality and more nutritious food. Furthermore, remittances invested in productive activities in agriculture (by buying physical capital, fertilizers or improving the qualities of cultivated land), or elsewhere (education of children or paying for health services) can increase production as well as current and future incomes, nutritional status and hence the potential for sustainable food security.

While migration can improve food security, it can also have negative impacts. In countries of origin, migration can hinder food and agricultural production and overall domestic economic development due to losses in human capital and agricultural labour especially when the younger and more productive workers migrate. Migration of skilled and young workers has raised particular concerns with respect to the ageing and feminization of rural populations and the increased work burdens on those left behind. The absence of young and dynamic labour from rural agricultural areas may affect the production and productivity of farms in producing staple food or other crops.

The international community should promote efforts to better manage migration flows, maximize the positive impacts and minimize the risks associated with migration to reduce distress rural out-migration and achieve food and nutrition security.

Evidence

As societies and economies undergo structural transformations, the movement of people among and within countries is inevitable. Migration and income diversification are vital to the livelihoods, and thus resilience, of many rural households. Migration is not simply a means for individuals to escape poor living conditions, but often a household strategy. For many poor households, migration of one or more family members is a strategic decision geared towards minimizing risk and diversifying the household's income by seeking more gainful and productive employment opportunities².

Rural populations are changing. In many parts of the world, rural populations are ageing rapidly; often faster than in urban areas, in part because of migration of young adults to cities or abroad. In the past

² Massey, D.S., Arango, J., Hugo, G., Kouaouci, A., Pellegrino, A. and Taylor, J.E. (1993). Theories of International Migration: A Review and Appraisal. *Population and Development Review*, 19(3), pp. 431-66

Mendola, M. (2006). Rural out-migration and economic development at origin. What do we know?. Migration Working Paper No. 40, Brighton, UK, University of Sussex.

Stark O. and Bloom D. E. (1985). The new economics of labour migration. *American Economic Review*, Vol. 75(2): 173-78

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50 years, 800 million people have moved from rural areas into cities. There are an estimated 200 million international migrants worldwide, about half of them moving from one developing country to another, typically a neighbouring country and many from rural areas³. Precise estimates are lacking, but the number of people moving from one rural area to another within the same country is believed to be even higher. In Nepal, about 68 per cent of total migrant population moved rural-rural from poor mountain areas to the agriculturally prosperous plains; whereas in Cambodia nearly 72 per cent of total migrants moved from rural to rural areas looking for opportunities in agriculture and fisheries.⁴ This type of migration is usually seasonal, as people move to take advantage of different seasonal patterns of farm production in different locations or to find non-farm jobs in the slack season. Return migration (urban to rural) is less frequent, but where it occurs it is in areas with good infrastructure and road connections and where there is ample off-farm rural employment.

In developing country contexts, migration is often triggered by poverty, food insecurity, inequality, lack of wage-earning opportunities and increased competition for scarce land and water resources (UNCTAD, 2012; ILO, 2010; IOM, 2008). By migrating, people may be able to escape such conditions, reduce pressure on resources in the places they leave behind, and add resources by sending remittances to family back home. But there are also downsides, as mostly the younger and often also better-educated adults migrate, depriving areas of skills and crucial labour.

Evidence indeed shows that migration and remittances have both positive and negative impacts on rural development, poverty reduction, and food security and nutrition. Such impacts vary widely according to context and the nature of migration taking place. Negative impacts in rural areas are generally the consequence of losses of human capital and of agricultural labour, which may affect crop production and food availability, particularly when families are unable to hire new labourers. Migration of young men has raised particular concerns with respect to the ageing and feminisation of rural populations and the increased work burdens on those left behind. For example, in Passoré, Burkina Faso, the migration of men has forced women to work longer and harder in the communal fields and thus to have less time to work their own land. Migration to France from the Bakel Region of Senegal has fostered the influx of Malian migrant workers into Senegal, but the departure of young man has been considered detrimental for the local economies by communities in central Mali. Migration may also accelerate the shift away from agriculture, especially of youth who do not perceive farming as a productive occupation.

There is conflicting evidence on the real contribution of remittances to poverty alleviation, when money is not used for productive investments but rather for (wasteful) consumption. Evidence from Mexico shows that migrants are more likely to make investments in housing rather than in activities that increase household production. There are also concerns in terms of increased inequality between remittance recipient households and non-recipient households. In some countries, international remittances are contributing to changes in land use patterns and titling as migrants (or their families back home) invest in land leading to conversion of (peri-urban) agricultural land to land for housing development. Evidence from West Africa shows that in peri-urban areas, particularly along paved roads, agricultural lands are being converted to residential plots, land prices are soaring and buildings are mushrooming very rapidly without adequate service provision.⁵ While, this is creating some new employment in non-farm activity, it has been found to affect agricultural production and food security.

Remittances can make up for those negative effects, but this is no guaranteed outcome. International remittance flows to developing countries have increased massively to over \$400 billion per year (more than three times to the total sum of official development assistance). For some countries, it constitutes the major source of foreign exchange income. In many, it contributes an important share of national income, in some cases more than 20 per cent, such as in Lesotho and Liberia, or well over 10 per cent as in Afghanistan, Lao D.R., El Salvador, Honduras and Guatemala. Around 30 to 40 per cent of total remittances go to rural areas, where they can make a much greater impact than in urban areas. Limited access to formal finance and credit is deemed as one of the major constraints to rural

³ United Nations Development Programme (2009). Human Development Report 2009. New York

⁴ IOM (2005), "Migration, development and poverty reduction in Asia", International Organisation for Migration, Geneva

⁵ IIED (2004), "Till to tiller: International migration, remittances and land rights in West Africa", Issue paper No.132

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employment and entrepreneurship development. Remittances therefore play a crucial, supplementary, role in providing liquidity to rural households. While there are no precise estimates, remittance flows from domestic migrants also are perceived to be substantial because of the sheer amount of migrants, though the impact on incomes of recipient households tends to be less than when receiving remittances from a family member abroad. Internal migrants often are temporary and seasonal migrants with precarious employment conditions and unstable wages, hence the part of the income they remit or bring back home is also less stable and therefore less conducive to investments in the farm.

Recipient households typically spend most of the income from remittances (up to 90 per cent) on primary needs, that is, to buy food, improve their homes, or pay for the cost of the education of the children. Only a very small part is invested in rural areas. Remittances do relax credit and liquidity constraints and help to repay debts and avoid households having to sell off assets (a plough or a cow) during times of stress and shock. Not much is known about the impact of remittances, but available evidence suggests it may depend on the type of migration. For instance, in Bangladesh, international migration seems to be complementary to the adoption of modern farming technologies (through remittances and transmission of knowledge by migrants), while remittance flows received from internal migrants seems to adversely affect farm productivity.

Migration can also contribute to reduce unemployment and underemployment, for instance through seasonal migration during the lean season, as well as reducing demographic pressure and resource constraints. Migration and remittances can also be a driver of social change. Increased female migration and control over resources by women who receive remittances can lead to important changes in gender power relations. In Mexico and in the Philippines, thanks to remittances, women were able to access decent employment opportunities, withdrawing from poorly paid and exploitative occupations, reducing the number of hours worked, and moving from unpaid subsistence agricultural work to running small business (i.e. Sari-sari stores).⁶ The engagement of diaspora groups can also bring collective gains, improving public infrastructure and market linkages, as well as education, health and care services. In southeast Nigeria, the contribution of migrant associations to infrastructural development in rural settlements and small towns has generally exceeded public investments.⁷

While forming a formidable source of income, the potential of remittances to improve rural livelihoods remains largely untapped. Financial innovations that help lower transaction costs for migrants to send money back home are helpful to enhance benefits for recipient households, but by themselves there are no guarantees they will also induce more investment in agriculture and rural livelihoods. In general, evidence shows that investments in agriculture are usually made in high potential areas, where land and irrigation water are available and investments can be more profitable. In Botswana, Lesotho, Malawi and Mozambique, labour migration to South African mines reduced crop production in the subsistence sectors in the short run, but over time remittances have enhanced both crop productivity and cattle accumulation, except in Lesotho. In rural Nepal, it has been found that international remittances enlarged wage labour opportunities, especially for landless and poor households, and in Senegal investments in irrigated land enable to employ hired labour. In Thailand, households receiving remittances from internal migration used them to buy inputs, such as fertilizers, or to pay wages.⁸

⁶ FAO, IFAD and ILO (2010), "Gender dimensions of agricultural and rural employment: Differentiated pathways out of poverty", Food and Agricultural Organisation of the United Nations, Rome

⁷ Tacoli C. (2002), "Changing rural-urban interactions in sub-Saharan Africa and their impact on livelihoods: a summary", Working Paper Series on Rural-Urban Interactions and Livelihood Strategies, Working Paper 7, IIED, London

⁸ IFAD and FAO (2008), "International migration, remittances and rural development", International Fund for Agricultural Development, Rome; Davis B., Carletto G., and Winters P. (2010), "Migration, Transfers and Economic Decision making among Agricultural households: an Introduction", Journal of Development Studies Vol. 46:1, 1-13, Routledge Taylor and Francis Group, London; Vargas-Lundius R. and Lanly G. (2007), "Migration and Rural Employment", Paper prepared for the Round Table organised by the Policy Division during the Thirtieth Session of the Governing Council of IFAD, 14 February 2007

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Knowledge gaps

In order to support more informed policymaking, it is also necessary to address the knowledge, data and evidence gaps related to internal and international migration flows, the links between migration and agricultural and rural development, as well as between human mobility and food security. Obtaining necessary data may in some cases involve adding questions to national census. There is also scope to explore data to better match labour supply and demand (thus further improving skills and jobs matching at domestic and international levels). There is a need for increased evidence on the effects of migration flows on agriculture and rural development and the role of agricultural development in reducing rural out-migration. With a greater understanding of these issues, policy-makers will be better equipped to address them in national sectoral policies and regional processes.

There should be more attention to the links between international and internal movements. Rural out-migration is often internal, as poor people lack the financial resources and skills to migrate internationally. It is widely acknowledged that international and internal movements are closely linked, even if the implications of these linkages have not been sufficiently explored.

More attention is needed on the rural youth employment challenge, as many migrants are very young – a third of all migrants are aged 12 to 24 years, and to the gender dimensions of migration and rural development. Migration impacts on gender relations, and female migration can be a driver of social change, increasing women's economic and social empowerment. On the other hand, migration can also increase the work burdens of those left behind and reduce time for household work and childcare.

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HLPE Inquiry

Critical and Emerging Issues for Food Security and Nutrition

Questionnaire

About the respondent

Name, Surname and Institution	FAO - Climate, Energy and Tenure Division (NRC)	
Dou you answer on behalf of your institution, or as an individual?	<input checked="" type="checkbox"/> On behalf	<input type="checkbox"/> As individual
Do you agree if this contribution is made available to the public as part of the proceedings?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Country of the responding individual/institution Please mention international or regional, the case being	International	

1. Overview of the issue

Issue <i>in 2 lines</i>	Increasing climate variability and climate change		
Description of the issue <i>in less than 5 lines</i>	Increasing climate variability and climate change constitute an additional challenge to achieving food security as they reduce the productivity of the majority of existing food systems and harm the livelihoods of those already vulnerable to food insecurity, especially for tropical regions with high incidence of hunger		
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>	<input checked="" type="checkbox"/> Challenge	<input type="checkbox"/> Opportunity	<input type="checkbox"/> It depends (please specify)
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition <i>In less than 10 lines. Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.</i>	The Intergovernmental Panel on Climate Change (IPCC 2013) states that continued GHG emissions will cause further warming. This will provoke increased variability of climate and rain patterns as well as increased frequency and intensity of extreme events and slow onset changes. These will affect agriculture and food systems in all continents with increased variability of production and reduced productivity particularly in some areas (FAO 2011, HLPE 2012), and particularly it will affect the most vulnerable. At the same time agriculture and land use change cause more than 20% of the total global GHG emissions.		
Main response proposed to address the issue	First, there is a need to integrate food security and climate change concerns. Addressing climate change in agriculture can be pursued in the context of sustainable agriculture development and food security objectives, as provided by the climate-smart agriculture framework. Second, there is a need to increase resilience of food systems to climate change at all levels from the field to landscapes, policies and markets. These measures have to be specific to local circumstances. And finally, there is a need to develop low-emission agriculture strategies that do not compromise food security.		

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	This means increasing the resource use efficiency in food systems, which would lead to lower emission intensity per unit of output.
Main actor(s) concerned or involved in the response proposed	Tackling climate change requires actions from all agriculture and food systems' stakeholders, including farmers, fishers, forest dependent people and their organizations, civil society, policy makers, the UN system including FAO, financing institutions, research community, and private sector. Moreover, many of the responses require also involvement and commitment of actors outside the agriculture and food sectors.

For the public inquiry fields below are optional

2. Broad typology of the issue

(*)	External driver	Internal to food systems	Both
Is the issue either or both?			Agriculture is affected by the increasing climate variability and climate change and is also a source of greenhouse gas emissions

(*)	Economic (and productive)	Social and Cultural	Governance (institutions, rights, etc.)	Environmental (resources, etc.)	Other (SPECIFY)
Main nature of the issue				X	
Nature of the main impact of the issue on FSN	X	X	X	X	

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	Classification (**)		
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?	Critical point	Systemic issue X	
2. Breadth: Are there many people affected?	Few	Many X	
3. Scale: local/regional/global?	Local	Region	Global X
	<i>Indicate here the precise location</i>	<i>Indicate here the precise region</i>	
For items 4-11 below, please use the classification [— — , — , 0, +, ++]: Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)			
4. Impact on Availability	- -		
5. Impact on Access	- -		
6. Impact on Utilization/ nutrition	-		

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7. Impact on Stability	- -		
8. Impact on most vulnerable people	- - Likely to harm the livelihoods of those already vulnerable to food security		
9. Impact on women	- Women's lack to essential resources will curtail their opportunities to adapt to climate change		
10. Impact on children	-		
11. Impact on marginalized populations	- - Climate variability and change will impose pressure on traditional livelihoods, which may exceed the coping capacity of the marginalized populations		
12. Cost to address the issue	Low	Middle	X High

(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

4. Time Scale

<i>Timeframe (*)</i>	<i>Now/Short term (1-5 years)</i>	<i>Medium term (5-10 years)</i>	<i>Long term (10-20 years +)</i>
Moment when the issue will have an impact	X	X	X
Moment to act to address the issue	X	X	X

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.	Low	X Middle	High
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6. Additional Supporting Information

<i>Additional information</i>
<i>Evidence</i> There is increasing evidence of the impact of climate change on agricultural production (Lobell, 2011). The likelihood of meeting the meeting the 2 ⁰ target of maximal average temperature rise set by the UNFCCC negotiations is diminishing with time. Different scenarios estimate different temperature increases. Their impact on agriculture and food systems will depend on the exposure of the systems to those changes, as well as on the adaptive capacity and resilience of the systems. Agriculture and land use change with substantial mitigation potential through reduced emissions per unit of production and carbon sinks are a part of the solution to climate change.

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Knowledge gaps

Research is needed on various aspects of climate change and its impact on agriculture and food systems. Moreover, knowledge is lacking on appropriate responses for different agro-ecological and socio-economic environments that incorporate food security, adaptation and reduced GHG emissions per unit of output.

References

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HLPE Inquiry

Critical and Emerging Issues for Food Security and Nutrition

Questionnaire

About the respondent

Name, Surname and Institution	FAO – Climate, Energy and Tenure Division (NRC)	
Do you answer on behalf of your institution, or as an individual?	X On behalf	
Do you agree if this contribution is made available to the public as part of the proceedings?	X Yes	
Country of the responding individual/institution Please mention international or regional, the case being	International	

1. Overview of the issue

Issue <i>in 2 lines</i>	Energy and Agrifood systems - What energy FOR and FROM agrifood systems?		
Description of the issue <i>in less than 5 lines</i>	<p>Three issues:</p> <ul style="list-style-type: none"> • Need to ensure adequate access to modern energy at all stages of agrifood chains • Need to decouple agrifood system development from the dependency of fossil fuels because of climate change and high cost of fossil fuels • Need to address the needs, production and use of water, energy and food in an integrated (nexus) way 		
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>	Challenge	Opportunity	It depends X
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition <i>In less than 10 lines. Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.</i>	<p>Challenge is to move away from business as usual without jeopardizing food security, and to work in a nexus manner</p> <p>The opportunity lies in increasing farmers' resilience through more access to modern energy, promote investments in agriculture through sustainable bioenergy, possibly increase his/her income through the sale of energy from his/her farm</p>		
Main response proposed to address the issue	<p>FAO proposes a multi-partner "Energy-Smart Food for People and Climate " programme with the following objectives in agrifood chains:</p> <ul style="list-style-type: none"> • Increase access to modern energy services • Improve energy efficiency • Gradually increase the use of renewable energy 		

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Main actor(s) concerned or involved in the response proposed	FAO, REEEP, BMZ/GIZ
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For the public inquiry fields below are optional

2. Broad typology of the issue

(*)	<i>External driver</i>	<i>Internal to food systems</i>	<i>Both</i>
Is the issue either or both?			Externally driven because energy amounts and prices are mainly external to the agrifood chain Internal because different agrifood systems require and can produce different amounts and types of energy

(*)	<i>Economic (and productive)</i>	<i>Social and Cultural</i>	<i>Governance (institutions, rights, etc.)</i>	<i>Environmental (resources, etc.)</i>	<i>Other (SPECIFY)</i>
Main nature of the issue	X			X	Food security
Nature of the main impact of the issue on FSN	Costs of energy affects production costs, including input costs			Land-based energy systems can affect the environment and climate change; Climate change might affect the availability of the sources of renewable energy	Land-based energy systems can compete with food production

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	<i>Classification (**)</i>		
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?	Critical point X		Systemic issue
2. Breadth: Are there many people affected?	Few		Many X
3. Scale: local/regional/global?	Local	Region	Global Addressing global significant and simultaneous increase in needs for water, energy
	<i>Farmer and household levels</i>	<i>Indicate here the precise region</i>	

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			and food
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For items 4-11 below, please use the classification [— — , —, 0, +, ++]:
 Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)

4. Impact on Availability	+ +/- -		
5. Impact on Access	+ +/- -		
6. Impact on Utilization/ nutrition	+/-		
7. Impact on Stability	0		
8. Impact on most vulnerable people	++/--		
9. Impact on women	++/--		
10. Impact on children	++/--		
11. Impact on marginalized populations	++/--		
12. Cost to address the issue	Low	Middle X	High

(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

4. Time Scale

<i>Timeframe (*)</i>	<i>Now/Short term (1-5 years)</i>	<i>Medium term (5-10 years)</i>	<i>Long term (10-20 years +)</i>
Moment when the issue will have an impact	X		
Moment to act to address the issue	X		

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.	Low	Middle X	High
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6. Additional Supporting Information

<i>Additional information</i>

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

Evidence

Knowledge gaps - Data on energy in post harvest stages, renewable energy in agrifood chains and energy produced by agrifood systems

References

ENERGY-SMART FOOD FOR PEOPLE AND CLIMATE: Issue Paper
<http://www.fao.org/docrep/014/i2454e/i2454e00.pdf>

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HLPE Inquiry

Critical and Emerging Issues for Food Security and Nutrition

Questionnaire

About the respondent

Name, Surname and Institution	FAO - Trade and Markets Division (EST)	
Do you answer on behalf of your institution, or as an individual?	<input checked="" type="checkbox"/> On behalf	
Do you agree if this contribution is made available to the public as part of the proceedings?	<input checked="" type="checkbox"/> Yes	
Country of the responding individual/institution Please mention international or regional, the case being	International	

1. Overview of the issue

Issue <i>in 2 lines</i>	The evolution of tastes and preferences in food markets of different parts of the world.
Description of the issue <i>in less than 5 lines</i>	Increasing income has resulted in a transition in human diets across the globe. Total food consumption eventually levels off, yet independently of economic factors. Vast differences exist between the types of diets across the world remain.
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>	It depends: Opportunity, as demand can be influenced, but efficient development could become a challenge.
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition <i>In less than 10 lines. Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.</i>	The issue has become apparent in FAO projections work where it became apparent that economic factors alone cannot project future diets, other drivers such as tastes and preferences have to be considered and their evolution projected as well.

Main response proposed to address the issue	Multi-disciplinary approach to identify demand trends in the various cultures and regions around the world.
Main actor(s) concerned or involved in the response proposed	The global food and agricultural sector has to closely monitor the demand trends and to a certain extent can influence them as well. To use the opportunities, responsible advocating of sustainable development by all actors is required.

For the public inquiry fields below are optional

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

2. Broad typology of the issue

(*)	<i>External driver</i>	<i>Internal to food systems</i>	<i>Both</i>
Is the issue either or both?			X

(*)	<i>Economic (and productive)</i>	<i>Social and Cultural</i>	<i>Governance (institutions, rights, etc.)</i>	<i>Environmental (resources, etc.)</i>	<i>Other (SPECIFY)</i>
Main nature of the issue	X	X			
Nature of the main impact of the issue on FSN					

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	Classification (**)		
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?	Critical point	X Systemic issue	
2. Breadth: Are there many people affected?	Few	X Many	
3. Scale: local/regional/global?	Local	Region	X Global
	<i>Indicate here the precise location</i>	<i>Indicate here the precise region</i>	

For items 4-11 below, please use the classification [— — , —, 0, +, ++]:

Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)

4. Impact on Availability	-		
5. Impact on Access	-		
6. Impact on Utilization/ nutrition	-		
7. Impact on Stability			
8. Impact on most vulnerable people	Specify as appropriate		
9. Impact on women	-		
10. Impact on children	-		
11. Impact on marginalized populations	Specify as appropriate		
12. Cost to address the issue	Low	X Middle	High

(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

4. Time Scale

<i>Timeframe (*)</i>	<i>Now/Short term (1-5 years)</i>	<i>Medium term (5-10 years)</i>	<i>Long term (10-20 years +)</i>
Moment when the issue will have an impact	X		
Moment to act to address the issue	X		

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(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.	Low	<input checked="" type="checkbox"/> Middle	High
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6. Additional Supporting Information

<i>Additional information</i>
<i>Evidence</i>
<i>Knowledge gaps</i>
<i>References</i> Traill WB, Mazzocchi M, Shankar B and Hallam D, <i>The Importance of Government Policies and Other Influences in Transforming Global Diets</i> , Nutrition Reviews; Forthcoming. FAO. <i>The State of Food Insecurity in the World, 2011</i> . Rome: Food and Agriculture Organization of the United Nations; 2011. Smil V. <i>Feeding the world: A challenge for the twenty-first century</i> . The MIT Press; 2001. World Bank. <i>World Development Report 2008</i> ; 2008. Regmi A, Gehlhar M. <i>Processed food trade pressured by evolving global supply chains</i> . 2005. Seale JL, Regmi A, Bernstein J. <i>International evidence on food consumption patterns</i> . 2003; Technical Bulletin 1904.

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HLPE Inquiry
Critical and Emerging Issues for Food Security and Nutrition
Questionnaire

About the respondent

Name, Surname and Institution	FAO - Food Safety Unit (AGDF)	
Do you answer on behalf of your institution, or as an individual?	X On behalf	
Do you agree if this contribution is made available to the public as part of the proceedings?	X	
Country of the responding individual/institution Please mention international or regional, the case being	International	

1. Overview of the issue

Issue <i>in 2 lines</i>	Most low income countries give inadequate attention to domestic food safety which is an essential basis for food security.		
Description of the issue <i>in less than 5 lines</i>	While the food security concept and definition stresses that all food needs to be safe, the reality is that there is often limited attention and resources given to assuring the safety of domestic food supplies. Another weakness occurs in policy development where there is little or no linkage or interaction between policy makers charged with mandates for national food security, nutrition and food safety (linkage to policy in other areas environment etc should also be strengthened).		
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>			It depends. This can be seen as both a challenge and an opportunity for FSN. A challenge – because there are potentially a range of possible food safety risks to be addressed, and they will vary from country to country. An opportunity for FSN as the overall goal of food and nutrition

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			<p>security can only be met where foods are safe. This becomes even more critical where a population or sub-population relies on a staple as their main source of food.</p>
<p>Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition</p> <p><i>In less than 10 lines.</i> Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.</p>	<p>Although countries continue efforts to strengthen their food safety systems, work still needs to be done. Inadequate controls for domestic food safety is known as an area of weakness in many countries – it is still very common to concentrate efforts on the safety of food exports at the expense of domestic food supply. Sources of information include FAO projects to support countries in strengthening food safety or improving safety in a specific value chain (e.g. sorghum, pistachios), country-specific assessments of current food control systems, studies and surveys completed on the presence of specific hazards in foods e.g. parasites in a range of foods, mycotoxins in sorghum, etc.)</p> <p>We also know from this work that there are limited efforts at country level in developing cross-sectoral policies in support of the overall goal of FSN, including food safety aspects.</p>		
<p>Main response proposed to address the issue</p>	<p>Strengthened action by government policy and decision-makers to give priorities and allocate adequate attention to food safety aspects of the domestic food supply.</p> <p>Collation and summation of evidence which demonstrates the linkage between food safety and FSN. An analysis to be undertaken on where and how it makes sense to have cooperation and coordination between different policy makers for FSN.</p>		
<p>Main actor(s) concerned or involved in the response proposed</p>	<p>At country level key policy makers with responsibility for food safety, working with private sector and academia. Policy makers in other areas of nutrition and food security policy should also be involved.</p> <p>At global level, FAO should provide a lead to ensuring a common understanding of food safety as an essential component of FSN. This would require interaction through established fora (e.g. ICN2,</p>		

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	CFS, FSIN, CAADP, etc.) and with key partners, that may include WHO, IFPRI, WFP, IFAD etc.
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For the public inquiry fields below are optional

2. Broad typology of the issue

(*)	<i>External driver</i>	<i>Internal to food systems</i>	<i>Both</i>
Is the issue either or both?		It is internal	Briefly mention how this may be the case

(*)	<i>Economic (and productive)</i>	<i>Social and Cultural</i>	<i>Governance (institutions, rights, etc.)</i>	<i>Environmental (resources, etc.)</i>	<i>Other (SPECIFY)</i>
Main nature of the issue	Yes	Yes	Yes		
Nature of the main impact of the issue on FSN	Unsafe food leads to loss of economic income where existing markets are lost, or potential markets cannot be accessed.	Social and cultural traditions can have a direct impact on the potential to increase or reduce risk from food safety hazards. In many countries, there are also strong traditions centered around food production which need to be considered when developing appropriate food safety policy.	Managing food supplies to ensure they are safe, and of good quality requires strong governance, led by very often a number of Ministries. It is essential however that the governance structure sets an enabling environment for the private sector to produce safe food and contribute to policy development.		

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	Classification (**)
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Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?		X Systemic issue	
2. Breadth: Are there many people affected?		X Many	
3. Scale: local/regional/global? • All three levels are relevant	X Local	X Region	X Global
	<i>Indicate here the precise location</i>	<i>Indicate here the precise region</i>	
For items 4-11 below, please use the classification [— — , —, 0, +, ++]: Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)			
4. Impact on Availability	(-) [in extreme cases, where there is a high level of contamination, eg. mycotoxin in maize, pests in grains etc – food may need to be discarded as it is unfit for human consumption]		
5. Tendance Impact on Access	(0)Where illness or deaths occur in a household, this can have a direct negative impact on ability to work, re-direction of limited household budget from food to health care, - these result in less productive time available to produce food, reduce monies available to purchase food.		
6. Impact on Utilization/ nutrition	(-) A person who is also ready vulnerable due to reduced nutritional status or food insecure – can become more vulnerable when they consume unsafe food.		
7. Impact on Stability			
8. Impact on most vulnerable people	Specify as appropriate		
9. Impact on women			
10. Impact on children	This can occur – one reality is diarrhea in under 5 year old children. This can be chronic in many countries – and is attributed to unsafe water, but also unsafe food (biological contamination)		
11. Impact on marginalized populations	Specify as appropriate		
12. Cost to address the issue		Middle	

(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

4. Time Scale

<i>Timeframe (*)</i>	<i>Now/Short term (1-5 years)</i>	<i>Medium term (5-10 years)</i>	<i>Long term (10-20 years +)</i>
Moment when the issue will have an impact	*	*	*
Moment to act to address the issue	*	*	*

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.			High
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6. Additional Supporting Information

<p><i>Additional information</i></p> <p>Regarding the timescale in point 4 above, work in this area has begun, but it needs to be strengthened. An additional component is to raise an understanding which can lead to more integrated action on cross-sectoral policy for FSN. Investing in domestic food safety can see results within 5 years, but it is an investment countries need to make in the medium and long-term.</p>
<p><i>Evidence</i></p> <p>Published papers and FAO projects demonstrating weaker controls, and less focus on domestic food safety</p> <p>Results of the WHO initiative to estimate the global burden of food-borne disease (FERG)</p> <p>Background papers available on incidence of parasites in main foods FAO/WHO Joint Expert Meeting September 2012 Multicriteria-based ranking for risk management of food borne parasites.</p> <p>Data and information available from the FAO/WHO Project on Mycotoxins in sorghum</p> <p>Case Evidence being developed as part of the food safety component on applying multiple criteria approaches to developing food safety policies and decisions [FAO/EC Programme on Global Governance for Hunger Reduction]</p> <p>Results of countries assessments on food control systems applying the FAO assessment tool (in pilot phase)</p>
<p><i>Knowledge gaps</i></p> <p>While a lot of data exists potentially, effort needs to be made to draw key lessons and evidence to clearly present the negative impact of unsafe food on FSN.</p>
<p><i>References</i></p> <p>Food safety and quality management in Kenya; an overview of the roles played by various stakeholder, Oloo Jee, 2010, African Journal of Food, Agriculture, Nutrition and Development. http://www.bioline.org.br/request?nd10118</p> <p>Aflatoxin: finding solution for improved food safety, Edited by: Laurian Unnevehr and Delia Grace, IFPRI, 2013 http://www.ifpri.org/sites/default/files/publications/focus20.pdf</p> <p>The urban informal sector in Nigeria: Towards economic development, Environmental health and social harmony, Geoffrey I. Nwaka, Global urban development, 2005 http://www.globalurban.org/Issue1PIMag05/Nwaka%20PDF.pdf</p> <p>Ruzante et al, 2010. A multi-factorial risk prioritisation framework for food borne pathogens.</p>

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

Caswell, J. 2008. Expanding the focus of cost benefit analysis for food safety: A multifactorial risk prioritisation approach.

FAO/WHO, 2014. Report of the FAO/WHO Expert Meeting on Foodborne Parasites – Multicriteria based ranking for risk management.

FAO/WHO project on mycotoxins in sorghum. Country reports (being finalized in 2014).

WHO FERG Reports: http://www.who.int/foodsafety/foodborne_disease/ferg/en/index7.html

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.



HLPE Inquiry

Critical and Emerging Issues for Food Security and Nutrition

Questionnaire

About the respondent

Name, Surname and Institution	FAO - Agricultural Development Economics Division (ESA)	
Do you answer on behalf of your institution, or as an individual?	<input checked="" type="checkbox"/> On behalf	<input type="checkbox"/> As individual
Do you agree if this contribution is made available to the public as part of the proceedings?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Country of the responding individual/institution Please mention international or regional, the case being	International	

1. Overview of the issue

Issue <i>in 2 lines</i>	Genetic Resources and Intellectual Property Rights (IPR)		
Description of the issue <i>in less than 5 lines</i>	Genetic Resources and IPR are of strategic global importance for economic, agricultural and social development. The risks and benefits to all actors must be outlined clearly and comprehensively.		
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>	<input type="checkbox"/> Challenge	<input type="checkbox"/> Opportunity	The deciding factor will be access to information and technology
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition <i>In less than 10 lines.</i> Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.			

Main response proposed to address the issue	The development of clear guidelines should be developed through multi-stakeholder negotiations with all relevant stakeholders. Opportunities and threats should be debated based on scientific and unbiased information contributing to understanding for policy makers, private sector, civil society organizations.
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Main actor(s) concerned or involved in the response proposed	National Government actors across ministries and at multiple levels, private sector actors in particular agribusiness but also food production and processing sectors, CSOs and various actors of international bodies such as the WTO, WIPO, WB and IMF as well as relevant food, agriculture and environmental bodies such as FAO, IFAD, WFP, UNEP, Bioversty International, among others.
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For the public inquiry fields below are optional

2. Broad typology of the issue

(*)	<i>External driver</i>	<i>Internal to food systems</i>	<i>Both</i>
Is the issue either or both?			Genetic resources are both the source and product of IPR yet international and national policies will determine how their benefits are accessed and who will bear the risks and repercussions.

(*)	<i>Economic (and productive)</i>	<i>Social and Cultural</i>	<i>Governance (institutions, rights, etc.)</i>	<i>Environmental (resources, etc.)</i>	<i>Other (SPECIFY)</i>
Main nature of the issue	X	X	X	X	
Nature of the main impact of the issue on FSN	X	X	X	X	

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	<i>Classification (**)</i>		
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?	Critical point	X Systemic issue	
2. Breadth: Are there many people affected?	Few	X Many	
3. Scale: local/regional/global?	Local	Region	X Global
	<i>Indicate here the precise location</i>	<i>Indicate here the precise region</i>	

For items 4-11 below, please use the classification [— — , — , 0, +, ++]:
Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)

4. Impact on Availability	(++) / (- -)
5. Impact on Access	(++) / (- -)
6. Impact on Utilization/ nutrition	(++) / (- -)
7. Impact on Stability	(++) / (- -)

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8. Impact on most vulnerable people	Without adequate information and consultation, the most vulnerable may lose the rights to production and consumption		
9. Impact on women	(++) / (- -)		
10. Impact on children	(++) / (- -)		
11. Impact on marginalized populations	Without appropriate regulatory and policy framework, IPR and genetic resource ownership along with its benefits will require highly technical knowledge as well as financial capital, marginalized populations tend to have neither.		
12. Cost to address the issue	Low	X Middle	High

(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

4. Time Scale

<i>Timeframe (*)</i>	<i>Now/Short term (1-5 years)</i>	<i>Medium term (5-10 years)</i>	<i>Long term (10-20 years +)</i>
Moment when the issue will have an impact	X	X	X
Moment to act to address the issue	X		

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.	Low	Middle	High
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6. Additional Supporting Information

<i>Additional information</i>
<i>Evidence</i>

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

Knowledge gaps

- Policy implications and practical policy options for greater welfare to small holder farmers in developing countries
- Transparent processes and research on impact on farming, forest and pastoral communities in developing countries

References

Blakeney, M. 2011. *Trends in Intellectual Property Rights Relating to Genetic Resources for Food and Agriculture*. Background Study Paper No. 58 for FAO Commission of Genetic Resources for Food and Agriculture (available at <http://www.fao.org/docrep/meeting/022/mb684e.pdf>)

Cabrera Medaglia, J.2009. *Study on the relationship between the ABS International Regimen and other international instruments which govern the use of genetic resources: The World Trade Organization (WTO); the World Intellectual Property Rights Organization (WIPO); and the Union for the Protection of New Varieties of Plants (UPOV)* For the Secretariat of the Convention on Biological Diversity. (available at <http://www.cbd.int/doc/programmes/abs/studies/study-regime-04-en.pdf>)

Genetic Resources Action International (GRAIN): <http://www.grain.org/>

European Commission. 2013. *Agricultural Genetic Resources - from conservation to sustainable use*. Report from the Commission to the European Parliament, the Council and the European Economic and Social Committee. (available at http://ec.europa.eu/agriculture/genetic-resources/pdf/com-2013-838_en.pdf)

Syngenta: Intellectual Property;
<http://www.syngenta.com/global/corporate/en/investor-relations/questions-about-syngenta/Pages/intellectual-property.aspx>

WIPO. 2012. *Intellectual Property and Genetic Resources, Traditional Knowledge and Traditional Cultural Expressions*.
(available at http://www.wipo.int/export/sites/www/freepublications/en/tk/933/wipo_pub_933.pdf)

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HLPE Inquiry

Critical and Emerging Issues for Food Security and Nutrition

Questionnaire

About the respondent

Name, Surname and Institution	FAO – Fisheries and Aquaculture Department (FID)	
Dou you answer on behalf of your institution, or as an individual?	<input checked="" type="checkbox"/> On behalf	<input type="checkbox"/> Individual
Do you agree if this contribution is made available to the public as part of the proceedings?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Country of the responding individual/institution Please mention international or regional, the case being	International	

1. Overview of the issue

Issue <i>in 2 lines</i>	Illegal, Unregulated and Unreported (IUU) fishing		
Description of the issue <i>in less than 5 lines</i>	<p>Illegal, unreported and unregulated (IUU) fishing remains a major global threat to the long-term sustainable management of fisheries and the maintenance of productive and healthy ecosystems as well as to the stable socio-economic condition of many of the world's small-scale and artisanal fishing communities. IUU fishing often targets high-value species in remote areas with ineffective management and control measures. It thrives on weak governance, weak tenure security, poor traceability and lack of deterrents.</p> <p>IUU fishing, estimated at 11 to 26 million tonnes a year, is found in all types and dimensions of fisheries, occurs both on the high seas and in areas under national jurisdiction, concerns all aspects and stages of the exploitation and utilization of fish, and may sometimes be associated with organized crime. This unsustainable practice often leads to the collapse of local fisheries, with small-scale fisheries in developing countries being particularly vulnerable.</p>		
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? Please tick the appropriate box	<input checked="" type="checkbox"/> Challenge	<input type="checkbox"/> Opportunity	<input type="checkbox"/> It depends (please specify)
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition	Reviews of national and regional assessments of fish stocks at the national, regional and global level vis-à-vis reported landings as well as reporting (national and/or regional) on illegal fishing activities in areas within and beyond national jurisdiction.		
<i>In less than 10 lines.</i> Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in	IUU fishing puts pressure on fish stocks, marine wildlife and habitats, and the profitability of fishing; subverts labor standards; and distorts markets with the consequent result of		

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section 5 below.	threatening food security. Moreover, products derived from IUU fishing enter local or overseas trade markets, thus undermining the local fisheries economy, competing with or displacing local communities from legally caught food supplies and threatening the livelihoods of legally operating fishers and other fishery-sector stakeholders.
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Main response proposed to address the issue	<ul style="list-style-type: none">• Enhancement of the implementation of domestic compliance and enforcement instruments (e.g., by incorporating the UN Fish Stocks Agreement, FAO Compliance Agreement and FAO Code of Conduct principles and measures into domestic legislation);• Provision of adequate resources to adapt and implement existing international legislative and policy frameworks for fisheries at the local, national and regional level to secure political commitment and governance reform based on tenure security and secure access to fisheries resources;• Eradication/elimination of entry into ports of IUU fishing-derived fish and fishery products via the global implementation of the 2009 FAO Port State Measures Agreement (PSMA);• Strengthened bilateral and multilateral cooperation among States and regions, including through the support of Regional Fisheries Bodies (RFBs) and FAO;• Updating and implementation of port State measures and other MCS schemes by a number of regional fisheries management organizations (RFMOs);• Proper implementation of the Voluntary Guidelines on Flag State Performance as a valuable tool for strengthening compliance by flag States with their international duties and obligations regarding the flagging and control of fishing vessels, contributing significantly to combating IUU fishing;• Proper implementation of the Global Record of Fishing Vessels Refrigerated Transport Vessels and Supply Vessels. The main objective of the Global Record is to provide a powerful tool to prevent, deter and eradicate IUU fishing activities, making it more difficult for vessels operating outside the law. The Global Record utilize UVIs to ensure each vessel's record is unique, thus allowing a vessel's history to be traced accurately and making information available regarding the identification of fishing vessels and fishing activity associated with illegal activities and contribute to the implementation of international instruments such as the PSMA.• Use of market-based mechanisms including, <i>inter alia</i>,
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- effective *Catch Documentation Schemes and Eco-labelling schemes* and the *Voluntary Guidelines on the Governance of Tenure of Land, Fisheries and Forests*;
- Proper implementation of the *Code of Conduct for Responsible Fisheries*. The Code is directed to Members and non-Members of FAO, fishing entities, subregional, regional and global organizations, and all persons concerned with the conservation of fishery resources and management and development of fisheries. The Code provides principles and actions required for implementation of responsible fisheries and aquaculture, addressing general principles, fisheries management, fishing operations, aquaculture development, coastal area management and post-harvest practices and trade;
 - Proper implementation of the *International Plan of Action to prevent, deter and eliminate IUU fishing (IPOA-IUU)*. The IPOA-IUU, developed in support of the implementation of the Code, provides possible actions that may be taken to address IUU fishing by States in their capacity as flag State, coastal State, port State and market State. States are called on to develop national plans of action and provides for a central role for RFBs in coordinating efforts;
 - Proper implementation of the *International Plan of Action for the Management of Fishing Capacity (IPOA-Capacity)*. The IPOA-Capacity, developed in support of the implementation of the Code, provides actions that States should take to eliminate excessive fishing capacity and thereby reducing the competition and pressure within fisheries that fuels the business decision of whether or not illegal fishing is a viable business model.
 - Effective use of *vessels monitoring system (VMS)*. This programme allows for tracking the vessels' position and activity;
 - To map and assess at the extent the framework and key provisions envisaged in the Code of Conduct have been incorporated into national and regional frameworks FAO promotes increased participation/responses by FAO Members, RFBs and NGOs to the FAO questionnaire on the implementation of the Code of Conduct for responsible Fisheries (<http://www.fao.org/fishery/topic/166326/en>).
 - Political will and capacity of both the RFMOs as a whole, as well as its individual member States for sustainable use and management of the fisheries resources;
 - Trade policies such as import bans and tariffs could be used to punish countries that fail to meet sustainability standards;
 - States should act in accordance with the pledge made at

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	<p>the United Nations Conference on Sustainable Development, then echoed in “The Future we Want”, to abolish subsidies for fuel or boatbuilding to the industrial fishing sector and review all other subsidies to ensure that they contribute to the realization of the right to food, domestically and extraterritorially, in particular for small-scale fishers in developing countries;</p> <ul style="list-style-type: none"> • Need to review fiscal policies in order to phase out subsidies that enhance fishing effort and fishing capacity and to redirect public support measures toward strengthening fisheries management capacities and institutions and avoiding social and economic hardships in the fisheries reform process; • Capacity-building programmes tailored to the needs of the different regions and aimed at human resource development, knowledge transfer and the strengthening of institutional capacity in the field of ocean affairs and the law of the sea, planning, fisheries management and monitoring capacities and enforcement, can play a significant role in improving the contribution of fish to food security and supporting the fight against IUU fishing; • A multifaceted and linked global strategy is needed to ensure sustainable and equitable food security. Linking institutions that deal directly or indirectly with ocean issues across spatial and jurisdictional scales in ways that are efficient and effective, avoiding duplications and conflicts, could be a solution to the problem. National governments can play a key role in addressing these challenges, acting with others through international treaties, including RFMOs/As and other regional mechanisms; • Ensuring access to information on fishing vessels and cargo vessels linked to fishing operations, including their physical characteristics, ownership and flag histories, previous convictions or suspected offences. <p>*For a comprehensive list of specific actions/measures to address IUU fishing within the jurisdiction of RFBs please see: http://www.fao.org/docrep/005/Y3274E/y3274e08.htm.</p>
Main actor(s) concerned or involved in the response proposed	Governments, fisheries and aquaculture industry and communities, research, development partners

For the public inquiry fields below are optional

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

2. Broad typology of the issue

(*)	<i>External driver</i>	<i>Internal to food systems</i>	<i>Both</i>
Is the issue either or both?	*	x	Briefly mention how this may be the case

(*)	<i>Economic (and productive)</i>	<i>Social and Cultural</i>	<i>Governance (institutions, rights, etc.)</i>	<i>Environmental (resources, etc.)</i>	<i>Other (SPECIFY)</i>
Main nature of the issue	*x	x*	x*	x*	
Nature of the main impact of the issue on FSN	*x	x*	x*	x*	

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	<i>Classification (**)</i>		
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?	This is relevant to the full length of aquatic food production systems (including post harvest), ie from “deck to dish”		Systemic issue
2. Breadth: Are there many people affected?	Few		Many
3. Scale: local/regional/global?	Local	Region	Global
	<i>Indicate here the precise location</i>	<i>Indicate here the precise region</i>	

For items 4-11 below, please use the classification [— — , — , 0 , + , ++]:

Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)

4. Impact on Availability	<p><i>Availability</i> of fisheries resources will decrease and the level of overexploited stocks increase.</p> <p><i>Availability</i> of the full profitability of fisheries decreases, increasing pressure for IUU fishing.</p> <p>Very negative (— —).</p>
5. Impact on Access	<p>IUU fishing competes for legal access to fisheries resources, reduces the availability of fisheries resources, and increases costs for legal operators. This has a significant impact on developing countries, both at the national level when unable to address IUU fishing and for the small communities that rely heavily on those resources and have fewer resources as a result.</p> <p>Very negative (— —).</p>
6. Impact on Utilization/ nutrition	<p><i>Utilization</i> of aquatic products and the nutritional benefits produced will be impacted by changes in range, quantity and quality of supply and reduced opportunities to consume preferred products. This is particularly critical for countries with high per capita fish consumption and in particular the one with limited</p>

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	equally nutrient food. Negative (—)			
7. Impact on Stability	IUU fishing has negative socio-economic, environmental and social impacts. It shifts direct and indirect revenues from fisheries resources from legal to illegal fishing activities and can create losses of resources, jobs, livelihood, both directly and further downstream. It may jeopardize food security and usually causes conflicts between small scale and industrial fisheries. IUU fishing may be associated with sub-standard working conditions. All these factors negatively impact on regional and national stability. Negative (-)			
8. Impact on most vulnerable people	As significant coastal inhabitants, fishers and fish-farmers are particularly vulnerable to the direct and indirect impacts of changes in fish stocks and fishing operations. Negative (—)			
9. Impact on women	IUU fishing may negatively impact the downstream fish processing and local trade in coastal countries where IUU fishing takes place. Women represent the large majority in many countries in fish processing and local trade and are thus at high risk to be negatively affected in their livelihoods.			
10. Impact on children	IUU fishing and unacceptable conditions of work are frequently related. This also often leads to child labor. Negative (—)			
11. Impact on marginalized populations	Marginalized populations are more likely to be negatively affected by IUU fishing given their great dependence on fishing as a source of income and food security. This is further exacerbated by the lack of empowerment of these populations.			
12. Cost to address the issue	<table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td style="width: 33%; text-align: center;">Low</td> <td style="width: 33%; text-align: center;">X Middle</td> <td style="width: 33%; text-align: center;">High</td> </tr> </table>	Low	X Middle	High
Low	X Middle	High		

(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

4. Time Scale

<i>Timeframe (*)</i>	<i>Now/Short term (1-5 years)</i>	<i>Medium term (5-10 years)</i>	<i>Long term (10-20 years +)</i>
Moment when the issue will have an impact	X	x*	
Moment to act to address the issue	*x	*x	

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.	Low	Middle	High
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6.

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

Additional Supporting Information

Additional information

Evidence

References

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.



HLPE Inquiry

Critical and Emerging Issues for Food Security and Nutrition

Questionnaire

About the respondent

Name, Surname and Institution	FAO - Trade and Markets Division (EST)	
Do you answer on behalf of your institution, or as an individual?	<input checked="" type="checkbox"/> On behalf	<input type="checkbox"/> As individual
Do you agree if this contribution is made available to the public as part of the proceedings?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Country of the responding individual/institution Please mention international or regional, the case being	International	

1. Overview of the issue

Issue <i>in 2 lines</i>	Trade strategies and associated trade policies constrain potential contribution of agriculture to FSN		
Description of the issue <i>in less than 5 lines</i>	Most countries pursue agricultural trade strategies that are suboptimal with respect to their coherence with FSN objectives and which fail to recognize the need for trade policy to evolve with structural transformation and reflect changing global market performance		
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>	<input checked="" type="checkbox"/> Challenge	<input checked="" type="checkbox"/> Opportunity	<input type="checkbox"/> It depends (please specify)
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition <i>In less than 10 lines.</i> Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.	FAO has longstanding involvement in the analysis of the relationship between trade policy reform and FSN outcomes at the national and household level. Evidence suggests that there is significant incoherence between trade strategies (and their translation into trade policy) and the FSN objectives of a country. This is particularly apparent in the failure of trade policy to evolve with requirements during processes of agricultural market development.		
Main response proposed to address the issue	In addition to strengthening evidence on trade policy appropriate to the level of agricultural market development and to providing capacity development in the use of this evidence to improve the articulation and mainstreaming of trade policy, countries will be assisted in engaging more effectively in the formulation of trade agreements which provide the framework for (and constrains on) design and implementation of trade policy.		

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

Main actor(s) concerned or involved in the response proposed	At the national level, government officials from Ministries concerned with the design and implementation of trade policy; value chain actors and producers/consumers affected by trade policy. At the international level, government officials involved in the negotiation of trade agreements and organizations providing evidence and platforms for dialogue on the implications of these agreements for trade policy as it affect the achievement of FSN objectives.
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For the public inquiry fields below are optional

2. Broad typology of the issue

(*)	<i>External driver</i>	<i>Internal to food systems</i>	<i>Both</i>
Is the issue either or both?			Trade policy is integral to the development of more inclusive and efficient food systems, but subject to numerous external pressures

(*)	<i>Economic (and productive)</i>	<i>Social and Cultural</i>	<i>Governance (institutions, rights, etc.)</i>	<i>Environmental (resources, etc.)</i>	<i>Other (SPECIFY)</i>
Main nature of the issue	X		X		
Nature of the main impact of the issue on FSN	X		X		

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	<i>Classification (**)</i>		
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?	Critical point	X Systemic issue	
2. Breadth: Are there many people affected?	Few	X Many	
3. Scale: local/regional/global?	Local	Region	X Global
	<i>Indicate here the precise location</i>	<i>Indicate here the precise region</i>	

For items 4-11 below, please use the classification [— — , — , 0 , + , ++]:

Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)

4. Impact on Availability	++
5. Impact on Access	++
6. Impact on Utilization/ nutrition	+
7. Impact on Stability	++
8. Impact on most vulnerable people	Improved recognition of the role of import competing sectors is critical to

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

	improvements in opportunities for vulnerable producers and net consumers		
9. Impact on women	The formalization of trade in food staples can have significant negative impacts of women which need to be considered in the design of trade policy		
10. Impact on children			
11. Impact on marginalized populations	Specify as appropriate		
12. Cost to address the issue	Low	Middle	High

(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

4. Time Scale

<i>Timeframe (*)</i>	<i>Now/Short term (1-5 years)</i>	<i>Medium term (5-10 years)</i>	<i>Long term (10-20 years +)</i>
Moment when the issue will have an impact	X		
Moment to act to address the issue	X		

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.	Low	Middle	High
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6. Additional Supporting Information

Additional information

Changes in the international agricultural market context, from one characterized by depressed prices to one in which higher prices persist and where market reactions to shocks (climatic, economic) are more visible, has prompted a reassessment of the role of trade and associated trade policies in securing improvements in food security.

During the era of lower global food prices, many developing countries had adopted more open trade strategies in which significant reliance was placed on the importation of food to satisfy domestic food requirements. Seen as a cheap source of food, procurement from global markets at the expense of domestic food production had the added "benefit" of releasing scarce resources from the production of food to the production of exportables (agricultural or non-agricultural). As food import bills have increased and confidence in global markets as a reliable source of affordable food requirements has waned, attention has turned to the support of increased domestic food production.

In some circles, this shift in attention has been associated with objectives of achieving food self sufficiency and with a propensity to restrict or to disrupt trade. However, this assessment is too simplistic and has served to further polarize views on the role of trade and associated trade policies. This is to the detriment of countries which, at quite different stages of agricultural transformation, and with different levels of agricultural potential, will require quite different policy regimes.

Defining the trade policy regime appropriate to a given stage of transformation, and more importantly, the evolution of the regime during the process transformation is however a significant challenge and one which will require improved evidence on the implications of alternative regimes; improved capacity to identify more appropriate policy sets and their evolution during transformation; and less polarized debate among global actors and institutions with influence over the choices made at country level.

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

Evidence

Case study and analytical evidence on the relationship between trade policy reform and food security exists. Evidence on the role of agricultural market development during processes of structural transformation exists. Evidence on the limitations of processes of mainstreaming trade and trade policy into FSN policy processes exists

Knowledge gaps

Evidence on the components of trade agreements, trade policy, agricultural development and FSN has tended to be developed separately – significant returns could be generated to efforts to bring these strands together.

The relationship between trade and FSN has not been addressed through the lens of the current global market context.

Political economy analysis tends to be lacking or used to derive one size fits all conclusions rather than being applied to local contexts.

References

FAO (2014) The Bali Package: implications for trade and food security. FAO Trade Policy Brief on issues related to the WTO Agreement on Agriculture. No. 16, Rome, Italy
<http://www.fao.org/docrep/019/i3658e/i3658e.pdf>

ICTSD and FAO (2013) G33 Proposal: early agreement on elements of the draft Doha accord to address food security. Information Note.
http://www.fao.org/fileadmin/templates/est/PUBLICATIONS/g33-proposal-early-agreement-on-elements-of-the-draft-doha-accord-to-address-food-security_1_.pdf

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<http://www.fao.org/docrep/005/y4671e/y4671e00.htm>

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.



HLPE Inquiry

Critical and Emerging Issues for Food Security and Nutrition

Questionnaire

About the respondent

Name, Surname and Institution	FAO - Social Protection Division (ESP)	
Do you answer on behalf of your institution, or as an individual?	X On behalf	As individual
Do you agree if this contribution is made available to the public as part of the proceedings?	X Yes	No
Country of the responding individual/institution Please mention international or regional, the case being	International	

1. Overview of the issue

Issue <i>in 2 lines</i>	Promoting decent rural employment (DRE) to reduce rural poverty and enhance food security.		
Description of the issue <i>in less than 5 lines</i>	The promotion of DRE is geared towards creating not only more rural employment opportunities – including farm and non-farm self-employment and wage employment – but also jobs that satisfy the qualitative standards of decent work (see Section 6).		
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>	Challenge	Opportunity	It depends (please specify)
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition <i>In less than 10 lines.</i> Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 6 below.	There is growing recognition of decent work's central importance to reduce poverty, and ultimately improve all four pillars of food security (see Section 6). Lacking productive assets, many rural poor rely mostly on their labour to earn a living. However, available employment opportunities are often precarious, poorly remunerated and even hazardous, sustaining a vicious cycle of low productivity, poverty and food insecurity. DRE has been identified as key to empowering the rural poor to break this cycle, as reflected in MDG 1 Target 1B: <i>Achieve full and productive employment and decent work for all, including women and young people.</i>		

Main response proposed to address the issue	Under its new Strategic Framework, FAO is implementing an integrated approach to the promotion of DRE – an approach that the Organization considers vital to effectively reducing poverty and enhancing food security in regions where rural poverty remains rampant, such as Sub-Saharan Africa, South Asia and Southeast Asia. This integrated approach includes: (i) supporting governments by strengthening their capacities to formulate, implement and monitor policies, strategies and programmes that promote DRE, with a particular focus on youth-smart programming; (ii) supporting the practical application of International Labour Standards in rural areas, particularly with
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	<p>respect to child labour and occupational safety and health; and (iii) increasing knowledge on DRE issues at the global, regional and national levels, including the identification and dissemination of good practices.</p>
<p>Main actor(s) concerned or involved in the response proposed</p>	<p>FAO is taking a lead role in promoting DRE as a central component of rural poverty reduction and enhanced FSN. This is reflected in the prioritization of DRE in FAO's new Strategic Framework, through which it is mobilizing resources from across the Organization towards achieving Strategic Objective 3, Organizational Outcome 2 (SO3-OO2), "<i>The rural poor have greater opportunities to access decent farm and non-farm employment</i>".</p> <p>To promote DRE for poverty reduction and enhanced FSN, FAO also works in close collaboration with the International Labour Organization (ILO), as well as partners at the UN, regional, national and community levels. Prominent among them is the NEPAD Planning and Coordinating Agency (NPCA), with whom FAO works on the implementation of the youth employment and decent work components of the Comprehensive Africa Agriculture Development Programme (CAADP). Throughout these partnerships, FAO places a strong emphasis on fostering inter-sectoral collaboration between organizations working on employment issues and those active in the agricultural sector.</p>

For the public inquiry fields below are optional

2. Broad typology of the issue

(*)	<i>External driver</i>	<i>Internal to food systems</i>	<i>Both</i>
<p>Is the issue either or both?</p>			<p>External: The policy and legislative changes needed to promote DRE are key external drivers of food systems, particularly given that they may involve overcoming existing social and cultural norms (e.g. child labour and gender inequalities).</p> <p>Internal: Employment and working conditions are fundamental internal components of food systems, as they are key determinants of both food production and consumption patterns.</p>

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

(*)	Economic (and productive)	Social and Cultural	Governance (institutions, rights, etc.)	Environmental (resources, etc.)	Other (SPECIFY)
Main nature of the issue	X	X	X		
Nature of the main impact of the issue on FSN	X	X	X	X	

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	Classification (**)		
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?	Critical point	Systemic issue	
2. Breadth: Are there many people affected?	Few	Many	
3. Scale: local/regional/global?	Local	Region	Global
	<i>Indicate here the precise location</i>	<i>Indicate here the precise region</i>	

For items 4-11 below, please use the classification [— — , — , 0, +, ++]:
Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)

4. Impact on Availability	+		
5. Impact on Access	++		
6. Impact on Utilization/ nutrition	+		
7. Impact on Stability	++		
8. Impact on most vulnerable people	Youth ++		
9. Impact on women	++		
10. Impact on children	++		
11. Impact on marginalized populations	Migrants ++		
12. Cost to address the issue	Low	Middle	High

(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

4. Time Scale

Timeframe (*)	Now/Short term (1-5 years)	Medium term (5-10 years)	Long term (10-20 years +)
Moment when the issue will have an impact	X	X	X
Moment to act to address the issue	X	X	

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

5. Degree of confidence

Solidity of currently available knowledge base.	Low	Middle	High
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6. Additional Supporting Information

Additional information

- In 2012, FAO's Decent Rural Employment Team carried out a conceptual analysis of the links between decent rural employment and the four pillars of food security. This report, entitled *Decent rural employment for food security: A case for action*, argues that:
 - i. More productive and decent employment in the agricultural sector increases local food production by improving farmers' access to productive and human resources, thereby contributing to a **sustainable increase in food availability**;
 - ii. Decent employment empowers workers to break out of rural poverty, thereby ensuring that households generate sufficient income to **improve their access to food**;
 - iii. Decent work provides households with sufficient income to purchase food that is nutritious and diverse, ensuring they can maintain the kinds of healthy diets needed to enhance **food utilization**;
 - iv. Decent employment opportunities strengthen household resilience by increasing incomes and access to basic social protection, thereby **improving food stability**.
- Decent rural employment and the work of FAO's Decent Rural Employment Team were featured during a CFS 40 Side Event entitled *Decent rural employment for rural poverty reduction and food security*, which included a panel discussion with representatives from FAO, ILO, Sida and the permanent representation of Malawi.
- FAO has prioritized the promotion of DRE in its new Strategic Framework, mobilizing resources from across the Organization towards achieving Strategic Objective 3, Organizational Outcome 2 (SO3-OO2), "*The rural poor have greater opportunities to access decent farm and non-farm employment*". This highlights FAO's Corporate-level recognition of the importance of DRE in reducing rural poverty and enhancing FSN.
- Decent rural employment is currently reflected in 43 of FAO's Country Programming Frameworks (CPFs), indicating increasing recognition of the importance of employment for rural poverty reduction and enhanced FSN among FAO Member Countries.
- ILO has strengthened its commitment to promoting decent work in rural areas by making *Decent work in the rural economy* one of the eight Areas of Critical Importance that will guide the Organization's work under its programme and budget for 2014-2015.

Evidence

Source: IFAD. 2011. *Rural Poverty Report 2011*. Rome, IFAD.

Relevant evidence: The report estimates that in 2011, 70 percent of the world's 1.4 billion extreme poor were living in rural areas. It also links the high incidence of rural poverty to rural economic stagnation and insufficient income-generating opportunities, and stresses the need to promote decent employment opportunities in the rural farm and non-farm economy in order to lift these individuals out of poverty.

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Source: ILO. 2012. *Global Employment Trends 2012: Preventing a Deeper Jobs Crisis*. Geneva, ILO.

Relevant evidence: Based on the findings of ILO's Key Indicators of the Labour Market (7th Edition), this report estimates that nearly 80 percent of the world's working poor – those subsisting on US\$1.25 per day or less – live in rural areas. This is a clear indication of the inadequacy of existing rural income-generating opportunities, and the impact that this has on rural poverty and food insecurity.

Source: World Bank. 2007. *World Development Report 2008: Agriculture for Development*. Washington, D.C., World Bank.

Relevant evidence: The report provides a detailed analysis of the potential for agricultural development to directly and indirectly generate significant rural employment opportunities, and thereby reduce rural poverty. In particular, it argues that agricultural development is among the most cost efficient and effective means of reducing poverty. As proof, the report cites research conducted across 42 developing countries between 1981-2003, which found that 1 percent GDP growth originating in the agricultural sector increased the expenditures of the three poorest deciles by at least 2.5 times more than the same amount of economic growth originating in other sectors of the economy.

Source: World Bank. 2014. *Youth Employment in Sub-Saharan Africa*. Washington, D.C., World Bank.

Relevant evidence: This World Bank report provides a detailed analysis of the scope of Africa's youth employment challenge, and weighs the relative importance of farm and non-farm employment in addressing this challenge.

Source: OECD. 2012. *African Economic Outlook 2012: Promoting Youth Employment*. Paris: OECD.

Relevant evidence: This report provides an analysis of the labour market challenges faced by youth in Africa, and the potential for decent jobs to help them in overcoming these challenges. The report also weighs the relative importance of non-farm rural employment as a source of income and livelihoods for the continent's sizeable youth cohort.

Source: ILO. 2013. *Marking progress against child labour: Global estimates and trends 2000-2012*. Geneva, ILO.

Relevant evidence: This ILO report analyses the deleterious effects of children's work in agriculture, and illustrates that the sector currently accounts for 59 percent of the world's child labourers (98 million children). It argues that child labour and its capacity to perpetuate a vicious cycle of rural poverty cannot be addressed without taking action in the agricultural sector.

Knowledge gaps

It is important to stress that the knowledge gaps listed below can be attributed in part to the fact that decent rural employment is a relatively new work area for FAO and the international development community. **Under FAO's Reviewed Strategic Framework, considerable resources are being devoted to closing these knowledge gaps and strengthening the evidence base for decent rural employment.** This will be done through both in-house research and collaborative work with universities and research organizations (e.g. Technical University of Munich, University of Sussex, IFPRI, UNRISD, UNU-WIDER, Institute of Development Studies). Knowledge gaps currently being addressed include:

- At global level:
 - The need for more quantifiable evidence of the consequences of decent work deficits and the benefits of decent rural employment;
 - The need for more detailed evidence of the impact of specific DRE-enhancing policies,

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strategies and programmes through effective monitoring and evaluation so as to facilitate the identification of best practices;

- The need to develop more practical indicators capable of accurately measuring decent work in agriculture and rural areas;
 - The need for more evidence on labour migration, including internal migration, and its impact on agriculture and rural livelihoods.
- At country level:
 - The need for a more detailed understanding of the existing and potential application of International Labour Standards (ILS) in specific agro-value chains and agricultural sub-sectors;
 - The need for a more detailed understanding of the existing and potential roles of minimum wages and living wages in agriculture and agricultural sub-sectors, particularly for informal workers;
 - The need for a more detailed understanding of the existing and potential effects of codes of conduct and certification schemes on social and labour dynamics, particularly with respect to informal workers and small-scale entrepreneurs in agriculture, agricultural sub-sectors and the rural non-farm economy;
 - The need for more rigorous analysis of the impact of countries' trade policies and related supporting measures on employment, rural poverty, food security and socio-economic inequalities.

References

- For a description of how DRE can be incorporated into FAO's country-level work, see: [*Guidance on how to address decent rural employment in FAO country activities*](#).
- For a description of how DRE can be incorporated into the formulation of FAO Country Programming Framework's, see: [*Guidelines for addressing rural employment and decent work in the Country Programming Framework*](#).
- For a description of how DRE can be incorporated into project formulation, see: [*Quick guidelines on how to mainstream decent rural employment into project formulation*](#).
- For an analysis of gender differentials in access to rural employment and income-generating opportunities, as well as the importance of promoting decent work to close these gaps, see: [*Gender dimensions of agricultural and rural development: Differentiated pathways out of poverty*](#).

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.



HLPE Inquiry

Critical and Emerging Issues for Food Security and Nutrition

Questionnaire

About the respondent

Name, Surname and Institution	FAO - Trade and Markets Division (EST)	
Do you answer on behalf of your institution, or as an individual?	<input checked="" type="checkbox"/> On behalf	<input type="checkbox"/> As individual
Do you agree if this contribution is made available to the public as part of the proceedings?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Country of the responding individual/institution Please mention international or regional, the case being	International	

1. Overview of the issue

Issue <i>in 2 lines</i>	Trade strategies and associated trade policies constrain potential contribution of agriculture to FSN		
Description of the issue <i>in less than 5 lines</i>	Most countries pursue agricultural trade strategies that are suboptimal with respect to their coherence with FSN objectives and which fail to recognize the need for trade policy to evolve with structural transformation and reflect changing global market performance		
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>	<input checked="" type="checkbox"/> Challenge	<input checked="" type="checkbox"/> Opportunity	<input type="checkbox"/> It depends (please specify)
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition <i>In less than 10 lines.</i> Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.	FAO has longstanding involvement in the analysis of the relationship between trade policy reform and FSN outcomes at the national and household level. Evidence suggests that there is significant incoherence between trade strategies (and their translation into trade policy) and the FSN objectives of a country. This is particularly apparent in the failure of trade policy to evolve with requirements during processes of agricultural market development.		
Main response proposed to address the issue	In addition to strengthening evidence on trade policy appropriate to the level of agricultural market development and to providing capacity development in the use of this evidence to improve the articulation and mainstreaming of trade policy, countries will be assisted in engaging more effectively in the formulation of trade agreements which provide the framework for (and constrains on) design and implementation of trade policy.		

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

Main actor(s) concerned or involved in the response proposed	At the national level, government officials from Ministries concerned with the design and implementation of trade policy; value chain actors and producers/consumers affected by trade policy. At the international level, government officials involved in the negotiation of trade agreements and organizations providing evidence and platforms for dialogue on the implications of these agreements for trade policy as it affect the achievement of FSN objectives.
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For the public inquiry fields below are optional

2. Broad typology of the issue

(*)	<i>External driver</i>	<i>Internal to food systems</i>	<i>Both</i>
Is the issue either or both?			Trade policy is integral to the development of more inclusive and efficient food systems, but subject to numerous external pressures

(*)	<i>Economic (and productive)</i>	<i>Social and Cultural</i>	<i>Governance (institutions, rights, etc.)</i>	<i>Environmental (resources, etc.)</i>	<i>Other (SPECIFY)</i>
Main nature of the issue	X		X		
Nature of the main impact of the issue on FSN	X		X		

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	<i>Classification (**)</i>		
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?	Critical point	X Systemic issue	
2. Breadth: Are there many people affected?	Few	X Many	
3. Scale: local/regional/global?	Local	Region	X Global
	<i>Indicate here the precise location</i>	<i>Indicate here the precise region</i>	

For items 4-11 below, please use the classification [— — , — , 0 , + , ++]:

Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)

4. Impact on Availability	++
5. Impact on Access	++
6. Impact on Utilization/ nutrition	+
7. Impact on Stability	++
8. Impact on most vulnerable people	Improved recognition of the role of import competing sectors is critical to

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

	improvements in opportunities for vulnerable producers and net consumers		
9. Impact on women	The formalization of trade in food staples can have significant negative impacts of women which need to be considered in the design of trade policy		
10. Impact on children			
11. Impact on marginalized populations	Specify as appropriate		
12. Cost to address the issue	Low	Middle	High

(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

4. Time Scale

<i>Timeframe (*)</i>	<i>Now/Short term (1-5 years)</i>	<i>Medium term (5-10 years)</i>	<i>Long term (10-20 years +)</i>
Moment when the issue will have an impact	X		
Moment to act to address the issue	X		

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.	Low	Middle	High
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6. Additional Supporting Information

Additional information

Changes in the international agricultural market context, from one characterized by depressed prices to one in which higher prices persist and where market reactions to shocks (climatic, economic) are more visible, has prompted a reassessment of the role of trade and associated trade policies in securing improvements in food security.

During the era of lower global food prices, many developing countries had adopted more open trade strategies in which significant reliance was placed on the importation of food to satisfy domestic food requirements. Seen as a cheap source of food, procurement from global markets at the expense of domestic food production had the added "benefit" of releasing scarce resources from the production of food to the production of exportables (agricultural or non-agricultural). As food import bills have increased and confidence in global markets as a reliable source of affordable food requirements has waned, attention has turned to the support of increased domestic food production.

In some circles, this shift in attention has been associated with objectives of achieving food self sufficiency and with a propensity to restrict or to disrupt trade. However, this assessment is too simplistic and has served to further polarize views on the role of trade and associated trade policies. This is to the detriment of countries which, at quite different stages of agricultural transformation, and with different levels of agricultural potential, will require quite different policy regimes.

Defining the trade policy regime appropriate to a given stage of transformation, and more importantly, the evolution of the regime during the process transformation is however a significant challenge and one which will require improved evidence on the implications of alternative regimes; improved capacity to identify more appropriate policy sets and their evolution during transformation; and less polarized debate among global actors and institutions with influence over the choices made at country level.

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

Evidence

Case study and analytical evidence on the relationship between trade policy reform and food security exists. Evidence on the role of agricultural market development during processes of structural transformation exists. Evidence on the limitations of processes of mainstreaming trade and trade policy into FSN policy processes exists

Knowledge gaps

Evidence on the components of trade agreements, trade policy, agricultural development and FSN has tended to be developed separately – significant returns could be generated to efforts to bring these strands together.

The relationship between trade and FSN has not been addressed through the lens of the current global market context.

Political economy analysis tends to be lacking or used to derive one size fits all conclusions rather than being applied to local contexts.

References

FAO (2014) The Bali Package: implications for trade and food security. FAO Trade Policy Brief on issues related to the WTO Agreement on Agriculture. No. 16, Rome, Italy
<http://www.fao.org/docrep/019/i3658e/i3658e.pdf>

ICTSD and FAO (2013) G33 Proposal: early agreement on elements of the draft Doha accord to address food security. Information Note.
http://www.fao.org/fileadmin/templates/est/PUBLICATIONS/g33-proposal-early-agreement-on-elements-of-the-draft-doha-accord-to-address-food-security_1_.pdf

FAO (2011) Articulating and mainstreaming agricultural trade policy and support measures.
http://www.fao.org/fileadmin/templates/est/PUBLICATIONS/International_trade_PB/FullBookLowResNoCrop.pdf

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Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.



HLPE Inquiry

Critical and Emerging Issues for Food Security and Nutrition

Questionnaire

About the respondent

Name, Surname and Institution	FAO – Fisheries and Aquaculture Department (FID)	
Do you answer on behalf of your institution, or as an individual?	<input checked="" type="checkbox"/> On behalf	<input type="checkbox"/> Individual
Do you agree if this contribution is made available to the public as part of the proceedings?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Country of the responding individual/institution Please mention international or regional, the case being	International	

1. Overview of the issue

Issue <i>in 2 lines</i>	Climate Change and ocean acidification implications for fisheries and aquaculture		
Description of the issue <i>in less than 5 lines</i>	<p>The world's dependence on the capture fisheries and aquaculture sector is threatened not only by misuse of these aquatic resources but also by factors external to the sector, such as pollution runoff, land use transformation, other aquatic resources uses and climatic changes. As significant coastal inhabitants (whether riparian, lacustrine or marine), fishers and fish-farmers are particularly vulnerable to the direct and indirect impacts of predicted climatic changes including changes in physical environments and ecosystems, fish stocks, infrastructure and fishing operations, and livelihoods.</p> <p>The build-up of carbon dioxide and other greenhouse gases in our atmosphere is changing several of the features of the earth's climate, oceans, coasts and freshwater ecosystems that affect fisheries and aquaculture. Air and sea surface temperatures, rainfall, sea level, acidity of the ocean, wind patterns, and the intensity of tropical cyclones are all changing. Climate change is modifying the distribution and productivity of marine and freshwater species, is already affecting biological processes and altering food webs and is increasing direct risks to aquatic food production systems such as through changes such as in weather patterns, sea level rise.</p>		
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? Please tick the appropriate box	<input checked="" type="checkbox"/> Challenge	<input type="checkbox"/> Opportunity	<input type="checkbox"/> It depends (please specify)
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition <i>In less than 10 lines. Additional supporting or describing information (literature, reports, expert report,</i>	Reviews of biochemical models (empirical and projected) of greenhouse gas sequestration and storage within aquatic systems and predicted chemical and physical changes from these, of biochemical models projecting impacts of such changes on fisheries and aquaculture resources and of bioeconomic models. Coupled with regional and national vulnerability assessments for the sector validated through regional and national workshops.		

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analysis, etc.) can be provided in section 5 below.	
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Main response proposed to address the issue	<ul style="list-style-type: none"> • Options to increase resilience and adaptability through improved fisheries and aquaculture management include the adoption as standard practice of adaptive and precautionary management. The ecosystem approaches to fisheries (EAF) and to aquaculture (EAA) should be adopted to increase the resilience of aquatic resources ecosystems, fisheries and aquaculture production systems, and aquatic resource-dependent communities. • Aquaculture systems, which are less or non-reliant on fishmeal and fish oil inputs (e.g. bivalves and macroalgae), have better scope for expansion than production systems dependent on capture fisheries commodities. • Adaptation options will also encompass diversification of livelihoods and promotion of aquaculture crop insurance in the face of potentially reduced or more variable yields. • In the face of more frequent severe weather events, strategies for reducing vulnerabilities of fishing and fish farming communities have to address measures including: investment and capacity building on improved forecasting; early warning systems; safer harbours and landings; and safety at sea. More generally, adaptation strategies should promote disaster risk management, including disaster preparedness, and integrated coastal area management. • National climate change adaptation and food security policies and programmes would need to fully integrate the fisheries and aquaculture sector (and, if non-existent, should be drafted and enacted immediately). This will help ensure that potential Climate change impacts will be integrated into broader national development (including infrastructure) planning. • Adaptations by other sectors will have impacts on fisheries, in particular inland fisheries and aquaculture (e.g. irrigation infrastructure, dams, fertilizer use runoff), and will require carefully considered trade-offs or compromises. • Interactions between food production systems could compound the effects of climate change on fisheries production systems but also offer opportunities. Aquaculture based livelihoods could for example be promoted in the case of salination of deltaic areas leading to loss of agricultural land.
Main actor(s) concerned or involved in the response proposed	Governments, fisheries and aquaculture industry and communities, research, development partners

For the public inquiry fields below are optional

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2. Broad typology of the issue

(*)	<i>External driver</i>	<i>Internal to food systems</i>	<i>Both</i>
Is the issue either or both?	*		Briefly mention how this may be the case

(*)	<i>Economic (and productive)</i>	<i>Social and Cultural</i>	<i>Governance (institutions, rights, etc.)</i>	<i>Environmental (resources, etc.)</i>	<i>Other (SPECIFY)</i>
Main nature of the issue	*	*	*	*	
Nature of the main impact of the issue on FSN	*		*	*	

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	<i>Classification (**)</i>		
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?	Critical point – aquatic food production systems (including post harvest)		Systemic issue
2. Breadth: Are there many people affected?	Few		Many
3. Scale: local/regional/global?	Local	Region	Global
	<i>Indicate here the precise location</i>	<i>Indicate here the precise region</i>	

For items 4-11 below, please use the classification [— — , — , 0 , + , ++]:

Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)

4. Impact on Availability	<i>Availability</i> of aquatic foods will vary, positively and negatively, through changes in habitats, stocks and species distribution. These changes will occur at local and regional levels in inland, coastal and marine systems, due to aquatic ecosystem shifts and impacts on aquaculture. For tropical belt countries, availability of fisheries resources is predicted to decrease significantly. Very negative (— —). However, northern latitude countries are seeing increased availability of valuable warm water species. Positive (+)
5. Impact on Access	<i>Access</i> to aquatic foods will be affected by changes in livelihoods and catching or culture opportunities combined with transferred impacts from other sectors (i.e. increased prices of substitute foods), competition for supply, and information asymmetries. Impacts may also arise from rigid management measures that control temporal and spatial access to resources. If, for example, governance and safety at sea issues do not reflect the risks imposed, impacts could be negative (-), even in the face of increased availability of fisheries resources.
6. Impact on Utilization/nutrition	<i>Utilization</i> of aquatic products and the nutritional benefits produced will be impacted by: changes in range and quality of

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	supply; market chain disruptions; greater food safety issues; and reduced opportunities to consume preferred products. This is particularly critical for countries with high per capita fish consumption. If food safety measures are not put into place, high consequences of disease-related incidents may occur. Nutrient substitution from other food sources is quite limited. Negative (-)
7. Impact on Stability	<i>Stability</i> of supply will be impacted by changes in seasonality, increased variance of ecosystem productivity, increased supply risks and reduced supply predictability – issues that may also have large impacts on supply chain costs and retail prices. Ability of sector to absorb increased variability is limited. Negative (-)
8. Impact on most vulnerable people	As significant coastal inhabitants (whether riparian, lacustrine or marine), fishers and fish-farmers are particularly vulnerable to the direct and indirect impacts of predicted climatic changes including changes in physical environments and ecosystems, fish stocks, infrastructure and fishing operations, and livelihoods.
9. Impact on women	There are particular gender dimensions, including competition for resource access, risk from extreme events and occupational change in areas such as markets, distribution and processing, in which women currently play a significant role. Within communities and households, existing gender issues related to differentiated access to resources and occupational change in markets, distribution and processing, where women currently play a significant role, may be heightened under conditions of stress and competition for resources and jobs stemming from climate change.
10. Impact on children	Fish are important sources for many nutrients, including protein of very high quality, retinol (Vitamin A), vitamin D, vitamin E, iodine and selenium. Evidence is increasing that the consumption of fish enhances brain development and learning in children, protects vision and eye health, and offers protection from cardiovascular disease and some cancers. The fats and fatty acids in fish, particularly the long chain n-3 fatty acids (n-3 PUFA), are highly beneficial and difficult to obtain from other food sources. Of particular importance are eicosapentaenoic acid (20:5n-3, EPA) and docosahexaenoic acid (22:6n-3, DHA). The high quality protein and essential fatty acids, vitamins and minerals found in fish and the effects of adding fish to traditional bland staple diets can stimulate appetite and increase food consumption of the young child and the aged, and of the ill including people living with HIV/AIDS.
11. Impact on marginalized populations	The vulnerability of fisheries and fishing communities depends on their exposure and sensitivity to change, but also on the ability of individuals or systems to anticipate and adapt. This adaptive capacity relies on various assets and can be constrained by culture or marginalization. Vulnerability varies between countries and communities, and between demographic groups within society. Generally, poorer and less empowered countries and individuals

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	are more vulnerable to climate impacts, and the vulnerability of fisheries is likely to be higher where they already suffer from overexploitation or overcapacity.		
12. Cost to address the issue	Low	X Middle	High

(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

4. Time Scale

<i>Timeframe (*)</i>	<i>Now/Short term (1-5 years)</i>	<i>Medium term (5-10 years)</i>	<i>Long term (10-20 years +)</i>
Moment when the issue will have an impact		*	*
Moment to act to address the issue	*	*	

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.	Low	Middle	High
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6. Additional Supporting Information

Additional information

Evidence

Changes in physical environments

Marine waters

Higher frequency and intensity climate processes (e.g. El Niño-Southern Oscillation [ENSO]) and decadal-scale regime shifts are expected to continue, but it is unclear so far whether they will retain or change their present characteristics. The oceans are warming, but with geographical differences and some decadal variability. Warming is more intense in surface waters but is not exclusive to these, with the Atlantic showing particularly clear signs of deep warming.

Changes in ocean salinity have been observed, with near-surface waters in the more evaporative regions increasing in salinity in almost all ocean basins, and high latitudes showing a decreasing trend due to greater precipitation, higher runoff, ice melting and advection. The oceans are also becoming more acidic, with likely negative consequences to many coral reef and calcium-bearing organisms. Although there are no clearly discernable net changes in ocean upwelling patterns, there are indications that their seasonality may be affected.

Global average sea level has been rising since 1961 and this rate has accelerated since 1993. Although not geographically uniform, large coastal land losses are likely on the Atlantic and Gulf of Mexico coasts of the Americas, the Mediterranean, the Baltic, and small-island regions, while in other areas (e.g. Asia) large and heavily populated deltaic regions may also be strongly impacted

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Inland waters

There has so far been no global assessment of warming of inland waters but many lakes have shown moderate to strong warming since the 1960s. There are particular concerns in African lakes, as the atmospheric temperature of the continent is predicted to be higher than the global average and rainfall is projected to decrease. Likewise, wetlands and shallow rivers are susceptible to changes in temperature and precipitation and water levels may drop to the point of drying out more completely in dry seasons. Increased temperature may lead to stronger, earlier and longer stratification of lakes and reservoirs and with limited or no seasonal turnover, greater deoxygenation of bottom layers.

River run-off is expected to increase at higher latitudes but decrease in parts of West Africa, southern Europe and southern Latin America. Overall, a global temperature increase of 1°C is associated with a four percent increase in river run-off. Changes in flood areas, timing, and duration are also expected.

Changes in biological functions/fish stocks

Marine waters

Although large differences exist, especially at regional scales, most models predict decreasing primary production in the seas and oceans and many models predict composition shifts to smaller phytoplankton which are likely to lead to changes in food webs in general. Changes in fish distributions in response to climate variations have been observed. Most rapid changes occur with pelagic species. Reactions to past warming events have been poleward expansions of warmer-water species and poleward contractions of colder-water species.

Inland waters

In general, temperature changes are likely to impact cold-water species negatively, warm-water species positively, and cool-water species positively in their northern ranges and negatively in their southern ranges. There will likely also be a general shift of cool- and warm-water species northward in northern hemisphere rivers. The abundance and species diversity of riverine fishes are predicted to be particularly sensitive to climatic disturbances, since lower dry season water levels may reduce the number of individuals able to spawn successfully. The timing of flood events is critical as a physiological trigger that induces fish to migrate and spawn at the onset of the flood; enabling their eggs and larvae to be transported to nursery areas on floodplains.

Ecological forecasts

A range of impacts on aquatic ecosystems can be predicted in association with large-scale changes in temperature, precipitation, winds, and acidification. It is very likely that over the short term (i.e. within a few years), increasing temperatures would have negative impacts on the physiology of fish in that locality through limiting oxygen transport. This would have significant impacts on aquaculture and result in changes in distributions, and probably abundance, of both freshwater and marine species. There is high confidence in predictions that over the medium term (i.e. a few years to a decade), temperature-regulated physiological stresses and changes in the timing of life cycles will impact the recruitment success and therefore the abundances of many marine and inland aquatic populations and species composition of marine and inland communities. There is lower confidence in long-term (i.e. multi-decadal) time scale predictions. Predicted impacts depend upon, amongst other factors, changes in net primary production in the oceans and its transfer to higher trophic levels.

Knowledge gaps

Estimate production levels. Projections of future fisheries production levels at the global and regional scales will be driven by medium- and long-term probabilistic climate change predictions in the context of substantial ecological and management uncertainties.

Forecast impact levels. Detailed impact predictions on specific fisheries and aquaculture systems will be required to determine additional positive or negative consequences for

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vulnerable resources and regions. This is particularly important for semi-arid countries with significant coastal or inland fisheries, as they are among the most vulnerable to climate change.

Develop tools for decision-making under uncertainty. Adaptive tools for the fisheries and aquaculture sectors will need to be refined, developed and implemented to guide decision-making under uncertainty and address important cross linkages among the relevant sectors. The uncertainties decision-makers will face include: i) the responses and adaptations of marine and freshwater production systems to gradual climate change, including critical thresholds and points of no return; ii) the synergistic interactions between climate change and other stressors such as water use, eutrophication, fishing, agriculture, alternative energy; and iii) the ability and resilience of aquatic production systems and related human communities to adapt and cope to multiple stresses.

Expand societal knowledge. Better knowledge will be required of who is or will be vulnerable with respect to climate change and food security impacts, how this arises and how it can be addressed. In this regard, gender and equity issues will need to be carefully considered.

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HLPE Inquiry

Critical and Emerging Issues for Food Security and Nutrition

Questionnaire

About the respondent

Name, Surname and Institution	FAO – Economic and Social Development Department (ESD)	
Do you answer on behalf of your institution, or as an individual?	<input checked="" type="checkbox"/> On behalf	<input type="checkbox"/> As individual
Do you agree if this contribution is made available to the public as part of the proceedings?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Country of the responding individual/institution Please mention international or regional, the case being	International	

1. Overview of the issue

Issue <i>in 2 lines</i>	Expanding policy space in WTO provisions for food security interventions to end hunger and poverty	
Description of the issue <i>in less than 5 lines</i>	WTO provisions on price support to agriculture and public stockholding for the purpose of food security are outdated. The Bali Agreement called for arriving at a permanent solution to be agreed to by member countries by 2017 at the latest.	
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>	<input checked="" type="checkbox"/> Challenge	<input type="checkbox"/>
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition <i>In less than 10 lines. Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.</i>	Review of WTO provisions and their impacts on food security	

Main response proposed to address the issue	Improve WTO provisions with the global goal of eradicating hunger, food insecurity, malnutrition and poverty
Main actor(s) concerned or involved in the response proposed	At the national level, government officials from Ministries concerned with the design and implementation of trade policy, especially linkages between agriculture and food security. At the international level, government officials involved in the negotiation of trade agreements and organizations providing evidence and platforms for dialogue on the implications of these agreements for trade policy as it affect the achievement of FSN objectives.

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For the public inquiry fields below are optional

2. Broad typology of the issue

(*)	<i>External driver</i>	<i>Internal to food systems</i>	<i>Both</i>
Is the issue either or both?			X

(*)	<i>Economic (and productive)</i>	<i>Social and Cultural</i>	<i>Governance (institutions, rights, etc.)</i>	<i>Environmental (resources, etc.)</i>	<i>Other (SPECIFY)</i>
Main nature of the issue	√		√		
Nature of the main impact of the issue on FSN	√		√		

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	<i>Classification (**)</i>		
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?	Critical and Systemic		
2. Breadth: Are there many people affected?	Many		
3. Scale: local/regional/global?	Local	Region	Global (affects, in particular, many developing countries and LDCs)
	<i>Indicate here the precise location</i>	<i>Indicate here the precise region</i>	

For items 4-11 below, please use the classification [— — , —, 0, +, ++]:

Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)

4. Impact on Availability	— to — —
5. Impact on Access	— —
6. Impact on Utilization/ nutrition	
7. Impact on Stability	— to — —
8. Impact on most vulnerable people	— —
9. Impact on women	— —
10. Impact on children	— to — —
11. Impact on marginalized populations	— —
12. Cost to address the issue	Economic costs are low; Difficult political issue.

(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

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4. Time Scale

<i>Timeframe (*)</i>	<i>Now/Short term (1-5 years)</i>	<i>Medium term (5-10 years)</i>	<i>Long term (10-20 years +)</i>
Moment when the issue will have an impact	√	√	√
Moment to act to address the issue	√		

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.		Middle	
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6. Additional Supporting Information

Additional information

Developed countries had very high support levels for agriculture when the Uruguay Round agreement was signed in 1994. Despite restrictions imposed under the agreement, most developed countries (including LDCs, throughout the document) have retained high levels of support for agriculture by shifting most of their subsidies to the unlimited 'Green Box' forms of support not restricted by the Agreement on Agriculture (AoA). On the other hand, because of various constraints faced by developing countries, the use of Green Box subsidies has been minimal, or has declined over time in most developing countries (with the notable exception of China). As a result, levels of support provided to agriculture by developed and developing countries have continued to be extremely unequal.

Provision of price support to smallholder producers and using public stocks for the purpose of price stabilization and food security programmes remain the most relevant policy interventions for many developing countries.

Global prices for food commodities have risen steeply, and have seen high levels of volatility, since the time the Uruguay Round was negotiated, especially in the new century. Given the way levels of support to agriculture are measured under the Agreement on Agriculture, the rise in world prices has meant that, for most developing countries and LDCs, almost any price support to smallholder producers or any public stockholding can result in a country breaching the WTO restrictions on the Aggregate Measure of Support. This has become a major barrier against countries providing support to smallholder producers and strengthening their food security programmes.

This was the most contentious issue in the Bali Ministerial of WTO in December 2013. The Ministerial ended with an agreement that provided interim relief with a roadmap for a permanent solution to be found within four years. Interim relief was only provided to countries that already had price support and stockholding programmes expected to result in exceeding the AMS limits (mainly, India), and imposed various restrictions on expansion of such programmes or initiation of new programmes. As part of the Bali agreement, member countries also committed to putting in place a work programme to find a permanent solution to the problem no later than 2017.

Evidence

A large amount of literature appeared in the context of the Bali ministerial. There is some new literature that evaluates the Bali package and discusses the post-Bali agenda. Some recent studies are provided in the references. The list does not cover a vast body of literature on the WTO and agriculture, on global food prices and food price policies, and on the impacts of trade policies on food security.

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Knowledge gaps

1. The coherence of WTO rules with country food security objectives is insufficiently documented. There is a need to examine disparities in levels of support provided to agriculture by developed and developing countries, and to take stock of proposals to reform different provisions in the Agreement on Agriculture to make them more equitable. This would require examining disparities in levels of support (AMS) allowed to different countries under AoA as well as the use of different provisions by some countries to retain high levels of support.

2. There is a need to document options for modifying the classification of different kinds of support under the Green, Blue and Amber boxes, taking into consideration their impact on food security.

3. There is a need to revisit specific provisions that restrict developing countries from providing support to smallholders and undertaking public stockholding for price stabilisation in the framework of national food security policies. These include, among others, use of the 1986-88 prices as the Reference Prices for calculation of AMS and use of total production, rather than actual quantity procured, for calculation of AMS.

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HLPE Inquiry

Critical and Emerging Issues for Food Security and Nutrition

Questionnaire

About the respondent

Name, Surname and Institution	FAO - Trade and Markets Division (EST)	
Do you answer on behalf of your institution, or as an individual?	<input checked="" type="checkbox"/> On behalf	
Do you agree if this contribution is made available to the public as part of the proceedings?	<input checked="" type="checkbox"/> Yes	
Country of the responding individual/institution Please mention international or regional, the case being	International	

1. Overview of the issue

Issue <i>in 2 lines</i>	Assessments of climate change impacts on global-scale agricultural productivity show negative impacts on food security and nutrition, especially for tropical regions with high incidence of hunger	
Description of the issue <i>in less than 5 lines</i>	Climate change impacts on global food production will be negative in the tropics compared to regions of higher latitudes, leading to worsening food insecurity and malnutrition in the absence of no response, resulting in increased food inequalities, from local to global levels and between rural and urban areas. Higher food prices and greater market volatility, constrained drinking water availability and higher disease incidences, are all limit poor people's food consumption.	
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>	<input checked="" type="checkbox"/> Challenge	<input type="checkbox"/>
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition <i>In less than 10 lines.</i> Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.	FAO organized an expert consultation in November 2013 on the theme: " Global food production under climate change and increased supply variability: Implications for trade policy and food security ". A large number of top world experts and modelers presented work on climate change impact assessments on crop productivity and discussed implications for food security and for trade. The contributions of the experts are being consolidated into a single book under preparation and due for release at the end of 2014. For more information on the two day expert consultation see the FAO web site: http://www.fao.org/economic/est/est-events-new/foodproduction/en/	

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

Main response proposed to address the issue	Provide a forum to share information and knowledge on climate change impact assessments on food systems at both country, regional and global levels. Create a formula for linking impact science with policy giving particular focus to food security, and nutrition and key response mechanisms such as trade policy and investment strategies.
Main actor(s) concerned or involved in the response proposed	Scientists and economists working on climate change impact assessments on food productivity and policy makers designing food security and nutrition strategies both at national and regional levels.

For the public inquiry fields below are optional

2. Broad typology of the issue

(*)	<i>External driver</i>	<i>Internal to food systems</i>	<i>Both</i>
Is the issue either or both?	Climate change is external driver		

(*)	<i>Economic (and productive)</i>	<i>Social and Cultural</i>	<i>Governance (institutions, rights, etc.)</i>	<i>Environmental (resources, etc.)</i>	<i>Other (SPECIFY)</i>
Main nature of the issue	Impact on productivity; changing comparative advantage; market and trade effects	Differentiated impact on vulnerable groups, small scale producers; rural-urban leading to migration; health impacts; rising inequality	Adaptation responses require policy and planning and participatory approaches to facilitate adoption of climate-smart practices; all of which require appropriate institutions and governance	Climate change operate directly through resources, including water, plant systems, animals	
Nature of the main impact of the issue on FSN	Through productivity change, price increase, greater market volatility; dramatic changes to trade flows	Decreased access to food by the poor; health impacts; migration;	Changes to access to resources by vulnerable groups can affect FSN	Reduced water availability can directly impact FSN	

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

		Classification (**)	
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?			Affect production and processing through the whole supply chain
2. Breadth: Are there many people affected?			Potentially large portion of world population affected, especially the poor in tropical areas, small scale producers in marginally productive areas; also women
3. Scale: local/regional/global?	Local <i>Low productive, marginal regions (that are dry or hot); rainfed if rainfall is diminishing</i>	Region <i>Tropical areas; dry areas (middle east North Africa);</i>	Climate change has global reach
For items 4-11 below, please use the classification [— — , — , 0, +, ++]: Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)			
4. Impact on Availability	Very negative (— —)		
5. Impact on Access	Negative (—) [not well studied yet]		
6. Impact on Utilization/ nutrition	Not well studied yet		
7. Impact on Stability	Negative (—); especially in tropical, or dry/hot areas		
8. Impact on most vulnerable people	Large number of people, mostly in poor rural areas; small scale producers in dry/hot, marginal productive regions;		
9. Impact on women	Negative (—) ; especially women agriculturalists in marginal/dry areas		
10. Impact on children	Negative (—) [not well studied yet]		
11. Impact on marginalized populations	Expected to be significant; more is needed to quantify the impacts		
12. Cost to address the issue		Middle: but the cost of no action is much higher than the cost of action	

(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

4. Time Scale

<i>Timeframe (*)</i>	<i>Now/Short term (1-5 years)</i>	<i>Medium term (5-10 years)</i>	<i>Long term (10-20 years +)</i>
Moment when the issue will have an impact		Medium term; though increased climate extreme events	But the effects will grow hugely in the long term (especially under no response scenario)
Moment to act to address the issue	NOW		

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.	Low	Middle	Despite uncertainty in modeling impact assessments, robust results are evident in terms of differentiated regional impacts of climate change
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6. Additional Supporting Information

Additional information

IMPLICATIONS OF CLIMATE CHANGE FOR FOOD SECURITY AND NUTRITION

The implications of climate change on food security and nutrition point to a sobering picture. The consequences of climate change for global under-nutrition and malnutrition are potentially large and increasing over time in the absence of no response. Climate change impacts on food security will be worse in countries already suffering high levels of hunger and will worsen over time. Many negative impacts on crops are projected in areas where current climate conditions are already marginal (hot or dry) for productive cultivation of crops; and technologies and farm management systems that could aid adaptation to negative climate change impacts are absent or under-utilised in many developing countries where direct climate impacts are thought to be greatest. Food inequalities will increase, from local to global levels, as climate change effects will differ from one part of the world to another and between rural and urban areas.

Climate-induced lower crop production will lead to **higher global agricultural prices and** likely increase in food market volatility from the production and supply side as well as from demand-side shocks (such as biofuel mandates and subsidies), all of which can limit poor people's food consumption. There is wide-spread agreement that climate variability and change will impact on water resources and clean drinking water availability. Uptake of micronutrients is likely to be negatively affected by increased diarrheal diseases that are strongly correlated to temperature. More generally, human health problems and damaged transport infrastructure are likely to exact higher costs than crop yield losses demonstrating the

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need for a *more comprehensive examination of climate change pathways* affecting agricultural supply and food security.

IMPLICATIONS FOR TRADE

Despite considerable uncertainties in climate scenarios and current assessments, it is clear that climate change will have significant impacts on agricultural trade. Given the robust result that climate change impacts to be less severe or even positive in temperate zones compared to tropical regions, economic measures and trade policies will have to be developed to ensure sufficient income in developing regions to participate in trade even under declining agricultural yields. Food systems in most countries are closely coupled with global trade in food and soft commodities. Thus, it is important to examine the impacts of climate change both at the local (country) level and the regional or global scale. With expected changes in the geography of agricultural production under climate change, the comparative advantage to produce certain products at regional and international levels will be altered generating new production patterns for food, feed, fuels and fibers. All of this will affect food trade flows, with implications for farm incomes, and access to food. ***Trade can serve as an adaptive mechanism*** as long as there is heterogeneity in climate impacts and countries do not respond to climate-crises with restrictive trade policies. At the same time, more trade can also exacerbate climate change if it leads to increased greenhouse gas emissions (say from higher deforestation) along the production chain. Appropriate trade policies must thus factor in the distinction between climate friendly (“green”) versus climate worsening (“grey”) trade.

Evidence

Knowledge gaps

This is a growing field with more efforts at quantifying the impacts of climate change on food systems under way; expect increased evidence, more sophisticated models; and nuanced information at the global regional and local levels

More work is needed on implications of climate change for the following dimensions of food security: access, utilization, stability. Much work has so far focused on the AVAILABILITY aspect of food security.

References

For more detailed discussion of the issues addressed here, refer to the FAO expert consultation mentioned above for consulting the expert presentations:

<http://www.fao.org/economic/est/est-events-new/foodproduction/en/>

A dedicated volume addressing this issue in detail is in preparation by FAO and due for release in 2014.

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.



HLPE Inquiry

Critical and Emerging Issues for Food Security and Nutrition

Questionnaire

About the respondent

Name, Surname and Institution	World Food Programme	
Dou you answer on behalf of your institution, or as an individual?	ON BEHALF	As individual
Do you agree if this contribution is made available to the public as part of the proceedings?	Yes	No
Country of the responding individual/institution Please mention international or regional, the case being		

1. Overview of the issue

Issue <i>in 2 lines</i>	1. Nutrition sensitive approaches across key sectors to maximize overall nutrition gains; 2. Ensuring nutrition resilience given changing patterns/new faces of large-scale humanitarian crisis/emergency operations		
Description of the issue <i>in less than 5 lines</i>	Identify nutrition sensitive approaches that contribute to a healthy and resilient state of nutrition focusing on young children and women.		
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>	Challenge	Opportunity	It depends (please specify)
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition <i>In less than 10 lines. Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.</i>	Group discussions among relevant units in WFP.		

Main response proposed to address the issue	<p>1. What are the key nutrition sensitive approaches across essential sectors- including but not limited to agriculture, social protection, education- to achieve significant improvement on nutrition status of mothers/children. Is there a consistency in the ways stakeholders are addressing? Is there or should there be more defined principles/framework and approaches and who are the relevant stakeholders including governments for doing so? What is the evidence of these approaches across sectors- and for specific approaches comparatively across sectors i.e more gains through nutrition sensitive</p>
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	<p>approaches in social protection vs other areas. What is the feasibility and cost-effectiveness of approaches (by sector?)</p> <p>2. In crises it is essential to build understanding that, despite low levels of Acute Global Malnutrition (GAM) nutrition prioritization is essential to prevent an increase of stunting. Understanding ways to balance sustainability and food and nutrition issues needs to be discussed-given unprecedented levels of donor support (and its impact to other operations given diversion of resources globally)</p>
Main actor(s) concerned or involved in the response proposed	Children/Women

For the public inquiry fields below are optional

2. Broad typology of the issue

(*)	<i>External driver</i>	<i>Internal to food systems</i>	<i>Both</i>
Is the issue either or both?			Briefly mention how this may be the case

(*)	<i>Economic (and productive)</i>	<i>Social and Cultural</i>	<i>Governance (institutions, rights, etc.)</i>	<i>Environmental (resources, etc.)</i>	<i>Other (SPECIFY)</i>
Main nature of the issue					
Nature of the main impact of the issue on FSN					

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	Classification (**)		
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?	Critical point	Systemic issue	
2. Breadth: Are there many people affected?	Few	Many	
3. Scale: local/regional/global?	Local	Region	
	<i>Indicate here the precise location</i>	<i>Indicate here the precise region</i>	Global

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

For items 4-11 below, please use the classification [— — , —, 0, +, ++]:
 Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)

4. Impact on Availability				
5. Impact on Access				
6. Impact on Utilization/ nutrition				
7. Impact on Stability				
8. Impact on most vulnerable people	Specify as appropriate			
9. Impact on women				
10. Impact on children				
11. Impact on marginalized populations	Specify as appropriate			
12. Cost to address the issue	<table border="1"> <tr> <td>Low</td> <td>Middle</td> <td>High</td> </tr> </table>	Low	Middle	High
Low	Middle	High		

(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

4. Time Scale

<i>Timeframe (*)</i>	<i>Now/Short term (1-5 years)</i>	<i>Medium term (5-10 years)</i>	<i>Long term (10-20 years +)</i>
Moment when the issue will have an impact			
Moment to act to address the issue			

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.	Low	Middle	High
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6. Additional Supporting Information

<i>Additional information</i>
<i>Evidence</i>
<i>Knowledge gaps</i>
<i>References</i>

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.



HLPE Inquiry

Critical and Emerging Issues for Food Security and Nutrition

Questionnaire

About the respondent

Name, Surname and Institution	International Centre for Tropical Agriculture (CIAT)	
Dou you answer on behalf of your institution, or as an individual?	On behalf	
Do you agree if this contribution is made available to the public as part of the proceedings?	Yes	
Country of the responding individual/institution Please mention international or regional, the case being	International Organization	

1. Overview of the issue

Issue <i>in 2 lines</i>			
Description of the issue <i>in less than 5 lines</i>	Issues range from production to consumption side. Production and productivity of nutrient rich crops like legumes need to increase. A better understanding of market to consumer linkages (complementing farm to market links) and how it works is increasingly critical with rapid urbanization where market to consumer linkages influence diets of many urban and rural poor.		
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>	✓	✓	There are opportunities like production of more nutrient dense food and improving its productivity and value addition.
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition <i>In less than 10 lines.</i> Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.	Expert consultation with CIAT scientists		

Main response proposed to address the issue	<p>Breeding to increase productivity of nutrient –dense crops like Common Bean.</p> <p>Promote a food basket approach to improve diet diversity</p> <p>Better understanding of market to consumer linkages and value addition</p>
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Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

Main actor(s) concerned or involved in the response proposed	Scientists

For the public inquiry fields below are optional

2. Broad typology of the issue

(*)	<i>External driver</i>	<i>Internal to food systems</i>	<i>Both</i>
Is the issue either or both?	Climate change, policies, international markets, infrastructure	Crop breeding	Some of internal and some external

(*)	<i>Economic (and productive)</i>	<i>Social and Cultural</i>	<i>Governance (institutions, rights, etc.)</i>	<i>Environmental (resources, etc.)</i>	<i>Other (SPECIFY)</i>
Main nature of the issue	All				
Nature of the main impact of the issue on FSN					

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	<i>Classification (**)</i>		
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?		Systemic issue	
2. Breadth: Are there many people affected?		Many	
3. Scale: local/regional/global? Issues are global, but certainly with regional specificity. For example, Central America, Sub Saharan Africa and South and South East Asia face many pressing issues in food security and nutrition	Local <i>Indicate here the precise location</i>	Region <i>Indicate here the precise region</i>	Global

For items 4-11 below, please use the classification [— — , — , 0, +, ++]:

Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

4. Impact on Availability	++		
5. Impact on Access	++		
6. Impact on Utilization/ nutrition	+		
7. Impact on Stability	++		
8. Impact on most vulnerable people	++ (Urban and rural poor)		
9. Impact on women	++		
10. Impact on children	++		
11. Impact on marginalized populations	+		
12. Cost to address the issue		Middle	

(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

4. Time Scale

<i>Timeframe (*)</i>	<i>Now/Short term (1-5 years)</i>	<i>Medium term (5-10 years)</i>	<i>Long term (10-20 years +)</i>
Moment when the issue will have an impact	Production & distribution	Nutrition	Crop Breeding
Moment to act to address the issue	Now		

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.		Middle	
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6. Additional Supporting Information

<i>Additional information</i>
<i>Evidence</i>

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

Knowledge gaps

Food consumption pattern and diet diversity, demand elasticity, traditional distribution system for urban and rural poor

References

- Pan African Bean Research Alliance <http://www.pabra-africa.org/>
- Agrosalud <http://www.agrosalud.org/>
- Harvest Plus <http://www.harvestplus.org/>



HLPE Inquiry

Critical and Emerging Issues for Food Security and Nutrition

Questionnaire

About the respondent

Name, Surname and Institution	Albino Maggio, Tine Van Crieckinge, Vincent Viaud, EC Joint Research Center (I.01)	
Dou you answer on behalf of your institution, or as an individual?		As individual
Do you agree if this contribution is made available to the public as part of the proceedings?	Yes	
Country of the responding individual/institution Please mention international or regional, the case being		

1. Overview of the issue

Issue <i>in 2 lines</i>	Increasing urban food insecurity underestimated and insufficiently analysed		
Description of the issue <i>in less than 5 lines</i>	Most efforts to enhance food security issues in developing countries have focused almost exclusively on agricultural smallholders and rural development. However, with the on-going trend of urbanisation, food security becomes increasingly an urban challenge for which solutions need to be adapted. Urbanisation is also an opportunity to enhance global food security if it triggers economic growth led by non-agricultural sectors and if rural-urban linkages along the food chain are well analysed and implemented. The issues of urban and periurban agriculture, market infrastructures, agritrade, the rise of supermarkets and the new economic opportunities in non-agricultural sectors in rural areas need to be more deeply integrated in the global food security agenda.		
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>	Challenge	Opportunity	It depends (please specify)
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition <i>In less than 10 lines. Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.</i>	JRC Foresight on Global Food security using expert workshops in combination with explorative narratives and policy analysis.		

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

Main response proposed to address the issue	Increased attention of international organizations, public-private partnerships and all stakeholders vs. alternative development schemes that capitalize on local resources, development pathways and social sustainability as a way to improve resilience.
Main actor(s) concerned or involved in the response proposed	Main international and developed countries organisations (EC, FAO, OECD, IFPRI, USDA, CGIAR, etc.), academic networks active in system analysis of developmental patterns in developing countries, farmer organizations.

For the public inquiry fields below are optional

2. Broad typology of the issue

(*)	<i>External driver</i>	<i>Internal to food systems</i>	<i>Both</i>
Is the issue either or both?			External is the urbanization trend; internal is the adjustment of supply/demand to a changing social environment

(*)	<i>Economic (and productive)</i>	<i>Social and Cultural</i>	<i>Governance (institutions, rights, etc.)</i>	<i>Environmental (resources, etc.)</i>	<i>Other (SPECIFY)</i>
Main nature of the issue	x	x	x	x	
Nature of the main impact of the issue on FSN	x	x		x	

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	<i>Classification (**)</i>		
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?		The goal should be to generate a sustainable balance between supply/demand/resource use/social satisfaction and stability	
2. Breadth: Are there many people affected?	Few	Many	
3. Scale: local/regional/global?	Local	Region	Global

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

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For items 4-11 below, please use the classification [— — , —, 0, +, ++]:

Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)

4. Impact on Availability	Increase (if associated with technology transfer and infrastructure development)
5. Impact on Access	Increase
6. Impact on Utilization/ nutrition	Increase
7. Impact on Stability	Increase
8. Impact on most vulnerable people	Specify as appropriate
9. Impact on women	Increase
10. Impact on children	Increase
11. Impact on marginalized populations	Increase Specify as appropriate
12. Cost to address the issue	Middle

(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

4. Time Scale

<i>Timeframe (*)</i>	<i>Now/Short term (1-5 years)</i>	<i>Medium term (5-10 years)</i>	<i>Long term (10-20 years +)</i>
Moment when the issue will have an impact			
Moment to act to address the issue			

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.	Low	Middle	High
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6. Additional Supporting Information

<i>Additional information</i>
<i>Evidence</i>
<i>Knowledge gaps</i>
<i>References</i> Report in progress



HLPE Inquiry

Critical and Emerging Issues for Food Security and Nutrition

Questionnaire

About the respondent

Name, Surname and Institution	Neil Hubbard, EC Joint Research Center	
Dou you answer on behalf of your institution, or as an individual?	On behalf	As individual
Do you agree if this contribution is made available to the public as part of the proceedings?	Yes	
Country of the responding individual/institution Please mention international or regional, the case being	Italy	

1. Overview of the issue

Issue <i>in 2 lines</i>	Climate change impact on food security in dryland areas.	
Description of the issue <i>in less than 5 lines</i>	Drylands cover 41.3% of the earth's land surface, including 15% of Latin America, 66% of Africa, 40% of Asia and 24% of Europe. Dryland farming is uniquely dependent on rainfall, highly exposed to erosion and soil nutrient depletion. The dryland regions are already today the most affected by food insecurity and nutrition problems. The climate change scenarios indicate the extension of drylands and more variability on rainfall amount and timing. The challenge is to adapt the farming system to the possible future climate.	
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>	Challenge	
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition <i>In less than 10 lines.</i> Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.	The issue is debated in academic fora but it's often left out in global food security policy debates. The International Centre for Agricultural Research in Dry Areas (ICARDA) remained focused on the Middle East environment and on a few research areas. The FAO report on Water and Cereals in Drylands (http://www.fao.org/docrep/012/i0372e/i0372e.pdf) provides good reference for cereals.	
Main response proposed to address the issue	Invest in research to solve the key elements: drought tolerant varieties, soil conservation, water and moisture management, livestock feeding.	

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

Main actor(s) concerned or involved in the response proposed	National governments, Research institutions (Universities, CGIAR, etc.), UN agencies and large private corporations active in agribusiness.
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For the public inquiry fields below are optional

2. Broad typology of the issue

(*)	<i>External driver</i>	<i>Internal to food systems</i>	<i>Both</i>
Is the issue either or both?	External as far as the climate is concerned	Internal because the current food system doesn't address correctly the issue and there're feedback effects.	Briefly mention how this may be the case

(*)	<i>Economic (and productive)</i>	<i>Social and Cultural</i>	<i>Governance (institutions, rights, etc.)</i>	<i>Environmental (resources, etc.)</i>	<i>Other (SPECIFY)</i>
Main nature of the issue	Yes			Yes	
Nature of the main impact of the issue on FSN	Yes	Yes		Yes	

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	<i>Classification (**)</i>		
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?	Critical point		
2. Breadth: Are there many people affected?			Many
3. Scale: local/regional/global?			Global

For items 4-11 below, please use the classification [— — , — , 0, +, ++]:

Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)

4. Impact on Availability	--
5. Impact on Access	--
6. Impact on Utilization/ nutrition	-
7. Impact on Stability	--
8. Impact on most vulnerable people	--
9. Impact on women	0

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

10. Impact on children	--		
11. Impact on marginalized populations	0		
12. Cost to address the issue		Middle	

(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

4. Time Scale

<i>Timeframe (*)</i>	<i>Now/Short term (1-5 years)</i>	<i>Medium term (5-10 years)</i>	<i>Long term (10-20 years +)</i>
Moment when the issue will have an impact	Yes	Yes	Yes
Moment to act to address the issue	Yes		

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.		Middle	
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6. Additional Supporting Information

<i>Additional information</i>
<i>Evidence</i>
<i>Knowledge gaps</i>
<i>References</i>



HLPE Inquiry

Critical and Emerging Issues for Food Security and Nutrition Questionnaire

About the respondent

Name, Surname and Institution	Felix Rembold, EC Joint Research Center	
Dou you answer on behalf of your institution, or as an individual?		As individual
Do you agree if this contribution is made available to the public as part of the proceedings?	Yes	
Country of the responding individual/institution Please mention international or regional, the case being	International, respondent based in Nairobi from mid 2011 to 2014	

1. Overview of the issue

Issue <i>in 2 lines</i>	Food security data assessment and analysis quality often considered as second priority as compared to bigger picture analysis.	
Description of the issue <i>in less than 5 lines</i>	Food security analysis has improved enormously in the last 5-6 years thanks to the introduction as standardized classification methods such as the IPC, improved policy framework, introduction of new indicators such as resilience, scenario analysis etc... However, data quality of assessment data, estimates of concerned population and availability of quantitative data for many food security indicators has not improved significantly.	
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>	Challenge	
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition <i>In less than 10 lines.</i> Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.	The issue is the result of participation and involvement in numerous national and regional assessments, IPC analysis and specific literature. Following the 2010-2011 food security crisis in Eastern Africa there was a general consensus that while early warning information was timely and reliable it was not followed by action and response. This statement is generally true and correctly channeled the necessary attention towards better emergency response planning (eg. no regrets, surge model etc.), but unfortunately has the side effect of hiding the fact that for situation analysis and early warning data quality is still low, seasonal forecasts are often used in a wrong way and reference data are most of the time not up to date. This data insufficiency affects also monitoring and evaluation of food security projects.	

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

Main response proposed to address the issue	More attention and resources should be dedicated to data quality aspects and methodological improvement of assessments. The recent increase in the use of VHR data for project impact monitoring, but also innovative techniques like crowd sourcing, use of voucher systems for data collection, strengthening of agricultural extension services and a higher level of attention towards the changes in livelihoods and towards competition for natural resources related problems are responses pointing in this direction.
Main actor(s) concerned or involved in the response proposed	Research organizations, FAO, WFP, major NGOs, regional food security fora

For the public inquiry fields below are optional

2. Broad typology of the issue

(*)	<i>External driver</i>	<i>Internal to food systems</i>	<i>Both</i>
Is the issue either or both?			Linked to the complexity of getting high quality food security information and little resources available for data collection and information systems

(*)	<i>Economic (and productive)</i>	<i>Social and Cultural</i>	<i>Governance (institutions, rights, etc.)</i>	<i>Environmental (resources, etc.)</i>	<i>Other (SPECIFY)</i>
Main nature of the issue			X		
Nature of the main impact of the issue on FSN	Bad quality information, low efficiency of food security related projects		Information not timely, late response to emergencies, inefficient planning of development projects	Little quantitative information available about environmental problems (eg. Charcoal, invasive species, land degradation etc..)	

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	<i>Classification (**)</i>	
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?	Critical point	
2. Breadth: Are there many people affected?		Many

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

3. Scale: local/regional/global?	Local	Region	Global
	<i>Indicate here the precise location</i>	<i>Most food insecure countries in Africa</i>	
<p>For items 4-11 below, please use the classification [— — , —, 0, +, ++]: Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)</p>			
4. Impact on Availability	--		
5. Impact on Access	--		
6. Impact on Utilization/ nutrition	-		
7. Impact on Stability	-		
8. Impact on most vulnerable people	Specify as appropriate		
9. Impact on women			
10. Impact on children			
11. Impact on marginalized populations	- -, problems of exact geographical and socio – economic definition as proven by the use of vague definitions such as for example PERI-URBAN		
12. Cost to address the issue	Low	Middle	High

(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

4. Time Scale

<i>Timeframe (*)</i>	<i>Now/Short term (1-5 years)</i>	<i>Medium term (5-10 years)</i>	<i>Long term (10-20 years +)</i>
Moment when the issue will have an impact	continuous		
Moment to act to address the issue	asap		

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.	Low	Middle	High
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6. Additional Supporting Information

<p><i>Additional information</i></p> <ul style="list-style-type: none"> - Mostly discussions during IPC analysis. - Papers addressing the causes of the 2010-2011 famine in Somalia. - Qualitative nature of most regional and national food security bulletins in food insecure countries. Uncertainties linked to quantification of concerned population, food security and nutrition indicators. - data collection and information systems often considered expensive and not really efficient
<p><i>Evidence</i></p> <ul style="list-style-type: none"> - IPC analysis reports sections on analysis confidence levels and data reliability scores - wrong use of seasonal climate forecasts in many food security bulletins as one of the main driver for planning interventions
<p><i>Knowledge gaps</i></p> <ul style="list-style-type: none"> - improved methods for rapid data collection - quick and possibly low cost access to very high resolution satellite data - low number of studies about natural resources degradation in food insecure countries like use of charcoal, invasive species, consequences of overgrazing, management of conflict based resources, climate change impact on livelihoods etc...

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

References

- Mentioned by a number of contributions to Global Food Security, Volume 1, Issue 1, December 2012, ISSN 2211-9124
- Partially addressed in the SHARE document by section 5 about the need for research



HLPE Inquiry

Critical and Emerging Issues for Food Security and Nutrition Questionnaire

About the respondent

Name, Surname and Institution	EC Joint Research Center (H07)	
Dou you answer on behalf of your institution, or as an individual?	On behalf	As individual
Do you agree if this contribution is made available to the public as part of the proceedings?	Yes	No
Country of the responding individual/institution Please mention international or regional, the case being		

1. Overview of the issue

Issue <i>in 2 lines</i>	Assessment of the role of climate information in local food prices formation (in West Africa)		
Description of the issue <i>in less than 5 lines</i>	Climatic information (rainfall, temperature) is an important element of expectation formation on certain local food markets. The relation between the prices formation and climatic conditions information (and forecasts) is still under-analyzed and assed in developing countries, whereas the rainfed production of non-international tradable goods (millet) position this information as key element of expectations formation.		
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>	Challenge	Opportunity	It depends
	The comprehension of the mechanism of price formation would be a good opportunity to better understand one aspect of food security but may also rise some challenges (on markets failures: information diffusion,...)		
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition <i>In less than 10 lines.</i> Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.	Needs to identify the key-information and it's used in the economics agents expectations. This study can be done by interview, or general surveys. It would permit to define the information used by the actors and the needs of other information, their availabilities and way to broadcast it.		

Main response proposed to address the issue	Research studies
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Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

Main actor(s) concerned or involved in the response proposed	SIMA (Prices information system) National Meteorological Systems Early Warning Systems Researchers
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For the public inquiry fields below are optional

2. Broad typology of the issue

(*)	External driver	Internal to food systems	Both
Is the issue either or both?		X	Briefly mention how this may be the case

(*)	Economic (and productive)	Social and Cultural	Governance (institutions, rights, etc.)	Environmental (Resources, etc.)	Other (SPECIFY)
Main nature of the issue	X				
Nature of the main impact of the issue on FSN	X				

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	Classification (**)		
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?	Critical point	Systemic issue	
2. Breadth: Are there many people affected?	Few	Many	
3. Scale: local/regional/global?	Local	Region	Global
	<i>Indicate here the precise location</i>	West Africa	

For items 4-11 below, please use the classification [— — , —, 0, +, ++]:

Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)

4. Impact on Availability	0
5. Impact on Access	++
6. Impact on Utilization/ nutrition	0
7. Impact on Stability	++
8. Impact on most vulnerable people	Rural populations
9. Impact on women	0
10. Impact on children	0
11. Impact on marginalized populations	Remote areas, non-integrated markets
12. Cost to address the issue	Low Middle High

(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data and sources can be provided in section 6 below.

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

4. Time Scale

<i>Timeframe (*)</i>	<i>Now/Short term (1-5 years)</i>	<i>Medium term (5-10 years)</i>	<i>Long term (10-20 years +)</i>
Moment when the issue will have an impact	X		
Moment to act to address the issue	X		

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.	Low	Middle	High
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6. Additional Supporting Information

<i>Additional information</i>
<i>Evidence</i>
<i>Knowledge gaps</i>
<i>References</i> Roll, R., 1984 'Orange juice and weather', <i>American Economic Review</i> ,74(5) WMO, Economic Framework for the provisions of meteorological services, AGR, Appendix C Osborne T, 2004, "Market News in Commodity Price Theory: Application to the Ethiopian Grain Market", <i>Review of Economics Studies</i> , 71



HLPE Inquiry

Critical and Emerging Issues for Food Security and Nutrition

Questionnaire

About the respondent

Name, Surname and Institution	Sergio Gomez y Paloma, EC Joint Research Center	
Dou you answer on behalf of your institution, or as an individual?	On behalf	As individual
Do you agree if this contribution is made available to the public as part of the proceedings?	Yes	No
Country of the responding individual/institution Please mention international or regional, the case being	Spain/Belgium	

1. Overview of the issue

Issue <i>in 2 lines</i>	Limited micro/local level analysis of the Food Security and Nutrition issues		
Description of the issue <i>in less than 5 lines</i>	The impact of national and regional policies in agriculture at the micro/local levels (incl. food and nutrition security) is barely analyzed, which is in particularly important for the developing countries e.g. Sub-Saharan Africa		
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>	Challenge	Opportunity	Both
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition <i>In less than 10 lines.</i> Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.	Quantitative/Modelling analysis based on existing statistics/ fed by ad hoc surveys. Analysis of literature, expert opinions. Example of analysis: A farm household model for agri-food policy analysis in developing countries: application to smallholder farmers in Sierra Leone, 2014, <i>Food Policy</i> , http://www.sciencedirect.com/science/article/pii/S0306919213001607 ;		
Main response proposed to address the issue	The effective design and implementation of the food security sector policy, and by extension, the achievement of poverty reduction (particularly rural poverty) require the availability of an adequate food security information system to be joined to a well-established policy and economic analysis mechanisms		
Main actor(s) concerned or involved in the response proposed	European Commission DG DEVCO, Joint Research Centre (JRC), EU Delegations in Sub-Saharan Africa, World Bank, FAO, Statistical Offices of Sub-Saharan Countries		

Replies to the questionnaire are expected by **15 March 2014** by e-mail at cfs-hlpe@fao.org.

For the public inquiry fields below are optional

2. Broad typology of the issue

(*)	<i>External driver</i>	<i>Internal to food systems</i>	<i>Both</i>
Is the issue either or both?			X

(*)	<i>Economic (and productive)</i>	<i>Social and Cultural</i>	<i>Governance (institutions, rights, etc.)</i>	<i>Environmental (resources, etc.)</i>	<i>Other (SPECIFY)</i>
Main nature of the issue	X	X	X	X	
Nature of the main impact of the issue on FSN	X	X	X	X	

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	<i>Classification (**)</i>		
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?	Critical point	Systemic issue	
2. Breadth: Are there many people affected?	Few	Many	
3. Scale: local/regional/global?	Local	Region	Global
	<i>Selected areas in Developing Countries and in High Income Countries</i>	<i>Developing Countries and selected regions in High Income Countries</i>	

For items 4-11 below, please use the classification [— — , — , 0 , + , ++]:

Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)

4. Impact on Availability	— — , — ,
5. Impact on Access	— — , — ,
6. Impact on Utilization/ nutrition	— — , — ,
7. Impact on Stability	— — , — ,
8. Impact on most vulnerable people	— — , — ,
9. Impact on women	— — , — ,
10. Impact on children	— — , — ,
11. Impact on marginalized populations	— — , — Specify as appropriate
12. Cost to address the issue	Low Middle High

(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

Replies to the questionnaire are expected by **15 March 2014** by e-mail at cfs-hlpe@fao.org.

4. Time Scale

<i>Timeframe (*)</i>	<i>Now/Short term (1-5 years)</i>	<i>Medium term (5-10 years)</i>	<i>Long term (10-20 years +)</i>
Moment when the issue will have an impact	X	X	X
Moment to act to address the issue	X	X	X

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.	Low	Middle	High
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6. Additional Supporting Information

Additional information

European Commission (2010): *Communication from the Commission to the Council and the European Parliament. An EU policy framework to assist developing countries in addressing food security challenges.* SEC(2010)379, COM (2010)127 final, 31.3.2010, Brussels. Available from: http://ec.europa.eu/development/icenter/repository/COMM_PDF_COM_2010_0127_EN.PDF

Project entitled “*Technical and scientific support to agriculture and food and nutrition security sectors (TS4FNS)*” carried by DG DEVCO through Institute for Prospective Technological Studies (IPTS) and Institute for Environment and Sustainability (IES) of the Joint Research Centre of the European Commission. The purpose of this Project is to provide support for: i) improvement of information systems on agriculture, nutrition and food security, ii) policy and economic analysis to support policy decision-making process and iii) scientific advice on selected topics concerning sustainable agriculture and food and nutrition security.

Evidence

The Millennium Development Goals Report 2013, United Nations,
<http://www.un.org/millenniumgoals/pdf/report-2013/mdg-report-2013-english.pdf>

Smallholders, food security and the environment, IFAD, UNEP Report, 2013,
http://www.unep.org/pdf/SmallholderReport_WEB.pdf

Why did the United Nations choose 2014 as the Year of Family Farming?
http://www.ecdpm.org/Web_ECDPM/Web/Content/Navigation.nsf/index2?readform&http://www.ecdpm.org/Web_ECDPM/Web/Content/Content.nsf/0/0297CC878C49F09DC1257C3D0048407A?Opendocument

Knowledge gaps

The impact of national and regional policies in the sectors of agriculture, food and nutrition security, are barely analysed, non-availability of adequate food security information system and well-established policy and economic analysis mechanisms.

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

References

Some of JRC publications:

A farm household model for agri-food policy analysis in developing countries: application to smallholder farmers in Sierra Leone, 2014, Food Policy;

<http://www.sciencedirect.com/science/article/pii/S0306919213001607>

Rural poverty reduction and food security: The case of smallholders in Sierra Leone, 2012, JRC Scientific and Policy Reports (EUR 25264) <http://ipts.jrc.ec.europa.eu/publications/pub.cfm?id=5220>

Modelling Agri-Food Policy Impact at Farm-household Level in Developing Countries (FSSIM-Dev). Application to Sierra Leone, JRC Scientific and Policy Reports, EUR 25962 EN. <http://ftp.jrc.es/EURdoc/JRC80707.pdf>



HLPE Inquiry

Critical and Emerging Issues for Food Security and Nutrition

Questionnaire

About the respondent

Name, Surname and Institution	Delincé Jacques, Ferrari Emanuele, M'Barek Robert, Santini Fabien, EC Joint Research Center	
Dou you answer on behalf of your institution, or as an individual?	On behalf	
Do you agree if this contribution is made available to the public as part of the proceedings?	Yes	
Country of the responding individual/institution Please mention international or regional, the case being	European Commission (Joint Research Centre – IPTS Seville, Spain)	

1. Overview of the issue

Issue <i>in 2 lines</i>	Medium term (5-10 years) Agricultural Commodities Markets Outlook in the Developing Countries	
Description of the issue <i>in less than 5 lines</i>	Agricultural and food security policies cannot be well assessed (ex ante, ex post) in absence of reliable data on the economic sectors concerned and a modeling framework for medium term projections of agricultural markets specific to developing countries.	
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>	Challenge	
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition <i>In less than 10 lines. Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.</i>	<p>Agricultural statistics for developing countries, particularly in Africa and areas where food security is not ensured, is not satisfactory (The World Bank, 2011). This impedes, despite several initiatives, the development and maintenance of a common modeling framework to project the developments of agricultural markets (in complement to the global frameworks) and serve as a benchmark in the ex ante assessment of policy options discussed.</p> <p>This is consequently not allowing us to properly guide policy- makers in the design of efficient and effective policies (national policies and donors developing policies) and stakeholders in their decisions. It therefore might impair the achievement of food security policies objectives.</p>	

Main response proposed to address the issue	<ul style="list-style-type: none"> - Keep on improving the coverage, the disaggregation and the quality of agricultural and food security statistics in developing countries (e.g. global strategy on agricultural statistics) - Develop a specific modeling network in developing countries (in particular Africa) aiming at producing periodical projections for the main agricultural commodities
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Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

	<p>markets (eg African Agricultural Outlook) in order to complement to the global exercises (principally OECD-FAO Agricultural Outlook), based on bottom-up contributions</p> <ul style="list-style-type: none"> - Contribute to the development of local capacities in agricultural economic modeling, the constitution of networks of expertise and their integration in the various global modeling communities. Private actors should be associated to the development of these capacities.
Main actor(s) concerned or involved in the response proposed	<p>Main international and developed countries organisations involved in agricultural economic modeling (EC, FAO, OECD, IFPRI, USDA, FAPRI, ...) or in development of agricultural statistics (eg in Africa, FAO, AfDB, UNECA, AU, etc.)</p> <p>Academic networks active in economic modeling in developing countries such as RENAPRI (BFAP), Agrodep, Wascal, etc.</p>

For the public inquiry fields below are optional

2. Broad typology of the issue

(*)	<i>External driver</i>	<i>Internal to food systems</i>	<i>Both</i>
Is the issue either or both?			External in the sense that organized by public actors (governments and international organizations universities, research institutes), but internal in the sense stakeholders (producers, traders, processors, household) need to support data collection

(*)	<i>Economic (and productive)</i>	<i>Social and Cultural</i>	<i>Governance (institutions, rights, etc.)</i>	<i>Environmental (resources, etc.)</i>	<i>Other (SPECIFY)</i>
Main nature of the issue	X		X		
Nature of the main impact of the issue on FSN	X	X	X principally (but this means the impact will spread to all other types of impacts through better policies)	X	

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

3. Attributes of the Issue

	Classification (**)		
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?		Systemic issue	
2. Breadth: Are there many people affected?		Many	
3. Scale: local/regional/global?			Global

For items 4-11 below, please use the classification [— — , —, 0, +, ++]:

Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)

4. Impact on Availability	-		
5. Impact on Access	--		
6. Impact on Utilization/ nutrition	-		
7. Impact on Stability	--		
8. Impact on most vulnerable people	0		
9. Impact on women	0		
10. Impact on children	0		
11. Impact on marginalized populations	0		
12. Cost to address the issue	Low for modeling	Middle for agricultural statistics improvement	

(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

4. Time Scale

<i>Timeframe (*)</i>	<i>Now/Short term (1-5 years)</i>	<i>Medium term (5-10 years)</i>	<i>Long term (10-20 years +)</i>
Moment when the issue will have an impact	X	X	X
Moment to act to address the issue	X	X	X

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.			High
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6. Additional Supporting Information

Additional information

Project entitled “*Technical and scientific support to agriculture and food and nutrition security sectors (TS4FNS)*” carried by DG DEVCO through Institute for Prospective Technological Studies (IPTS) and Institute for Environment and Sustainability (IES) of the Joint Research Centre of the European Commission. The purpose of this Project is to provide support for: i) improvement of information systems on agriculture, nutrition and food security, ii) policy and economic analysis to support policy decision-making process and iii) scientific advice on selected topics concerning sustainable agriculture and food and nutrition security.

Evidence

The poor state and degradation of statistical information on agriculture in developing countries and in particular in Sub-Saharan Africa has been acknowledged by several international organisations (eg The World Bank, 2011; AfDB, 2011): “the importance of the agricultural sector demands that its planning, management, and monitoring be based on sound evidence. This, in turn, requires the sustained availability of comprehensive, reliable, up-to-date, and consistent statistical data. In addition, these data need to be in a form that renders them intelligible and practicable for a variety of users. Unfortunately, agricultural statistical systems and data are in a sorry state in many African countries – the systems are weak, uncoordinated, insufficiently resourced, and essentially unsustainable” (AfDB, 2011).

In these conditions, attempts to assess the impact of policies (even more so for different alternative policy options) at regional, national, but also at local & household level (see separate questionnaire) are difficult and mostly have to rely on case study approaches. For example, during the assessment of the impact of the EU CAP on developing countries, both the lack of data and the difficulties to link global models results to concrete issues in developing countries was acknowledged (EC, 2012). International trade and regional integration are seen as factors to increase availability of food (EC, 2010), but there (is) a gap in providing adequate, timely and evidence based policy options to national governments and private sector (Tostao, 2013).

Replies to the questionnaire are expected by **15 March 2014** by e-mail at cfs-hlpe@fao.org.

Knowledge gaps

Statistical gaps: reliability over time of national agricultural data, absence of regional/local disaggregation of national data, insufficient and not regular household consumption per type of household, absence of input-output tables and SAMs regularly updated

Economic modeling gaps: Disaggregation of agriculture in global CGE models insufficient, PE models coverage not sufficiently developed in developing countries, difficulties to link all economic models available between them for developing countries and to link them with biophysical models

Governance gap: need to support and develop existing networks of expertise (researchers, NGOs, private sector) in developing countries

References

AfDB, AU, ECA, FAO, 2011, Improving Statistics for Food Security, Sustainable Agriculture, and Rural Development An Action Plan for Africa 2011-2015
<http://www.fao.org/docrep/016/am084e/am084e.pdf>

EC, 2010: *Communication from the Commission to the Council and the European Parliament. An EU policy framework to assist developing countries in addressing food security challenges*. SEC(2010)379, COM (2010)127 final, 31.3.2010, Brussels. Available from:
http://ec.europa.eu/development/icenter/repository/COMM_PDF_COM_2010_0127_EN.PDF

EC, 2012 - CAP towards 2020 impact assessment Annex 12 - The Common Agricultural Policy and Development
http://ec.europa.eu/agriculture/policy-perspectives/impact-assessment/cap-towards-2020/report/annex12_en.pdf

OECD, FAO, 2013, OECD - FAO Agricultural Outlook 2013-2022
<http://www.oecd.org/site/oecd-faoagriculturaloutlook/>

Tostão E., 2013, Regional Network of Agricultural Policy Research Institutes (ReNAPRI), presentation at the 4th AAAE CONFERENCE, Hammamet, Tunisia
http://fsg.afre.msu.edu/gisaia/ReNAPRI_Presentation_%20Hammamet_Tunisia_TOSTAO_v2.pdf

The World Bank, FAO, UN, 2011 - GLOBAL STRATEGY TO IMPROVE AGRICULTURAL AND RURAL STATISTICS
<http://www.fao.org/docrep/015/am082e/am082e00.pdf>



HLPE Inquiry

Critical and Emerging Issues for Food Security and Nutrition

Questionnaire

About the respondent

Name, Surname and Institution	Sandra Caldeira, Jan Wollgast, Anne-Katrin Bock European Commission Joint Research Centre	
Dou you answer on behalf of your institution, or as an individual?	On behalf	As individual
Do you agree if this contribution is made available to the public as part of the proceedings?	Yes	No
Country of the responding individual/institution Please mention international or regional, the case being		

1. Overview of the issue

Issue <i>in 2 lines</i>	GLOBAL FOOD CONSUMPTION PATTERNS		
Description of the issue <i>in less than 5 lines</i>	The current food consumption patterns, with a large share of animal-based products affect food security. Several studies suggest that sustainably feeding a world population of 9 billion in 2050 will be impossible without significant changes in animal production and consumption.		
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>	Challenge	Opportunity	It depends (please specify)
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition <i>In less than 10 lines. Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.</i>	Livestock is a significant contributor to the serious environmental problems we face today ¹ . Animal livestock production has been estimated to be responsible for 9% - 18% of the overall anthropogenic greenhouse-gas emissions ² . Furthermore, animal production systems have a negative energy balance, and need intensive energy input while returning a disproportionately low output in calories ³ . 33% of the global arable land (ca. 30% of the Earth's entire land surface) is devoted to producing feed for livestock, while 39.8% of the EU's total agricultural input costs are associated with animal production ⁴ .		

¹ FAO (2006) Livestock Long Shadow

² European Commission, Joint Research Centre (2010): Evaluation of the livestock sector's contribution to the EU greenhouse gas emissions (GGELS) – final report

³ Kastner *et al.* (2012) *Proc Natl Acad Sci USA* (early edition)

⁴ European Commission Eurostat (2011) Food: From farm to fork statistics

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

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Main response proposed to address the issue	Increased resource and energy efficiency of intensive production systems, shifting meat production patterns from ruminants to monogastric animals (e.g. pigs and poultry) or changing consumption patterns towards diets with less meat are possible approaches to reduce the environmental impacts of animal livestock ^{5,6} .
Main actor(s) concerned or involved in the response proposed	Food industry, consumers, academics, governments

For the public inquiry fields below are optional

2. Broad typology of the issue

(*)	External driver	Internal to food systems	Both
Is the issue either or both?		x	Briefly mention how this may be the case

(*)	Economic (and productive)	Social and Cultural	Governance (institutions, rights, etc.)	Environmental (resources, etc.)	Other (SPECIFY)
Main nature of the issue	x	x		x	
Nature of the main impact of the issue on FSN				x	

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	Classification (**)	
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?	Critical point	Systemic issue
2. Breadth: Are there many people affected?	Few	xMany

⁵ PBL Netherlands Environmental Assessment Agency (2011) The protein puzzle

⁶ Steinfeld and Gerber (2010) PNAS 43:18237-18238

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

3. Scale: local/regional/global?	Local	Region	Global
	<i>Indicate here the precise location</i>	<i>Indicate here the precise region</i>	
For items 4-11 below, please use the classification [— — , —, 0, +, ++]: Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)			
4. Impact on Availability			
5. Impact on Access			
6. Impact on Utilization/ nutrition			
7. Impact on Stability			
8. Impact on most vulnerable people	Specify as appropriate		
9. Impact on women			
10. Impact on children			
11. Impact on marginalized populations	Specify as appropriate		
12. Cost to address the issue	Low	Middle	High

(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

4. Time Scale

<i>Timeframe (*)</i>	<i>Now/Short term (1-5 years)</i>	<i>Medium term (5-10 years)</i>	<i>Long term (10-20 years +)</i>
Moment when the issue will have an impact			
Moment to act to address the issue			

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.	Low	Middle	High
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6. Additional Supporting Information

<i>Additional information</i>
<i>Evidence</i>
<i>Knowledge gaps</i>
<i>References</i>



HLPE Inquiry

Critical and Emerging Issues for Food Security and Nutrition

Questionnaire

About the respondent

Name, Surname and Institution	Anne-Katrin Bock, Sandra Caldeira, Jan Wollgast European Commission Joint Research Centre	
Dou you answer on behalf of your institution, or as an individual?	On behalf	As individual
Do you agree if this contribution is made available to the public as part of the proceedings?	Yes	No
Country of the responding individual/institution Please mention international or regional, the case being		

1. Overview of the issue

Issue <i>in 2 lines</i>	Improvement of nutritional evidence and information		
Description of the issue <i>in less than 5 lines</i>	The nutritional quality of diets is an issue worldwide in the context of obesity and non-communicable diseases. The complex interactions between diets and health complicate the establishment of cause-effect relationships. The trend towards personalized diets, including technical devices for direct, targeted dietary advice to individuals require a strong scientific evidence base to be able to develop effective policies and for the provision of high quality, effective nutritional information to consumers.		
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>	Challenge	Opportunity	It depends (please specify)
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition <i>In less than 10 lines. Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.</i>	A recent foresight study on food and health, carried out by the European Commission's Joint Research Centre, identified a number of research priorities to improve the diets of (European) citizens. The study was carried out based on literature reviews and participatory expert workshops. The study results will be published in April 2014.		

Main response proposed to address the issue	Development of better research methodologies, e.g. improved and nutrition adapted Randomised Control Trials or other viable methodology alternatives for generating better data in less time and better approaches to deal with the complexity of food and health interactions. Development of platforms and infrastructures for data sharing.. Development and implementation of harmonized authoritative dietary reference values. Increased attention to quality of nutritional advice provided to consumer.
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Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

Main actor(s) concerned or involved in the response proposed	Academia, publishers, policy-makers and food chain actors
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For the public inquiry fields below are optional

2. Broad typology of the issue

(*)	<i>External driver</i>	<i>Internal to food systems</i>	<i>Both</i>
Is the issue either or both?		Mainly	Briefly mention how this may be the case

(*)	<i>Economic (and productive)</i>	<i>Social and Cultural</i>	<i>Governance (institutions, rights, etc.)</i>	<i>Environmental (resources, etc.)</i>	<i>Other (SPECIFY)</i>
Main nature of the issue	x	x	x		
Nature of the main impact of the issue on FSN	x	x	x		

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	<i>Classification (**)</i>		
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?	Critical point	Systemic issue	
2. Breadth: Are there many people affected?	Few	Many	
3. Scale: local/regional/global?	Local	Region	Global
	<i>Indicate here the precise location</i>	<i>Indicate here the precise region</i>	

For items 4-11 below, please use the classification [— — , — , 0 , + , ++]:

Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)

4. Impact on Availability	
5. Impact on Access	
6. Impact on Utilization/ nutrition	++
7. Impact on Stability	
8. Impact on most vulnerable people	Specify as appropriate
9. Impact on women	
10. Impact on children	
11. Impact on marginalized populations	Specify as appropriate

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

12. Cost to address the issue	Low	Middle	High
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(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

4. Time Scale

<i>Timeframe (*)</i>	<i>Now/Short term (1-5 years)</i>	<i>Medium term (5-10 years)</i>	<i>Long term (10-20 years +)</i>
Moment when the issue will have an impact		X	X
Moment to act to address the issue	X		

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.	Low	Middle	High
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6. Additional Supporting Information

<i>Additional information</i>
<i>Evidence</i>
<i>Knowledge gaps</i>

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

References



HLPE Inquiry

Critical and Emerging Issues for Food Security and Nutrition Questionnaire

About the respondent

Name, Surname and Institution	Fabio Micale European Commission DG-JRC.H07	
Dou you answer on behalf of your institution, or as an individual?	On behalf	As individual
Do you agree if this contribution is made available to the public as part of the proceedings?	YES	No
Country of the responding individual/institution Please mention international or regional, the case being	European Institution	

1. Overview of the issue

Issue <i>in 2 lines</i>	Drought & heat stress (D&H) hazard/risk management under Climate Change	
Description of the issue <i>in less than 5 lines</i>	In many areas in the World, and in particular in Africa, future climate scenarios depict an increase of the D&H hazard (and related issues on water availability: quantity and quality) on very vulnerable populations.	
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>	Challenge	
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition <i>In less than 10 lines.</i> Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.	<p>Risk based approach:</p> <ul style="list-style-type: none"> a. <u>Mitigation policies</u>: reducing climate risks by reducing the hazards b. <u>Adaptation policies</u>: reducing climate risks by reducing exposure and vulnerability for increasing population. <p>Adaptation policy area is more challenging since science and policy must develop simultaneously.</p>	

Main response proposed to address the issue	<p>Drought and heat stress are the most relevant stressors for food and feed production as well as for cooking firewood/biomass.</p> <p>In order to protect the most vulnerable population the definition of National or Local "<u>drought and water resources management plans</u>" are suitable tools able to tackle this long-term issue and to dampen its negative impacts on FSN</p>
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Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

Main actor(s) concerned or involved in the response proposed	Institutions, whether local (National or Local Authorities) or global (UN-WMO, EU, etc.), which are involved in long-term planning need to take into account the risks and opportunities (but mainly risks) of ongoing and future climate change.
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For the public inquiry fields below are optional

2. Broad typology of the issue

(*)	<i>External driver</i>	<i>Internal to food systems</i>	<i>Both</i>
Is the issue either or both?	X		Briefly mention how this may be the case

(*)	<i>Economic (and productive)</i>	<i>Social and Cultural</i>	<i>Governance (institutions, rights, etc.)</i>	<i>Environmental (resources, etc.)</i>	<i>Other (SPECIFY)</i>
Main nature of the issue			X	X	
Nature of the main impact of the issue on FSN	X			X	Land use and soil fertility degradation

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	<i>Classification (**)</i>		
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?	Critical point	Systemic issue	
2. Breadth: Are there many people affected?	Few	Many	
3. Scale: local/regional/global?	Local	Region	Global
	Low-technology farmer systems	<i>Africa, south America, Asia</i>	

For items 4-11 below, please use the classification [— — , — , 0 , + , ++]:

Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)

4. Impact on Availability	--
5. Impact on Access	-
6. Impact on Utilization/ nutrition	--
7. Impact on Stability	-
8. Impact on most vulnerable people	Low-technology farmer systems
9. Impact on women	-

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10. Impact on children	--		
11. Impact on marginalized populations	--		
12. Cost to address the issue	Low	Middle	High

(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

4. Time Scale

<i>Timeframe (*)</i>	<i>Now/Short term (1-5 years)</i>	<i>Medium term (5-10 years)</i>	<i>Long term (10-20 years +)</i>
Moment when the issue will have an impact		X	X
Moment to act to address the issue	X		

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.	Low	Middle	High
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6. Additional Supporting Information

Additional information

The European Commission develops WEB platforms to monitor and evaluate drought events occurring over:

- Europe (<http://edo.jrc.ec.europa.eu>)
- Africa (<http://edo.jrc.ec.europa.eu/dewfora/php/index.php?id=4120>) and
- South America(<http://edo.jrc.ec.europa.eu/scado/php/index.php?id=3120>)

Evidence

There is a very ample scientific literature showing the occurrence of these phenomena and their temporal evolution along the last decades, as well as the related affected areas in the World and the risk for the population living there.

Knowledge gaps

Still limited scientific knowledge on future evolution of these phenomena under Climate Change conditions, considering also the localized impacts on territories and population.

References

IPCC - Fifth Assessment Report (AR5)
 Trenberth *et al.* Global warming and changes in drought. Nature Climate Change. 4,17–22(2014).
 Russo S., *et al.* (2013), Projection of occurrence of extreme dry-wet years and seasons in Europe with stationary and nonstationary Standardized Precipitation Indices, J. Geophys. Res. Atmos., 118, 7628–7639.

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.



**HLPE Inquiry
Critical and Emerging Issues for Food Security and Nutrition
Questionnaire**

About the respondent

Name, Surname and Institution	United Nations Educational, Scientific and Cultural Organization (UNESCO)	
Do you answer on behalf of your institution, or as an individual?	On behalf	
Do you agree if this contribution is made available to the public as part of the proceedings?	Yes	
Country of the responding individual/institution Please mention international or regional, the case being	n.a.	

1. Overview of the issue

Issue <i>in 2 lines</i>	The need to recognize the multifunctional nature of agriculture.	
Description of the issue <i>in less than 5 lines</i>	One of the most important finding of the International Assessment on Agricultural Science and Technology for Development (IAASTD) is that “agriculture operates within complex social, economic and environmental systems and so should be seen as multifunctional in its nature. A multifunctional approach to agricultural knowledge, science and technology will enhance impact on the alleviation of hunger and poverty, and improve human nutrition and livelihoods in an equitable and sustainable manner”. ⁹	
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/> Opportunity
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition <i>In less than 10 lines. Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.</i>	The notion of multifunctionality of agriculture, which encompasses not only food production systems but also social organization, the continuum between rural and peri-urban environments, issues related to access to land, resources and local markets, cultural identities and local and indigenous knowledge – among others – calls for an integrated approach to agriculture and food security in the years to come. Such an approach would ideally also encompass issues related to human rights, adequate norms, promoting environmental sustainability and the contribution of agriculture and food production to poverty reduction.	

⁹ Cited from the International Assessment on Agricultural Science and Technology for Development (IAASTD).

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Main response proposed to address the issue	A major lesson learned through past work in this area led by UNESCO or to which UNESCO has contributed is the multistakeholder nature of agriculture and the need to involve multiple stakeholders in the process of 'rethinking' and re-designing our current approach to agriculture and food production.
Main actor(s) concerned or involved in the response proposed	In the latter context, please note the successful experience of establishing a Multistakeholder Board to guide the design of the IAASTD. This Board saw the participation of large food manufacture companies, food producing companies, representatives of civil society, representative of consortia for agricultural research, UN organizations, Governments and private companies involved in potentially controversial issues such as the use of genetically-modified organisms in food production and, more recently, biofuels. The provision of a platform whereby different stakeholders with different aspirations and expectations would be in a position to discuss their respective interests and agendas with a view to define common goals in relation to food security is a <i>conditio sine qua non</i> to meet the Sustainable Development Goals (which are currently being designed) in relation to inter alia eradicating extreme poverty and hunger, reducing child mortality and improving maternal health (as far as food security and nutrition) and ensuring environmental sustainability.

For the public inquiry fields below are optional

2. Broad typology of the issue

(*)	<i>External driver</i>	<i>Internal to food systems</i>	<i>Both</i>
Is the issue either or both?			Lack of recognition of the contribution of agriculture to social organization, lack of due recognition of gender-specific issues in relation to agriculture, the nexus between agriculture and education and recognition of relevant indigenous and local knowledge have created an enormous distance between local production and global trade in agriculture commodities. This has acted both as an internal driver in that agricultural systems have been seen merely as tools for food production instead

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			as systems delivering important ecosystem services such as soil fertility and carbon absorption; as well as an external driver, as agriculture policies simply reflecting the trade side of the equation have create distortions such as the disappearance of local markets, which in turn have had an impact on local production of food.
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(*)	<i>Economic (and productive)</i>	<i>Social and Cultural</i>	<i>Governance (institutions, rights, etc.)</i>	<i>Environmental (resources, etc.)</i>	<i>Other (SPECIFY)</i>
Main nature of the issue			X		
Nature of the main impact of the issue on FSN			Eroded social organization; disappearance of local food markets.		

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	Classification (**)		
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?			Systemic issue
2. Breadth: Are there many people affected?			Many
3. Scale: local/regional/global?	Local	Region	Global

For items 4-11 below, please use the classification [— — , —, 0, +, ++]:
 Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)

4. Impact on Availability	--
5. Impact on Access	--
6. Impact on Utilization/ nutrition	--
7. Impact on Stability	-- --
8. Impact on most vulnerable people	The IAASTD took place at the historical juncture of the world food crisis 2005-2008 (which saw hundreds of million of disenfranchised people reverting to a situation of extreme poverty and hunger) with the world financial crises that have influenced the dynamics of the world economy in the past few years. The Assessment demonstrated clearly that vulnerable people are impacted by food

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

	scarcity not because of inadequate agricultural production but rather because of volatility in market prices and other perverse trade dynamics.		
9. Impact on women	-- --		
10. Impact on children	(not assessed)		
11. Impact on marginalized populations	(See answer under 8. above).		
12. Cost to address the issue		Middle	

(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

4. Time Scale

<i>Timeframe (*)</i>	<i>Now/Short term (1-5 years)</i>	<i>Medium term (5-10 years)</i>	<i>Long term (10-20 years +)</i>
Moment when the issue will have an impact	X	X	X
Moment to act to address the issue	X	X	

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.			High
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6. Additional Supporting Information

Additional information

Between 2004 and 2008 UNESCO, represented by its Natural Sciences Sector, was actively involved in work aimed at elucidating the contribution of agricultural science and technology to sustainable development. In close collaboration with FAO, UNDP, UNEP, the Global Environment Facility, the World Bank as well as WHO (in relation to the interlinkages between agriculture and health), UNESCO conducted an 'International Assessment on Agricultural Science and Technology for Development'.

Evidence

The Assessment conducted by the consortium of UN entities and sister organizations listed above was intended to be a forward-looking exercise. On the basis of a systematic and multidisciplinary evaluation of agriculture in the past 50 years, the Assessment aimed at designing the future of agriculture in the next 50 years. The underlying assumption was that current scientific knowledge in multiple disciplines (natural and social sciences, economics, anthropology, governance and institutions) and relevant indigenous and local knowledge as well as past experiences and success stories related to agriculture could be built upon in designing the future of agriculture and its contribution to food security and, more generally, to social resilience.

In some countries, especially developing countries, agriculture is now faced with competition between food production and production of bioenergy and biofuels, which provide both opportunities and constraints. In an era of global change (climate change, alteration of biochemical cycles such as nitrogen, which is heavily employed in agriculture, biodiversity loss, social transformations related to demographics, climate change-induced migrations and global health-related issues such as epidemics due to unsustainable livestock production practices), business as usual is not an option.

Governments and institutions will continue having a central role to play, but companies also hold a central responsibility and offer opportunities to counteract perverse phenomena such as extreme volatility in the prices of food commodities, developing informed trade and market systems which take into account the need to ensure food security for all, and contributing to plant and animal health and ultimately to food and hence human safety.

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

Knowledge gaps

The cultural aspects of food, which are highly promoted by UNESCO in the context of its instruments related to the preservation of cultural diversity, should be further valued by private groups, also in light of the contribution of local food practices to enhancing the quality of nutrition – a challenge with which private companies operating in the food sectors are faced due to public perceptions related to industrial vs. traditional food.

References

IAASTD Synthesis Report

([http://www.unep.org/dewa/agassessment/reports/IAASTD/EN/Agriculture%20at%20a%20Crossroads_Synthesis%20Report%20\(English\).pdf](http://www.unep.org/dewa/agassessment/reports/IAASTD/EN/Agriculture%20at%20a%20Crossroads_Synthesis%20Report%20(English).pdf))

UNESCO-SCOPE-UNEP Policy Briefs on:

- Global Environmental Change and Food Security (no. 12)
- Towards Sustainable Agriculture (no. 9)
- Biofuels and Environmental Impacts (no. 8)
- Livestock in a changing landscape (no. 6)
- Human Alteration of the Nitrogen Cycle (no. 5)

(available at <http://www.unesco.org/new/en/natural-sciences/environment/ecological-sciences/related-info/publications/unesco-scope-unep-policy-briefs/>).

Open Inquiry Inputs

Private comment

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.



Critical and Emerging Issues for Food Security and Nutrition Questionnaire

About the respondent

Name, Surname and Institution	Prof Roger R.B. Leakey (www.rogerleakey.com)	
Dou you answer on behalf of your institution, or as an individual?	-----	Self
Do you agree if this contribution is made available to the public as part of the proceedings?	Yes	-----
Country of the responding individual/institution Please mention international or regional, the case being	UK, but I have worked in over 100 countries, mostly in Africa	

1. Overview of the issue

Issue <i>in 2 lines</i>	A cycle of environmental degradation and social deprivation causes a huge Yield Gap in crop yield		
Description of the issue <i>in less than 5 lines</i>	Many modern varieties underperform because of soil infertility and poor farmers cannot afford to buy fertilizers and pesticides. This problem can be overcome by a 3-step approach to close the Yield Gap (see book: "Living with the Trees of Life")		
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>	Challenge	Opportunity	There is the opportunity to overcome the challenge
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition <i>In less than 10 lines.</i> Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.	<p>3 steps: 1. Use leguminous trees/shrubs to rapidly restore N fertility and initiate restoration of agroecological function. 2. Domesticate indigenous fruit and nut trees to provide micro-nutrients, produce income from marketable products and further diversify agroecosystem. 3. Trade and process culturally important traditional tree foods to create SME opportunities, and employment.</p> <p>This approach = Agroecology + Income Generation to reverse the downward spiral of land degradation and social deprivation and so close the Yield Gap and resolve food and nutritional insecurity, and poverty.</p> <p>http://www.foodsecurity.ac.uk/blog/index.php/2013/01/three-steps-to-bridging-the-yield-gap/</p> <p>Leakey R.R.B. 2012. <i>Living with the Trees of Life – Towards the Transformation of tropical Agriculture</i>, CABI, Wallingford, UK. 200pp.</p> <p>Leakey, R.R.B. 2013. Addressing the causes of land degradation, food / nutritional insecurity and poverty: a new approach to agricultural</p>		

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

	<p>intensification in the tropics and sub-tropics. In: <i>Wake Up Before it is too Late: Make Agriculture Truly Sustainable Now for Food Security in a Changing Climate</i>, 192-198, <i>UNCTAD Trade and Environment Review 2013</i>, U. Hoffman (ed.), UN Publications, Geneva, Switzerland.</p> <p>Leakey, R.R.B. 2013. UN Year of Family Farming - Africans show the way with a new vision for agriculture, <i>Great Insights</i> 3(1): 15-17, European Centre for Development Policy Management, Belgium: Brussels.</p> <p>Leakey, R.R.B. 2014. Twelve Principles for Better Food and More Food from Mature Perennial Agroecosystems, In: <i>Perennial Crops for Food Security</i>, FAO Workshop, Rome, Italy, 28-30 August 2013, FAO. Rome.</p>
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<p>Main response proposed to address the issue</p>	<p>Policy recognition of the issue and its relatively simple and low cost resolution. Establishment of Development Projects implementing the 3-step approach to closing the Yield Gap Up-scaling of successful projects in Cameroon in-see: Leakey, R.R.B. and Asaah, E.K. 2013. Underutilised Species as the Backbone of Multifunctional Agriculture – The Next Wave of Crop Domestication. <i>Acta Horticulturae</i> 979: 293-310. Leakey R.R.B. 2012. <i>Living with the Trees of Life – Towards the Transformation of tropical Agriculture</i>, CABI, Wallingford, UK. 200pp.</p>
<p>Main actor(s) concerned or involved in the response proposed</p>	<p>World Agroforestry Centre, Nairobi, Kenya and their many partners worldwide International Tree Foundation, Crawley, UK and its partners</p>

For the public inquiry fields below are optional

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

2. Broad typology of the issue

(*)	<i>External driver</i>	<i>Internal to food systems</i>	<i>Both</i>
Is the issue either or both?			A combination of external and internal factors drive the cycle of land degradation and social deprivation

(*)	<i>Economic (and productive)</i>	<i>Social and Cultural</i>	<i>Governance (institutions, rights, etc.)</i>	<i>Environmental (resources, etc.)</i>	<i>Other (SPECIFY)</i>
Main nature of the issue	Yes	Yes	Missing	Yes	Poor understanding of the problem
Nature of the main impact of the issue on FSN	Constraint	Poverty	Human rights	Breakdown of agroecological functions	Lack of action

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	<i>Classification (**)</i>		
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?	Very widespread, especially in Africa		Systemic issue
2. Breadth: Are there many people affected?	----		Hundreds of millions
3. Scale: local/regional/global?	Local	Region	Global
	Smallholder farmers everywhere	Africa	

For items 4-11 below, please use the classification [— — , —, 0, +, ++]:

Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)

4. Impact on Availability	- -
5. Impact on Access	- -
6. Impact on Utilization/ nutrition	- -
7. Impact on Stability	- -
8. Impact on most vulnerable people	- - poor, marginalized smallholder farmers
9. Impact on women	- -
10. Impact on children	- -
11. Impact on marginalized populations	- - Crucial issue
12. Cost to address the issue	Low --- ---

(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

4. Time Scale

<i>Timeframe (*)</i>	<i>Now/Short term</i>	<i>Medium term</i>	<i>Long term</i>
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Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

	(1-5 years)	(5-10 years)	(10-20 years +)
Moment when the issue will have an impact	Already exists on large scale	---	---
Moment to act to address the issue	Now	---	---

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.	---	---	High
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6. Additional Supporting Information

Additional information

There are good examples of small scale projects in Africa that show the impact of addressing the issue
 Leakey, R.R.B. 2013. UN Year of Family Farming - Africans show the way with a new vision for agriculture, *Great Insights* 3(1): 15-17, European Centre for Development Policy Management, Belgium: Brussels.

Evidence

Leakey, R.R.B. 2013. Addressing the causes of land degradation, food / nutritional insecurity and poverty: a new approach to agricultural intensification in the tropics and sub-tropics. In: *Wake Up Before it is too Late: Make Agriculture Truly Sustainable Now for Food Security in a Changing Climate*, 192-198, UNCTAD Trade and Environment Review 2013, U. Hoffman (ed.), UN Publications, Geneva, Switzerland.

Knowledge gaps

Most of the necessary knowledge exists to have huge positive impact. The missing ingredient is political will and understanding of the issues and their solutions.

Because the issues behind low crop yields are socio-economic and environmental they cannot be resolved by Biotechnology.

References

Popular science book

Leakey R.R.B. 2012. *Living with the Trees of Life – Towards the Transformation of tropical Agriculture*, CABI, Wallingford, UK. 200pp.

Supported by large scientific literature (much of it quoted in this book)

Leakey, R.R.B. 2010. Agroforestry: a delivery mechanism for Multi-functional Agriculture. In: *Handbook on Agroforestry: Management Practices and Environmental Impact*, 461-471, Ed. Lawrence R. Kellimore, Nova Science Publishers. Environmental Science, Engineering and Technology Series, ISBN: 978-1-60876-359-7.

Leakey, R.R.B. 2012a. Participatory domestication of indigenous fruit and nut trees: New crops for sustainable agriculture in developing countries. In: *Biodiversity in Agriculture: Domestication, Evolution, and Sustainability*. 479-501, P Gepts, TR Famula, RL Bettinger, SB Brush, AB Damania, PE McGuire, and CO Qualset (eds.) Cambridge University Press, New York, USA.

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

- Leakey, R.R.B. 2012b. The intensification of agroforestry by tree domestication for enhanced social and economic impact. *CAB Reviews: Perspectives in Agriculture, Veterinary Science, Nutrition and Natural Resources*, **7**: No: 035, 1-3.
- Leakey, R.R.B. 2012c. Multifunctional agriculture. In: *Agroforestry – The Future of Global Land Use*, 203-214, Nair, P.K., and Garrity, D. (eds.), Springer, USA.
- Lombard, C. and Leakey, R.R.B. 2010. Protecting the rights of farmers and communities while securing long term market access for producers of non-timber forest products: experience in southern Africa. *Forests, Trees and Livelihoods* **19**: 235-249.
- Asaah, E.K., Tchoundjeu, Z., Leakey, R.R.B., Takoung, B., Njong, J. and Edang, I. 2011. Trees, agroforestry and multifunctional agriculture in Cameroon. *International Journal of Agricultural Sustainability* **9**: 110-119.
- Leakey, R.R.B., Weber, J.C., Page, T., Cornelius, J.P., Akinnifesi, F.K., Roshetko, J.M., Tchoundjeu, Z. and Jamnadass, R. 2012. Tree domestication in agroforestry: progress in the second decade. In: *Agroforestry – The Future of Global Land Use*, 145-173, Nair, P.K., and Garrity, D. (eds.), Springer, USA.
- Leakey, R.R.B. and Prabhu, R. In prep. What is sustainable intensification? - an African perspective. *Science* 0: 000-000.

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HLPE Inquiry

Critical and Emerging Issues for Food Security and Nutrition

Questionnaire

About the respondent

Name, Surname and Institution	Kjell Esser, Norwegian University of Life Sciences	
Do you answer on behalf of your institution, or as an individual?		As individual
Do you agree if this contribution is made available to the public as part of the proceedings?	Yes	
Country of the responding individual/institution Please mention international or regional, the case being	Norway	

1. Overview of the issue

Issue <i>in 2 lines</i>	Vocational agricultural training for young farmers in Africa	
Description of the issue <i>in less than 5 lines</i>	Low long-term impact of rural development projects. Economic growth in urban areas and increasing food prices create new opportunities for farmers. Lack of technical and entrepreneurial skills prevent them from benefitting.	
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>		Opportunity
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition <i>In less than 10 lines. Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.</i>	Observation of: 1) unused opportunities for food production, 2) lack of skills among rural youth, 3) lack of understanding of biophysical cause-and-effect relationships due to religion and culture, 4) lack of visions and goals among youth, 5) migration of unskilled youth (males) to urban centres, 6) rapid increase in economic opportunities in agriculture, 7) increasing need to control factors for food production	

Main response proposed to address the issue	Establish agricultural vocational schools with attached commercial research and training farms. Offer one and two-year programmes. Focus on farming as a business and entrepreneurial skills. Offer scholarships for students. Attach investment support and follow-up networks for graduates.
Main actor(s) concerned or involved in the response proposed	1. Faith-based or private organizations to run agricultural vocational schools, see Tombontsoa Agricultural School, Madagascar, for model 2. Universities and colleges to educate vocational teachers and instructors.

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For the public inquiry fields below are optional

2. Broad typology of the issue

(*)	<i>External driver</i>	<i>Internal to food systems</i>	<i>Both</i>
Is the issue either or both?	X	X	Internal challenge, external solution

(*)	<i>Economic (and productive)</i>	<i>Social and Cultural</i>	<i>Governance (institutions, rights, etc.)</i>	<i>Environmental (resources, etc.)</i>	<i>Other (SPECIFY)</i>
Main nature of the issue	X	X	X		
Nature of the main impact of the issue on FSN	X	X		X	

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	<i>Classification (**)</i>		
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?			Systemic issue
2. Breadth: Are there many people affected?			Many
3. Scale: local/regional/global?	Local	Region	
	All	All	

For items 4-11 below, please use the classification [— — , — , 0, +, ++]:

Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)

4. Impact on Availability	++
5. Impact on Access	++
6. Impact on Utilization/ nutrition	++
7. Impact on Stability	++
8. Impact on most vulnerable people	++ (life-long abilities)
9. Impact on women	++
10. Impact on children	++
11. Impact on marginalized populations	++ (life-long abilities)
12. Cost to address the issue	High

(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

4. Time Scale

<i>Timeframe (*)</i>	<i>Now/Short term</i>	<i>Medium term</i>	<i>Long term</i>
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	(1-5 years)	(5-10 years)	(10-20 years +)
Moment when the issue will have an impact		X	X
Moment to act to address the issue	X		

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.		Middle(?)	
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6. Additional Supporting Information

<p><i>Additional information</i></p> <p>Perpetual pilot studies and persistent absence of scaling up effects of development projects are rooted in lack of biophysical cause-and-effect understanding, technical skills and entrepreneurial vision within farming communities. Farmers need to take the step into the modern world, whereby they can gain better control over their food security and nutrition. Recent economic developments in African countries have created opportunities for the rural poor that were not available only a decade ago.</p>
<p><i>Evidence</i></p> <p>Experiences by EARTH University, Costa Rica, and Tombontsoa Agricultural School, Antsirabe, Madagascar, for models.</p>
<p><i>Knowledge gaps</i></p> <ol style="list-style-type: none"> 1. Curricula for vocational schools adapted to local agricultural conditions. 2. Pedagogy for vocational teachers at universities and pedagogy for vocational students
<p><i>References</i></p> <ol style="list-style-type: none"> 1. http://agrilinks.org/events/building-base-global-food-security-agricultural-education-and-training 2. Rivera, W. 2011. Literature review of agricultural education and training: Sound lessons from the past. Weidemann Associates, Inc. 53 pp.

Responses to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.



HLPE Inquiry

Critical and Emerging Issues for Food Security and Nutrition Questionnaire

About the respondent

Name, Surname and Institution	Suman Apparusu , Change Planet Partners Climate Innovation Foundation	
Do you answer on behalf of your institution, or as an individual?	On behalf	As individual
Do you agree if this contribution is made available to the public as part of the proceedings?	Yes	No
Country of the responding individual/institution Please mention international or regional, the case being	India	

1. Overview of the issue

Issue <i>in 2 lines</i>	Food Innovation – Opportunities and Challenges		
Description of the issue <i>in less than 5 lines</i>	“Food Innovation” concept genesis lays principally in drivers of 1) consumers changing demographics, life style and food preferences, 2) global food trade integration and inflationary pressures, 3) livelihood and sustainability, 4) climate adaptation and mitigation imperatives, 5) retail revolution in emerging economies 6) drive towards global food safety certification, labeling and standards and 7) technology conversion trends.		
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>	Challenge	Opportunity	It depends (please specify)
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition <i>In less than 10 lines. Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.</i>	Extensive Literature Review Synthesis and Based on current ongoing FP6-7 EU funded programmes on Food Clusters Development. High topical relevance and implications for emerging economies to leap frog both in terms of technologies and adoption.		

Main response proposed to address the issue	“ Food Innovation Corridors ” is the proposed response to address the underlying drivers identified in the issue description. The concept in brief seeks to address the stated drivers through a public-private collaboration orientated market mechanism and through it seek to undertake a series of targeted interventions such like developing food clusters(e.g. Oresund- Sweden), launching food innovation voucher schemes, pushing for mature food technologies commercialization, improving food logistics to cut food systems losses, build strong capacities for CODEX uptake, launching food-water-energy nexus innovation pilots and undertaking market research for enabling and catalyzing emerging food innovation opportunities and tracking
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	consumer demand drivers.
Main actor(s) concerned or involved in the response proposed	Government, Private Food Companies, Food Logistic Providers, Food Safety, Certification, Labeling Regulators, Consumers, Infrastructure Developers, Infrastructure Development Financing Firms, Market Research Firms, Technology Integrators, Food Innovators and Incubators.

For the public inquiry fields below are optional

2. Broad typology of the issue

(*)	<i>External driver</i>	<i>Internal to food systems</i>	<i>Both</i>
Is the issue either or both?	External Driver		Briefly mention how this may be the case

(*)	<i>Economic (and productive)</i>	<i>Social and Cultural</i>	<i>Governance (institutions, rights, etc.)</i>	<i>Environmental (resources, etc.)</i>	<i>Other (SPECIFY)</i>
Main nature of the issue	X	X	X	X	
Nature of the main impact of the issue on FSN	Livelihoods/Employment/Incomes/Skills/Entrepreneurship	Food Preferences/Choices	Infrastructure, Policies, Programmes, Regulation, Capacity Building	Sustainability/Adaptation & Mitigation	

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	Classification (**)		
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?	Critical point	Systemic issue	
2. Breadth: Are there many people affected?	Few	Many	
3. Scale: local/regional/global?	Local	Region	& Global
	<i>Indicate here the precise location</i>	Emerging Economies – More Specifically (e.g. India)	

For items 4-11 below, please use the classification [— — , — , 0, +, ++]:

Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)

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4. Impact on Availability	++++			
5. Impact on Access	++++			
6. Impact on Utilization/ nutrition	++++			
7. Impact on Stability	+++			
8. Impact on most vulnerable people	Specify as appropriate			
9. Impact on women	+++			
10. Impact on children	++			
11. Impact on marginalized populations				
12. Cost to address the issue	<table border="1"> <tr> <td>Low</td> <td>Middle</td> <td>High</td> </tr> </table>	Low	Middle	High
Low	Middle	High		

(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

4. Time Scale

<i>Timeframe (*)</i>	<i>Now/Short term (1-5 years)</i>	<i>Medium term (5-10 years)</i>	<i>Long term (10-20 years +)</i>
Moment when the issue will have an impact		X	
Moment to act to address the issue	Now		

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.	Low	Middle	High
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6. Additional Supporting Information

<i>Additional information</i>
<i>Evidence</i> From : FSTA , IUFoST, GECAFS, CCAFS et.al Networks.
<i>Knowledge gaps</i> Market Research on Consumer Demand for Functional Foods, Technology Convergence Trends, Packaging, Private Labels and Certification, Climate Change Impacts (Direct & Indirect) on Food and Nutrition Security especially key variables such as Frequency and Intensity of extreme weather events and changing weather patterns, supply-demand imbalances, ecological stresses, infrastructure stresses, Vulnerability and resilience maps, livelihood and sustainability issues and maps of key global current and emerging crop value chains.
<i>References</i> http://www.foodclusterinitiative.eu/participating-projects http://www.niftem.ac.in/ http://www.firc.com.sg/ http://www.foodinnovationnetwork.co.nz/ http://www.fial.com.au/ http://www.foodinnovationcentre.ca/what-we-do/

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

Responses to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.



HLPE Inquiry

Critical and Emerging Issues for Food Security and Nutrition

Questionnaire

About the respondent

Name, Surname and Institution	George Kent, University of Hawaii	
Do you answer on behalf of your institution, or as an individual?		As individual
Do you agree if this contribution is made available to the public as part of the proceedings?	Yes	
Country of the responding individual/institution Please mention international or regional, the case being	United States	

1. Overview of the issue

Issue <i>in 2 lines</i>	The CFS should recognize the importance of current and evolving threats to the food security of infants.	
Description of the issue <i>in less than 5 lines</i>	Malnutrition is a contributing cause of millions of child deaths, and accounts for many types of morbidity and impairment. The increasing global promotion of baby foods of questionable safety and nutritional adequacy may be increasing the risks.	
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>	Challenge	It depends (please specify)
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition <i>In less than 10 lines.</i> Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.	The research literature is clear about the inferiority of alternative methods of feeding of infants and young children when compared with breastfeeding. The alternative of infant formula is being promoted with great vigor, primarily because of its high profitability. This is likely to result in negative health impacts. The degree or intensity of that impact needs to be assessed systematically and on a large scale, especially as modified forms of formula are introduced.	
Main response proposed to address the issue	Better monitoring and regulation of infant formula and other baby foods is needed to ensure their safety and nutritional adequacy. That regulation should be based on solid science, especially with regard to comparisons of the health impacts of different methods of feeding. The many small-scale studies that have been done indicate the likely patterns, but large-scale well-managed monitoring studies are need to provide a strong basis for regulation at both national and global levels.	

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Main actor(s) concerned or involved in the response proposed	The safety and nutritional adequacy of baby foods are not assured with current patterns of regulation at the national level. The International Code of Marketing of Breast-milk Substitutes of 1981 provided a good start for regulation at the global level, but it does not meet current needs. The Codex Alimentarius Commission's guidelines for the basic recipe for infant formula remain essentially the same as when they were set out in the mid-1980s. There is a need for global agencies to consider the needs for regulation at every level as the baby food industry grows in scale and complexity.
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For the public inquiry fields below are optional

2. Broad typology of the issue

(*)	<i>External driver</i>	<i>Internal to food systems</i>	<i>Both</i>
Is the issue either or both?	As the baby food industry globalizes, it operates beyond the effective control of national regulatory agencies.	Many countries might manufacture their own commercial baby food, but under license from or through joint ventures with global corporations. Thus, while the manufacturing might be local, often the control is not.	Most national governments lack the capacity to ensure the safety and nutritional adequacy of baby foods. The industry is dominated by global corporations that are not subject to effective regulation.

(*)	<i>Economic (and productive)</i>	<i>Social and Cultural</i>	<i>Governance (institutions, rights, etc.)</i>	<i>Environmental (resources, etc.)</i>	<i>Other (SPECIFY)</i>
Main nature of the issue	There is an ongoing tension between concerns about profitability and about health impacts.		The issue is primary one of governance, especially in terms of regulation.		
Nature of the main impact of the issue on FSN					

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	<i>Classification (**)</i>		
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?			Systemic issue
2. Breadth: Are there many people affected?			Many
3. Scale: local/regional/global?			Global
	<i>Indicate here the precise location</i>	<i>Indicate here the precise region</i>	

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For items 4-11 below, please use the classification [— — , — , 0 , + , ++]:
 Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)

4. Impact on Availability	
5. Impact on Access	
6. Impact on Utilization/ nutrition	--
7. Impact on Stability	
8. Impact on most vulnerable people	Infants and young children
9. Impact on women	--
10. Impact on children	--
11. Impact on marginalized populations	Specify as appropriate
12. Cost to address the issue	High

(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

4. Time Scale

<i>Timeframe (*)</i>	<i>Now/Short term (1-5 years)</i>	<i>Medium term (5-10 years)</i>	<i>Long term (10-20 years +)</i>
Moment when the issue will have an impact			The risks of food insecurity for infants and young children associated with commercial baby foods, especially formula, are expected to grow steadily if there is no global regulation.
Moment to act to address the issue			Action should begin soon, in a careful deliberative process designed to establish global regulations to protect the food security of infants and young children.

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.	Middle
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6. Additional Supporting Information

Additional information

The main issues identified here are summarized in a paper on *The Food Security of Infants* available at <http://www2.hawaii.edu/~kent/FOODSECURITYOFINFANTS.docx>

For background information, citations of evidence, proposals, etc. see my book, *Regulating Infant Formula*, released in 2011 by Hale Publishing of Amarillo, Texas.

Evidence

Knowledge gaps

References

Responses to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.



HLPE Inquiry

Critical and Emerging Issues for Food Security and Nutrition

Questionnaire

About the respondent

Name, Surname and Institution	Katy Lee, on behalf of	
Do you answer on behalf of your institution, or as an individual?	International Agri-Food Network	
Do you agree if this contribution is made available to the public as part of the proceedings?	Yes	
Country of the responding individual/institution Please mention international or regional, the case being	International Agri-Food Network	

1. Overview of the issue

<i>Issue in 2 lines</i>	Post 2015 Goals	
Description of the issue <i>in less than 5 lines</i>	Prioritisation of agriculture in the context of the Post 2015 Sustainable Development Goals. Agriculture is the primary driver to abate hunger and reduce poverty.	
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>	<input type="checkbox"/>	Opportunity <input checked="" type="checkbox"/>
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition <i>In less than 10 lines.</i> Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.	<p>Focus on women, children, micronutrients, agricultural productivity, strengthening value chains.</p> <p>Rural development and farming are key mechanisms to address devastating gaps in hunger and malnutrition.</p> <p>Increased agricultural productivity by all, by ensuring that food flows freely across borders and around the globe to places where it is needed, and by ensuring that economic development supports both local production and the purchase of imports.</p>	

Main response proposed to address the issue	Place food, hunger and nutrition at the top of the SDG agenda.
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Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

Main actor(s) concerned or involved in the response proposed	Agri food value chain. From farmers, to input providers, to processors, cooperatives and food businesses.
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For the public inquiry fields below are optional

2. Broad typology of the issue

(*)	<i>External driver</i>	<i>Internal to food systems</i>	<i>Both</i>
Is the issue either or both?			All parts of value chain.

(*)	<i>Economic (and productive)</i>	<i>Social and Cultural</i>	<i>Governance (institutions, rights, etc.)</i>	<i>Environmental (resources, etc.)</i>	<i>Other (SPECIFY)</i>
Main nature of the issue	X		X	X	
Nature of the main impact of the issue on FSN		X			

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	<i>Classification (**)</i>		
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?	Critical point		
2. Breadth: Are there many people affected?	Many		
3. Scale: local/regional/global?			Global

For items 4-11 below, please use the classification [— — , — , 0, +, ++]:

Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)

4. Impact on Availability	+
5. Impact on Access	+
6. Impact on Utilization/ nutrition	++
7. Impact on Stability	++
8. Impact on most vulnerable people	++ Rural women lag behind urban women and all men in achieving the Millennium Development Goals.
9. Impact on women	++

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

10. Impact on children	++		
11. Impact on marginalized populations	++		
12. Cost to address the issue		Middle	

(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

4. Time Scale

<i>Timeframe (*)</i>	<i>Now/Short term (1-5 years)</i>	<i>Medium term (5-10 years)</i>	<i>Long term (10-20 years +)</i>
Moment when the issue will have an impact			X
Moment to act to address the issue	X		

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.			High
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6. Additional Supporting Information

Additional information

1. First, agriculture is central to addressing hunger and poverty. Supportive policies are needed to encourage investments in local agriculture and innovation that lead to food security, economic development, stability and national security. Returning agriculture and rural development to at least 10% of overseas development assistance is equally as important as countries meeting their national commitments under programs like CAADP.

2. Second, sustainable agriculture is knowledge-based and requires a holistic view. Just as people-centred approaches are at the core of the development aspirations of the UN, agriculture programs are needed that are 'farmer-centred and knowledge-based' so that the full potential of farmers, both men and women, including small-holder and commercial farmers, can be harnessed in making food security and sustainable development a reality. Farmers need access to land, water, knowledge, inputs, and credit to grow a crop and functioning markets to sell their products. Rural infrastructure needs to be in place including a revitalisation of extension services.

3. Third, achieving zero hunger means a focus on food and nutrition. The intersection of food security with development is not only an immediate measure of hungry mouths, but also the long term implications on a country's well being. If children are stunted in their first 1000 days the challenges remain for their health and education for their life time. The capacity of people to be part of building their nation and shaping their future can be irrevokably harmed. The new agenda must include nourishment as well as hunger in its agenda.

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

Evidence

Knowledge gaps

References

Responses to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.



HLPE Inquiry

Critical and Emerging Issues for Food Security and Nutrition Questionnaire

About the respondent

Name, Surname and Institution	Katy Lee, on behalf of	
Do you answer on behalf of your institution, or as an individual?	International Agri-Food Network	
Do you agree if this contribution is made available to the public as part of the proceedings?	Yes	
Country of the responding individual/institution Please mention international or regional, the case being	International Agri-Food Network	

1. Overview of the issue

Issue <i>in 2 lines</i>	Knowledge, Skills and Talent Development in the Agri-Food Sector	
Description of the issue <i>in less than 5 lines</i>	Human capital is a critical driver of growth, sustainability and security across the entire food chain.	
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>	<input type="checkbox"/>	Opportunity <input checked="" type="checkbox"/>
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition <i>In less than 10 lines. Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.</i>	Focus on: 1) Knowledge, skills and nutrition security 2) Global challenge: recruiting talent back into agriculture 3) Re-investment in the next generation of farmers and agribusinesses 4) Knowledge to modernize the farms of tomorrow 5) Knowledge to minimize the ecological footprint of agriculture 6) R&D 7) Knowledge to focus on the value chain	

Main response proposed to address the issue	Achieve a systematic report on the power and wide-reaching impact of increased talent development in agriculture.
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Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

Main actor(s) concerned or involved in the response proposed	Youth important. From farmers, to input providers, to processors, cooperatives and food businesses.
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For the public inquiry fields below are optional

2. Broad typology of the issue

(*)	<i>External driver</i>	<i>Internal to food systems</i>	<i>Both</i>
Is the issue either or both?			All parts of value chain.

(*)	<i>Economic (and productive)</i>	<i>Social and Cultural</i>	<i>Governance (institutions, rights, etc.)</i>	<i>Environmental (resources, etc.)</i>	<i>Other (SPECIFY)</i>
Main nature of the issue	X	X			Youth
Nature of the main impact of the issue on FSN			X	X	

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	<i>Classification (**)</i>		
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?	Critical point		
2. Breadth: Are there many people affected?			Many
3. Scale: local/regional/global?			Global

For items 4-11 below, please use the classification [— — , — , 0, +, ++]:

Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)

4. Impact on Availability	+
5. Impact on Access	+
6. Impact on Utilization/ nutrition	++
7. Impact on Stability	++
8. Impact on most vulnerable people	++
9. Impact on women	++
10. Impact on children	++
11. Impact on marginalized populations	++

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

12. Cost to address the issue

Middle

(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

4. Time Scale

<i>Timeframe (*)</i>	<i>Now/Short term (1-5 years)</i>	<i>Medium term (5-10 years)</i>	<i>Long term (10-20 years +)</i>
Moment when the issue will have an impact			X
Moment to act to address the issue	X		

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.

High

6. Additional Supporting Information

1) **Global challenge: recruiting talent back into agriculture**

- a) Human capital and talent are critical drivers of growth, sustainability and security across the entire food chain.
- b) CFS is ideally placed to highlight constraints, opportunities, and recommendations which include:
- Improving the mechanisms for sharing knowledge, adaptive strategies, and more sustainable techniques is the means to achieve the Millennium Development Goals (and beyond), food security and nutrition, and improved livelihoods.
 - High degree of knowledge needed in farming to manage multiple variables.
 - Improving impact on sustainable development of all forms of agriculture.
 - The centrality of education and skills to sustain food production in the face of the vagaries of weather, climate change, political instability, market volatility, and increasing pest pressures.

2) **Knowledge, skills and nutrition security**

- a) There is a lack of appropriately-trained and work-ready people in the agriculture sector, a factor contributing to food and nutrition insecurity.
- b) Some of the primary skills lacking are numeracy, agronomics, communications, business management (specific to the food and agriculture sector), marketing, finance, logistics, food processing, and broad, yet critical, teamwork and management skills.
- c) Nutrition is an valuable part of the training and education process which has the capacity to improve health at a household level.

3) **Re-investment in the next generation of farmers and agribusinesses**

- a) There is a need to recruit new talent, particularly youth, to agriculture.
- b) Despite the recent modest renewal in public sector investments in agriculture, there have been disinvestments in extension programmes and agriculture education – at the primary, secondary and tertiary levels - at the same time universities have disinvested in agriculture colleges.
- c) In many developing countries, especially in Africa, the higher agricultural education system is experiencing serious problems of low quality, irrelevancy, lack of funding, poor infrastructure, low

faculty morale, and high graduate unemployment.

- d) Among the existing agriculture universities and colleges, there is a serious disconnect between agriculture education and the marketplace.
- e) Extension services need fresh models that make use of best practices, new technologies and more inclusive approaches.
- f) Support and incentives are required for young people entering agriculture and generational transfer.

4) R&D

- a) Consistent with GFRAS recommendations, implement improvements to rural advisory services in these key areas: (1) focusing on best-fit approaches, (2) embracing pluralism, (3) using participatory approaches, (4) developing capacity, and (5) ensuring long-term institutional support.
- b) Increase extension activities through farmer, co-operative, private, and public engagement and use of communication technologies.
- c) Develop more decentralized, farmer-led, and market driven systems.
- d) Build upon the indigenous knowledge of conservation and resource management that farmers already possess.
- e) Ensure programming meets the unique needs of women smallholder farmers.
- f) Increase public agricultural R&D on nutrition and agricultural innovation.
- g) Promote private agricultural R&D through grants and tax credits, including R&D supported by farm groups and co-operatives.

5) Knowledge to minimize the ecological footprint of agriculture

- a) Building capacity in agriculture to better safeguard natural resources such as land, water, and biodiversity.
- b) Higher priority needs to be placed on process innovations.
- c) Promotion of best practices such as water management, animal welfare, manure management, integrated crop management, integrated pest management, and nutrient management is required.
- d) Furthering the resilience and adaptive capacity of farmers is needed to meet the demands of climate change and shifting weather patterns.

6) Knowledge to modernize the farms of tomorrow

- a) Further access to scalable information technologies for farmers, including women and young farmers, to receive weather, crop, and market alerts, as well as other early warning systems, to help them make the right decisions for sustainability and productivity.
- b) Improved access to technologies and techniques to improve farm productivity and reduce the footprint of agriculture.

7) Knowledge to focus on the value chain

- a) Programming on marketing, basic business skills, and primary processing can help address poverty.
- b) Concrete measures are needed to reduce post-harvest losses through proper storage, transportation, and other techniques.
- c) Increasing the linkage of rural producers to regional and urban consumers will further the capacity for farmers to earn a fair living.

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

Evidence

Knowledge gaps

References

Responses to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.



HLPE Inquiry

Critical and Emerging Issues for Food Security and Nutrition Questionnaire

About the respondent

Name, Surname and Institution	Katy Lee, on behalf of	
Do you answer on behalf of your institution, or as an individual?	International Agri-Food Network	
Do you agree if this contribution is made available to the public as part of the proceedings?	Yes	
Country of the responding individual/institution Please mention international or regional, the case being	International Agri-Food Network	

1. Overview of the issue

Issue <i>in 2 lines</i>	Access to Finance	
Description of the issue <i>in less than 5 lines</i>	<p>Access to finance is essential for unlocking agricultural growth.</p> <p>Rural development and farming are key mechanisms to address devastating gaps in hunger and malnutrition.</p>	
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>	<input type="checkbox"/>	Opportunity <input type="checkbox"/>
<p>Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition</p> <p><i>In less than 10 lines.</i> Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.</p>	<ol style="list-style-type: none"> 1. Make agriculture an engine for development 2. Support entrepreneurship and private enterprise 3. Establish a conducive operating environment to add value to agriculture 4. Further research, development, and extension services 5. Capture the power of partnerships <p>Increased agricultural productivity by all, by ensuring that food flows freely across borders and around the globe to places where it is needed, and by ensuring that economic development supports both local production and the purchase of imports.</p>	

Main response proposed to address the issue	Improved access to finance. Identification of impediments to small holder access to rural finance and markets.
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Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

Main actor(s) concerned or involved in the response proposed	Agri food value chain. From farmers, to input providers, to processors, cooperatives and food businesses.
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For the public inquiry fields below are optional

2. Broad typology of the issue

(*)	<i>External driver</i>	<i>Internal to food systems</i>	<i>Both</i>
Is the issue either or both?			All parts of value chain.

(*)	<i>Economic (and productive)</i>	<i>Social and Cultural</i>	<i>Governance (institutions, rights, etc.)</i>	<i>Environmental (resources, etc.)</i>	<i>Other (SPECIFY)</i>
Main nature of the issue	X		X	X	
Nature of the main impact of the issue on FSN		X			

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	<i>Classification (**)</i>		
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?	Critical point		
2. Breadth: Are there many people affected?			Many
3. Scale: local/regional/global?			Global

For items 4-11 below, please use the classification [— — , —, 0, +, ++]:

Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)

4. Impact on Availability	+
5. Impact on Access	+
6. Impact on Utilization/ nutrition	++
7. Impact on Stability	++
8. Impact on most vulnerable people	++
9. Impact on women	++
10. Impact on children	++
11. Impact on marginalized populations	++

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

12. Cost to address the issue		Middle	
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(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

4. Time Scale

<i>Timeframe (*)</i>	<i>Now/Short term (1-5 years)</i>	<i>Medium term (5-10 years)</i>	<i>Long term (10-20 years +)</i>
Moment when the issue will have an impact			X
Moment to act to address the issue	X		

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.			High
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6. Additional Supporting Information

<i>Additional information</i>
<i>Evidence</i>
<i>Knowledge gaps</i>
<i>References</i>

P7A



**HLPE Inquiry
Critical and Emerging Issues for Food Security and Nutrition
Questionnaire**

About the respondent

Name, Surname and Institution	Laurence Dare, One Acre Fund	
Dou you answer on behalf of your institution, or as an individual?	On behalf of my institution	

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

Do you agree if this contribution is made available to the public as part of the proceedings?	Yes	
Country of the responding individual/institution Please mention international or regional, the case being	East Africa	

1. Overview of the issue

Issue <i>in 2 lines</i>	Lack of access to financing for smallholder farmers		
Description of the issue <i>in less than 5 lines</i>	Without access to financial services, smallholder farmers often lack the resources to invest in farm inputs. Without these inputs, farm yields and profits remain low, and are very often insufficient to ensure food security.		
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>	Challenge		
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition <i>In less than 10 lines.</i> Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.	One Acre Fund, which provides smallholder farmers in East Africa with farm inputs and training on credit, has collected information on yields and profits both before and after joining our program. We have found that before joining, the average farmer harvests just 5-8 bags of maize per acre. Under our program, with goods and services delivered to within walking distance of where smallholder farmers live, yields on average double.		

Main response proposed to address the issue	Donors and African governments should establish a multi-donor trust fund to provide seed funding for financial institutions and microfinance organizations to develop farm microfinance products. International organizations such as FAO should help to facilitate this process.		
Main actor(s) concerned or involved in the response proposed	<ul style="list-style-type: none"> • African governments • Donor governments • Financial institutions • Microfinance organizations • International organizations • Smallholder farmer representatives 		

For the public inquiry fields below are optional

2. Broad typology of the issue

(*)	<i>External driver</i>	<i>Internal to food systems</i>	<i>Both</i>
Is the issue either or both?	✓		Briefly mention how this may be the case

(*)	<i>Economic (and productive)</i>	<i>Social and Cultural</i>	<i>Governance (institutions, rights, etc.)</i>	<i>Environmental (resources, etc.)</i>	<i>Other (SPECIFY)</i>

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

Main nature of the issue	✓				
Nature of the main impact of the issue on FSN	✓				

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	Classification (**)		
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?	Critical point		
2. Breadth: Are there many people affected?		Many	
3. Scale: local/regional/global?			Global

For items 4-11 below, please use the classification [— — , —, 0, +, ++]:

Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)

4. Impact on Availability	++
5. Impact on Access	++
6. Impact on Utilization/ nutrition	+
7. Impact on Stability	0
8. Impact on most vulnerable people	++
9. Impact on women	++
10. Impact on children	++
11. Impact on marginalized populations	++
12. Cost to address the issue	Middle

(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

4. Time Scale

<i>Timeframe (*)</i>	<i>Now/Short term (1-5 years)</i>	<i>Medium term (5-10 years)</i>	<i>Long term (10-20 years +)</i>
Moment when the issue will have an impact	✓		
Moment to act to address the issue	✓		

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.		Middle	
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6. Additional Supporting Information

<i>Additional information</i>
<i>Evidence</i>
<i>Knowledge gaps</i>
<i>References</i> See: http://dalberg.com/documents/Catalyzing_Smallholder_Ag_Finance.pdf http://www.cgap.org/publications/segmentation-smallholder-households http://www.brookings.edu/blogs/africa-in-focus/posts/2014/01/29-africa-agriculture-productivity-hanson

Responses to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.



HLPE Inquiry

Critical and Emerging Issues for Food Security and Nutrition Questionnaire

About the respondent

Name, Surname and Institution	Andrew MacMillan (retired FAO)	
Do you answer on behalf of your institution, or as an individual?		As Individual
Do you agree if this contribution is made available to the public as part of the proceedings?	Yes	
Country of the responding individual/institution Please mention international or regional, the case being	UK, but resident in Italy	

1. Overview of the issue

Issue <i>in 2 lines</i>	Whether the success of social protection in cutting hunger opens way for raising consumer food prices so that income from food sales becomes the main driver for rural poverty reduction and the shift to sustainable production and consumption systems.		
Description of the issue <i>in less than 5 lines</i>	That over half the global population suffers from hunger, malnutrition or obesity is evidence that current food policies are failing badly. Most nations aim to keep food prices “affordable” for all consumers. In so doing, incomes of workers in the food chain are squeezed, and there is a concentration of deep poverty and hunger in rural areas. Social protection, indexed to prices, is the best way to assure food access for the poor. Higher food prices, if reflected equitably through the food chain, will stimulate farm investment and rural economic growth and cut poverty and hunger while curbing excess food consumption and waste, slowing future growth rate in food demand.		
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>		Opportunity	
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition <i>In less than 10 lines.</i> Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.	<p>Review of major weaknesses in current food management systems</p> <p>Identification of current forms, locations and scale of malnutrition and food waste, and future challenges.</p> <p>Identification of economic, social, technical issues relating to food system sustainability.</p> <p>Assessment of extent to which current policies (especially as reflected in farm subsidies) create barriers to improved food system management in the global public interest of bringing about rapid improvements in all aspects of nutrition and system sustainability.</p> <p>Review of emerging experience in social protection in relation to hunger reduction.</p>		

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

	Formulation of recommendations
Main response proposed to address the issue	<p>Let us adopt two simple global goals - first to enable all people to eat healthily, and secondly to produce all food sustainably – and apply them as common sense points of reference in all policy making processes affecting food management.</p> <p>To attain these goals, we must draw together agricultural, nutritional, environmental and social security policies. This could involve a deliberate raising of retail food prices to meet the real costs of production and to discourage waste and over-consumption; the application of fair trade type practices to ensure decent living standards for all involved in the food chain, and incentives for taking up truly sustainable production systems. This must be matched by cash or food transfers to very poor families to enable them to close the hunger gap, be more resilient to shocks and lead a more independent life, competing for opportunities on an even footing.</p> <p>The 47 countries which now subsidise farming are well placed to set the lead in making such policy changes through reallocating already committed resources, including some to help developing countries to adjust to changing price conditions.</p> <p>The proposed policy changes will yield enormous benefits in terms of reduced human suffering, better nutrition and health, higher productivity, longer life. The economic benefits will be vast, and the world will be a safer place for all of us.</p>
Main actor(s) concerned or involved in the response proposed	Governments, international organizations, all people involved in the food chain, consumers.

For the public inquiry fields below are optional

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

2. Broad typology of the issue

(*)	<i>External driver</i>	<i>Internal to food systems</i>	<i>Both</i>
Is the issue either or both?			Briefly mention how this may be the case

(*)	<i>Economic (and productive)</i>	<i>Social and Cultural</i>	<i>Governance (institutions, rights, etc.)</i>	<i>Environmental (resources, etc.)</i>	<i>Other (SPECIFY)</i>
Main nature of the issue					
Nature of the main impact of the issue on FSN					

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	<i>Classification (**)</i>		
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?	Critical point	Systemic issue	
2. Breadth: Are there many people affected?	Few	Many	
3. Scale: local/regional/global?	Local	Region	Global
	<i>Indicate here the precise location</i>	<i>Indicate here the precise region</i>	

For items 4-11 below, please use the classification [— — , — , 0, +, ++]:

Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)

4. Impact on Availability	
5. Impact on Access	
6. Impact on Utilization/ nutrition	
7. Impact on Stability	
8. Impact on most vulnerable people	Specify as appropriate
9. Impact on women	
10. Impact on children	
11. Impact on marginalized populations	Specify as appropriate
12. Cost to address the issue	Low Middle High

(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

4. Time Scale

<i>Timeframe (*)</i>	<i>Now/Short term (1-5 years)</i>	<i>Medium term (5-10 years)</i>	<i>Long term (10-20 years +)</i>
Moment when the issue will have an impact		Medium term	
Moment to act to address the issue	Sooner the better		

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.		Middle	
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6. Additional Supporting Information

Hasn't the time come for some brave new thinking on food management?¹⁰

by

Andrew MacMillan

Summary of the Argument

It is absurd, indeed criminal, that, although we produce enough food for all, over half the world's people face nutrition-endangered lives, from hunger, micro-nutrient malnutrition or excess.

Moreover, much of what we now eat – and waste - is produced in non-sustainable ways that damage the earth's scarce natural resources, contribute to climate change and keep many rural people poor and hungry.

A major flaw in current food policies, especially those tied to farm subsidies, is their implicit aim of assuring "affordable" food for all consumers on the grounds that this will enable the poor to access adequate food. The fact that so many people are still hungry shows that current policies fail to do this in spite of their huge cost.

If continued as they are, current policies will fuel a massive growth in food demand, an explosion of non-communicable diseases, continued exposure of hundreds of millions to chronic hunger, and greater pressures on natural resources and climate change processes. The growing credibility of targeted cash and food transfers as reliable, cheap, and fast-acting vehicles for enabling the poorest families to eat adequately opens the way for "smart" approaches to hunger reduction.

Let us adopt two simple global goals - first to enable all people to eat healthily, and secondly to produce all food sustainably – and apply them as common sense points of reference in all policy making processes affecting food management.

To attain these goals, we must draw together agricultural, nutritional, environmental and social security policies. This could involve a deliberate raising of retail food prices to meet the real costs of production and to discourage waste and over-consumption; the application of fair trade type practices to ensure decent living standards for all involved in the food chain, and incentives for taking up truly sustainable production systems. This must be matched by cash or food transfers to very poor families to enable them to close the hunger gap, be more resilient to shocks and lead a more independent life, competing for opportunities on an even

¹⁰ This article is based on a presentation (with the same title) made by the author at a meeting convened by the Cambridge Humanitarian Centre (<http://www.humanitariancentre.org/>) on 12 February 2014.

footing.

The 47 countries which now subsidise farming are well placed to set the lead in making such policy changes through reallocating already committed resources, including some to help developing countries to adjust to changing price conditions.

The proposed policy changes will yield enormous benefits in terms of reduced human suffering, better nutrition and health, higher productivity, longer life. The economic benefits will be vast, and the world will be a safer place for all of us.

Introduction

A public perception has been nurtured for decades that ending hunger is a forbiddingly difficult and unaffordable task. This is not the case.

It has long been assumed that hunger will disappear through a combination of increased food availability and economic growth but there is little evidence that this happens until countries share growth equitably – which few do! Instead, like most curable illnesses, the incidence of hunger and malnutrition can be cut very quickly through direct actions, smartly targeted on those people who are most affected by the problem. For most of them, the cure is to raise their capacity to buy, or, especially in rural communities, produce, adequate food for their families. This will help to end suffering and deep poverty and enable them to respond to other opportunities for self-improvement.

Hunger is literally a matter of life or death for hundreds of millions of people. We were brutally reminded of this just two years ago when 258,000 people – half of them children – died of starvation in Somalia because we failed to respond on time to early warning systems which told us what to do to prevent the disaster that happened.ⁱ

A crime has been committed against humanity in Somalia. *Famicide* is also committed every day by all governments that fail to act to prevent the predictable premature death of their people from chronic hunger, when all the means exist to do so.ⁱⁱ The world turns a very blind eye to this slow-burning diffuse famine. And nobody will end up in The Hague to be held accountable for it.ⁱⁱⁱ

In our mad world, hunger is not even a certifiable cause of death, but obesity is classified as an epidemic!

This article explores some ideas both on eradicating hunger and on moving to more sustainable food systems, setting these in the broader context of the urgent need for food management policies that deliver outcomes shaped by the desire to achieve the greatest global public good rather than to respond mainly to special interests.

A crying need for better food policies

The need for much better food management policies is obvious from just two facts.

First, that, in spite of ample cheap food for all for decades, the nutrition, health, productivity and longevity – and happiness – of well over half the world's 7 billion people is damaged by bad nutrition – almost 1 billion hungry, 2 billion suffering from various forms of malnutrition, and 1.5 billion overweight or obese.

Secondly, that much food is now produced, distributed, consumed and wasted in ways that seriously damage the natural resources – soils, fresh water, fish stocks, forests, biodiversity – that future generations will need for their survival. As they now operate, food systems are also driving the climate change processes which will disrupt future farming. And they are leading to the impoverishment and breakdown of rural societies in both developed and developing countries.

These two problems – the failure to translate expanding food output into better nutrition and the spread of unsustainable intensive farming systems – result from a laissez-faire approach to food and agricultural policies at the global level, underlain by a convenient but naïve

assumption that the market will largely take care of things. Until now the big regional and national market policy interventions – the farm subsidy programmes of most of the OECD countries and some emerging economies - have been designed to boost input-intensive farming, protect farmers' incomes and keep domestic food prices low, with little concern for global knock-on effects. In a globalised food market, however, these policies have huge international repercussions on nutrition, incomes and the pressure on natural resources in other countries, as was vividly demonstrated when the US and the EU began to promote an expansion in corn-based ethanol production.^{iv}

A flurry of trend-based forecasts has looked at world food demand – rather than needs – in 2050. Most, including FAO's latest forecast, have assumed that, when their incomes rise, people will inevitably adopt the unhealthy diets and food wasting behaviour of the “west”.^v If this dietary transition takes place in this way, it would have a bigger effect on food demand than population growth and the ending of hunger. Alarmingly, the same FAO study showed that with business as usual, there would still be 318 million hungry people by 2050, but not for lack of food!

This crystal gazing has sparked alarm about how to produce enough food to feed 9 billion people by then. The worry is that there is less “spare” land to be farmed; the rate of crop yield growth is slowing, and farming will be increasingly exposed to the impacts of climate change. The UK chief scientist concluded that “every means to improve food production should now be employed, including the widespread use of new biotechnological techniques in farming.”^{vi} Sensing future scarcities, businesses have rushed to “grab” spare land, often trampling on the land rights of local people.

What the forecasts tell me is that we cannot afford to let current trends continue unaltered. They are a wake-up call for policy shifts that will prevent the prophesies from becoming true.

Two simple goals as a point of reference for policy adjustments

The idea of setting global goals has gained credibility through the Millennium Development Goals (MDG) process. But a great weakness is that the process has failed to create a supportive policy environment for reaching them.

Let me propose two very simple global goals for the food system that, if factored into all relevant policy making, would bring us a lot closer to overcoming both problems.

Goal 1. All people should always be able to eat healthily.

Goal 2. The world's food system should operate sustainably from social, economic and environmental perspectives.

I suggest that we try to have these goals become widely accepted as common sense points of reference for any policy making related to the many dimensions of food management at global, regional and national levels – whether to do with trade, subsidies, nutrition, environment and natural resources management, climate change, food safety, health, agricultural technology, poverty reduction, economic growth and so on.

They could become the focus for civil society lobbying of intergovernmental organisations and governments as well as for shaping public opinion. At first they could help to weed out existing perverse policies and to challenge potentially non-supportive new policies. And then they could inspire proactive global and national policy making.

Four surprising figures

While writing “How to End Hunger...”^{vii} I came across 4 figures that helped me think about the dimensions of the main nutritional problems.

First, I discovered that the average gap between the current food energy consumption of the chronically hungry and the hunger threshold is about 250-300 kcal per day - about 70 grams of rice or wheat. This is equivalent to less than 30 kg of grain per year and implies that less than

2 percent of world cereal production is enough to close the food energy gap for 1 billion people. The annual cost of closing the gap is roughly \$30 billion, or well below 10% of the \$548 billion spent on farm subsidies in 2012.

Secondly, I calculated that the ecological footprint of a “healthy” adult diet (2,700 kcal and 99 g protein per day) would be 40% of that of the recent average daily food use (3,370 kcal and 148g protein per day with a substantial proportion of animal protein) in industrialised countries.

Thirdly, I learnt that the volume of food wasted annually in developed countries is greater than the net yearly food consumption of Sub-Saharan Africa.^{viii}

Finally, I found that cereal production rose by around 5% per year in Africa between 2000 and 2010, more than half being due to expanded area, but with yields also rising by a respectable 2%.

Figures such as these suggest that, even if population growth continues as forecast (and this is not inevitable), there is lots of room for reducing the future rate of growth in food demand, while also arriving at a better nourished human population, cutting future human disease burdens and leaving greater “space” for the urgent transition to sustainable production systems with lower greenhouse gas emissions. A potential win-win scenario!

The negative effects of low food prices

Surprisingly, most policy makers accept that low food prices are good. The price rise in 2008 to 2011 was generally portrayed as a “bad thing”. It pushed up the number of hungry and led to food riots in over 20 countries that failed to soften the blow on the poor.

However, when retail food prices stay too low for too long, as for most of the 20 years up to 2007–8, they have a number of negative effects. Part of this is because the food marketing system has evolved to create increasingly asymmetrical relationships between consumers, food industry and retailers, traders, and producers (especially farm labourers). Under these conditions, the results of low food prices have been:

- Downward pressure on the incomes of farmers, farm labourers and food industry workers, resulting in:
 - Their impoverishment and deteriorating living conditions
 - Accelerating rural-urban migration and growing slums
 - Disproportionately high incidence of food insecurity amongst rural people. About 70% of the hungry are rural.
 - Low resilience of rural communities and their high exposure to shocks
- Low incentives for farmers to invest and to expand output
- Drop in public investment in rural infrastructure and services and de-capitalisation of production systems
- Under-employment of the rural work force
- Abandonment of good farm land

- Non-payment for the environmental damage and greenhouse gas emissions caused by food production, leaving our children to pick up the bill
- Strong incentives for consumers to waste and over-consume food, partially fuelling the rise in obesity and related non-communicable diseases
- Governments of richer and emerging countries subsidising farmers to fill the income gap between their earnings from food production and a decent living standard.

The main positive impact of low food prices is that consumers, especially lower-income urban families, can buy more food for the same money and be better fed. In rural communities, net food-buying families also benefit, but the rise in the number of such families is itself a result of the low food prices!

Paradoxically, it is generally perceived that low food prices will help to alleviate all manifestations of hunger, while in reality they tend to depress rural economies and contribute to the collapse of rural societies and to accelerating rural–urban migration.

Link food pricing and social protection policies

By making food “affordable”, many current policies effectively subsidise all consumers including those who have adequate financial means to pay the full costs of their food. In industrialised countries, where food wastage is greatest, food expenditures typically account for as little as 10 to 15% of disposable income and so even a substantial rise in prices would not significantly impact on the household budgets of middle and high income families. In developing countries, as incomes rise, the proportion spent on food will also fall, opening a wider range of food choices.

Under current policies most governments are foregoing opportunities to use price adjustments and income redistribution measures to induce behavioural changes amongst both consumers and producers which could yield big social, nutritional, health and environmental benefits. In some cases they offer educational programmes that promote good nutrition and raise environmental awareness amongst consumers but these alone are not enough to radically change how people now eat or to steer the direction of income-induced nutritional transitions. This is particularly true because consumption patterns are much more strongly influenced by advertising than by consumer education.

There is now, as we shall show below, convincing evidence emerging from a growing number of developing countries that well-targeted social protection programmes improve the food consumption of very poor families. This opens the way for policies that deliberately push up food prices to counteract the negative impacts of low prices, outlined above.

And so, to reach the proposed goals, I suggest that governments engage in two linked sets of actions. First, that they adopt policies that raise consumer food prices with the aim of stimulating investment in expanding food output through sustainable farming systems, assuring fair incomes for food chain workers and getting consumers to offset the cost of public health and environmental damage caused by their eating habits through penalising food wastage, over-consumption, and eating of foods with high environmental footprints. This would harness consumer food purchasing power to induce badly needed rural development and livelihood improvements in farming communities. Secondly, that they use income transfers, indexed to food prices – or, in some cases, food transfers - to boost the food accessing power of the poorest families to a point at which they can escape from the hunger trap.

Towards “fair” food prices

Rising retail food prices will only elicit a sustainable production response if they are

transmitted through the food chain and deliberately linked to the uptake of sustainable farming methods. The fair trade movement shows that price transmission from consumer to producer is possible, and that higher and more predictable prices can trigger increased output of quality products grown more sustainably by small-scale farmers. If we can make all food trade, local and international, “fair” (and I see no reason why not^{ix}), mid-century food demand would readily be met, mainly by small-scale farmers responding to price incentives. Rural hunger and malnutrition should have disappeared.

In the Middle East, South Asia and China options for expanding food production are tightening because of land and water constraints. However, where future food needs will increase fastest (in much of Africa), there is still ample room for raising cropped areas and yields. There is a large gap between current and potential yields, even when using sustainable practices. A rise in farm-gate prices would release the latent production capacity of small-scale farmers when they feel confident that the additional income will exceed the cost of engaging amply available extra labour. If higher food prices are ultimately reflected in a “living wage” for farm workers – paid for by consumers - this alone would make a huge dent in rural poverty and hunger.

Confidence that a move towards more sustainable farming systems is already under way is evidenced by the rapid uptake by small-scale farmers, especially in developing countries, of minimum tillage (“conservation agriculture”)^x, SRI (System of Rice Intensification)^{xi}, agro-forestry, and organic farming systems. Most importantly, these innovations raise labour productivity but they also rebuild soil fertility, make better use of scarce land and water resources, lead to greater yield stability and cut fossil fuel use: in some cases they store more carbon in the soil. Farmers like them because investment needs are small and net incomes rise.^{xii} As oil prices rise, their comparative advantages over conventional farming systems will grow.

The uptake of such systems could be accelerated by adjustments in the policies of the 47 countries that now subsidise farming. However, though the recent global food price rises opened opportunities for painlessly cutting farm support subsidies, the OECD states that exactly the opposite is happening, especially through rising farm input subsidies in Asian emerging economies.^{xiii}

The EU’s Common Agricultural Policy (CAP) has moved away gradually from direct production subsidies, high import tariffs and export subsidies in response to WTO pressure. However its shift towards “decoupled” financial support for farm incomes still appears to have a food price depressing impact in Europe and beyond. The current negotiations around CAP 2014-20 and related national policy-making seem to be leading to compromises which are unlikely either to get EU consumers to come much closer to meeting the full costs of their food or to reducing trade distortion effects at the global level. The new CAP is also criticised for “greenwashing” agriculture, losing opportunities to drive the shift to truly sustainable food production.^{xiv}

Interestingly, the USA has combined social protection (through food stamps) and farm subsidies in the same policy instrument (the Farm Bill). However, as pointed out by The Economist, recent action has been designed to minimise that linkages between the two components! The farm subsidy component, now paid mainly in the form of crop insurance, tends to encourage over-production of cereal crops and to concentrate support on the largest farmers – with 10% of farmers receiving 75% of the available funds.^{xv} The new Bill includes innovative programmes for sustainable agriculture by supporting local food, organic agriculture, rural development, specialty crops, and start-up farmers, but, like the new CAP, it continues to support unfair competition from US producers on the global market.

Wouldn’t it be better if countries that now subsidise farming look to policies that favour a rise

in domestic consumer and farm gate prices, opening the way for a progressive shift away from farm income support? This would free up fiscal resources for targeted income supplements for poor consumers to enable them to eat healthily even as prices rise. At the same time, input subsidies would be replaced by more publicly funded research and development on sustainable production systems, and by greater rewards for producers to convert to low-input but high-output farming practices. The overall net fiscal cost of subsidies would fall and could be increasingly offset by rising taxation on high footprint foods, carbon emissions, water pollution and construction on farm lands. Some savings in developed countries could be applied to underpin similar policy adjustments in developing countries, as the higher food prices begin to have a knock-on effect on global markets.

The case for social protection

Moving to seriously higher food prices will take time because of consumer and farmer apprehensions and perceived political risks. This means that, in the short term, redistributive measures are vital to enable the 840 million chronically hungry people to access their food needs. Without additional resources, the hungry are caught in a vicious circle from which escape by their own means alone is virtually impossible. Hunger exposes them to weakness, ill health and shortened lives, and prevents them from working and so from earning the money they need to buy adequate food. Those nations that have succeeded in breaking the hunger cycle have all engaged in some form of income or food transfer, targeted on very poor families.

Of these experiences, I have first-hand knowledge of Brazil's Zero Hunger Programme, launched by Lula on his first day as President in January 2003. It combines nutritional, agricultural and social protection policies. It includes universal school lunches, a deliberate move to harness incremental food demand to stimulate small-scale farming, and accelerated land reform. Much the biggest component (*Bolsa Familia*) provides monthly cash transfers to over 12 million poor families, channelled when possible through adult women family members. The results are impressive: a rapid fall in hunger; higher labour force participation; incomes for the poor rising 5 times as fast as those of the rich; big drops in under-5 child mortality and stunting; better public health and school attendance, and a greater status for women in the home and community. By raising minimum wages simultaneously, government reinforced the impact of the cash transfer programme.^{xvi}

Convincing feedback on the success of such programmes, including their impact on reducing "distress" shedding of assets in times of shock, is coming from a growing number of African and Latin American countries.^{xvii} But a main blockage to their still wider adoption is a common perception that they create dependencies and induce laziness. While this may be so in some developed country welfare programmes, modest transfers to people living under conditions of extreme deprivation enable them to access adequate food. This frees them from social exclusion and assures them the energy they need to stand on their own feet, study to good effect, be less prone to illness and compete for jobs. Responsible use is made of such funds and in rural areas what is not used on food consumption is invested in farm assets.^{xviii}

An added reason for enabling good nutrition is that it is a viable investment. Nobel Laureate Robert William Fogel claims that "the combined effect of the increase in dietary energy available for work, and of the increased human efficiency in transforming energy into work output appears to account for about 50 percent of the British economic growth since 1790".^{xix} At that time, average daily food consumption in Britain was about 2200 kcals per person which is about the mean Dietary Energy Supply (DES) now in sub-Saharan Africa. There is no reason why the results of increasing human energy availability and stature – and hence energy efficiency – would be any different in Africa today, so the opportunity now exists for countries to boost their economies partly through better nutrition without waiting 200 years.

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Risks

The biggest risk is that the proposed changes will not be allowed to happen because of the huge strength of vested interests in food management, exemplified by the concentration of much of ownership of farm input and output processing businesses, the international food trade, and the retailing of food in just a few corporations.

Partly because of this, there is a real danger of food price rises moving faster than the creation of well-run nationwide social protection programmes, leaving the poor in a worse condition than before the process of adjustment.

A third risk is that higher farm gate prices could stimulate a rise in food output at the same time as the rate of growth in demand is slowing, thereby creating surpluses and a possible subsequent collapse in prices.

Closing thought

We all have a long way to go to understand what it means to be responsible citizens in our globalised society. Amidst growing inequalities, what are our obligations towards each other, and how do we translate these into practical actions to close the gaps? And to what extent, as this generation's stewards of the world's resources, are we giving enough consideration to the needs and interests of future people in our decision-making?

Unless we pull ourselves together very quickly, future historians will brand us as a selfish bunch that has squandered its huge advances in knowledge, communications and wealth by failing to apply them for the benefit of all humanity.

As a start, let's each see how, in our own lives, we can apply common sense towards ending hunger by 2025!

Evidence

See above, and references (below)

How to create an institution setting for global policy making in which participants put the attainment of the global good ahead of national interests and pandering to vested interests.

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of Teramo, September 2011

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Encuesta del Grupo de alto nivel de expertos

Cuestiones nuevas y decisivas para la seguridad alimentaria y la nutrición

Cuestionario

Datos del encuestado

Nombre, apellido e institución	Armando Sánchez – Ministerio de Desarrollo Rural y Tierras	
¿Responde en nombre de su institución o a título particular?	En nombre de la institución	
¿Está de acuerdo con que esta contribución se ponga a disposición del público como parte del proceso?	Sí	
País de la persona o institución encuestada. Por favor, indique si es de ámbito regional o internacional, según proceda	Bolivia – Ministerio de Desarrollo Rural y Tierras	

1. Resumen de la cuestión

Cuestión <i>en 2 líneas</i>		
Descripción de la cuestión <i>en menos de 5 líneas</i>	La incorporación de la SOBERANÍA ALIMENTARIA, se constituye en un desafío y una oportunidad para las políticas nacionales y regionales, que reconoce el derecho de los productores sus costumbres y el manejo de los recursos naturales.	
La cuestión, ¿es un desafío para la seguridad alimentaria y la nutrición? ¿O representa una oportunidad? <i>Sírvase marcar la casilla adecuada</i>	<i>Desafío</i>	<i>Oportunidad</i>
Metodología y enfoque utilizados para determinar la cuestión y evaluar su importancia para la seguridad alimentaria y la nutrición. <i>En menos de 10 líneas. En la sección 6 más abajo puede facilitarse información adicional de apoyo o descriptiva (bibliografía, informes, informes de expertos, análisis, etc.).</i>	La metodología utilizada, fue participativa, con productores agropecuarios, las organizaciones sociales, Ministerios involucrados y representantes de senadores y diputados de Bolivia. El enfoque es integral, más allá del concepto de la seguridad alimentaria, es decir enriquece la misma, dando prioridad y visibilidad a los productos locales regulando las importaciones de productos que son necesarias.	
Respuesta principal que se propone para abordar la cuestión	La seguridad alimentaria describe que habrá uso, disponibilidad, acceso y estabilidad de alimentos, (los mismos pueden ser importados, en consecuencia, ser dependientes). La Soberanía Alimentaria involucra los elementos de la seguridad alimentaria y adiciona el reconocimiento de los productores y prioriza el desarrollo de los productos agropecuarios locales y el manejo de los recursos naturales.	

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Principales agentes afectados por la respuesta que se propone o implicados en ella	El Estado, conjuntamente la sociedad civil, entre ellos; Ministerios, Asamblea Legislativa, los pequeños (<i>campesinos, indígenas, originarios, afro-bolivianos</i>), medianos y grandes productores, participan en los procesos de planificación integral para el desarrollo del sector agropecuario hacia la soberanía alimentaria y nutricional.
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Los apartados siguientes son opcionales para la encuesta pública

2. Tipología general de la cuestión

(*)	Factor externo a los sistemas alimentarios	Factor interno de los sistemas alimentarios	Ambos
¿Corresponde la cuestión a una de las tipologías o a ambas?	Adecua las importaciones	Fortalece la producción interna.	Fortalece los procesos de la oferta de alimentos en cada país y permite definir los alimentos que se importarán y exportarán adecuadamente.

(*)	Económica (y productiva)	Social y cultural	Gobernanza (instituciones, derechos, etc.)	Ambiental (recursos, etc.)	Otra (especifíquese)
Naturaleza principal de la cuestión	X	X	X	X	Hace frente a la dependencia externa y al cambio climático
Naturaleza del efecto principal de la cuestión en la soberanía alimentaria y la nutrición	Incrementa equitativamente los ingresos	Profundiza el respeto y complementariedad	Planificación integral con productores y Estado	Recuperación y manejo adecuado de recursos naturales	Atención oportuna a la población y reduce impacto negativo, del cambio climático

(*) Sírvase marcar las casillas. En la sección 6 más abajo puede facilitarse información adicional de apoyo o descriptiva.

3. Características de la cuestión

	Clasificación (**)		
1. Profundidad: ¿Afecta la cuestión al conjunto de los sistemas alimentarios y nutricionales o a determinadas partes de ellos?			Involucra a la población conjunta
2. Alcance: ¿Afecta a muchas personas?			Beneficia a todos
3. Ámbito: ¿Local, regional o mundial?	Local	Regional	Mundial
	Municipal	Departamental nacional	
En los puntos 4-11 a continuación, sírvase utilizar la clasificación [— — , — , 0, +, ++]: Efecto muy negativo (— —) / Negativo (—) / Bajo (0) / Positivo (+) / Muy positivo (++)			
4. Efecto en la disponibilidad	++		

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5. Efecto en el acceso	++		
6. Efecto en la utilización/nutrición	++		
7. Efecto en la estabilidad	++		
8. Efecto en las personas más vulnerables	Reduce la vulnerabilidad		
9. Efecto en las mujeres	Incrementa índice de nutrición		
10. Efecto en los niños	Incrementa índice de nutrición		
11. Efecto en poblaciones marginadas	Amplia la atención a los marginados		
12. Costo para abordar la cuestión		Medio	

(**) Sírvase marcar las casillas o clasificar los efectos y facilitar datos resumidos cuando proceda. En la sección 6 más abajo puede facilitar información adicional de apoyo o descriptiva, datos y fuentes.

4. Marco temporal

Calendario (*)	Ahora/corto plazo (1-5 años)	Medio plazo (5-10 años)	Largo plazo (10-20 años +)
Momento en que la cuestión tendrá efectos		X	X
Momento de adoptar medidas para abordar la cuestión	X		

(*) Sírvase marcar las casillas. En la sección 6 más abajo puede facilitarse información adicional de apoyo o descriptiva.

5. Grado de confianza

Solidez de la base de conocimientos actualmente disponible			Alta
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6. Información adicional de apoyo

Información adicional

La formulación e implementación de normativas y políticas nacionales, para el fomento de la producción agropecuaria es de vital importancia, para el logro de la soberanía alimentaria y nutricional.

Es menester señalar que la soberanía alimentaria, no restringe el intercambio de productos agropecuarios entre países, al contrario genera mayores oportunidades de diversificarlas.

Pruebas

Bolivia, en base a las normativas y políticas para el desarrollo del sector agropecuario, está implementando programas y proyectos para el incremento de alimentos agropecuarios para la población nacional.

Asimismo, ha promovido y difundido en el ámbito internacional las bondades de la quinua boliviana.

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Lagunas de conocimientos

Es importante resaltar que la seguridad alimentaria puede ser satisfecha con alimentos provenientes de otros países (*lo que se convierte en un factor **de dependencia**, con el riesgo de que cuando en los países externos, no exista disponibilidad de alimentos, la situación se convierte en inseguridad alimentaria*). Por ello es que, la soberanía alimentaria, además de contemplar a la seguridad alimentaria, involucra otros factores, ej: a la persona (productor), respeto a sus costumbres, políticas de fomento de la producción local, manejo adecuado de recursos naturales, etc.

Referencias

Se describe dos principales referencias, por las cuales se llevan a la práctica lo anteriormente descrito:

- 1) Ley N° 144 “Revolución Productiva Comunitaria Agropecuaria”, promulgada por el Excmo. Presidente del Estado Plurinacional de Bolivia, en fecha 26 de junio de 2011.
- 2) Ley N° 338 “de organizaciones económicas campesinas, indígena originarias – OECA’s y de organizaciones económicas comunitarias – OECOM’s para la integración de la agricultura familiar sustentable y la soberanía alimentaria “, promulgada en fecha 26 de enero de 2013.

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HLPE Inquiry

Critical and Emerging Issues for Food Security and Nutrition

Questionnaire

About the respondent

Name, Surname and Institution	Susan Bragdon, Quaker United Nations Office, Geneva		
Dou you answer on behalf of your institution, or as an individual?	On behalf the Quaker United Nations Office, Geneva		
Do you agree if this contribution is made available to the public as part of the proceedings?	YesX		
Country of the responding individual/institution Please mention international or regional, the case being	The Quaker United Nations Office (QUNO), is an NGO that undertakes the work at the United Nations on behalf of the Friends World Committee for Consultation (Quakers)		

1. Overview of the issue

Issue <i>in 2 lines</i>			
Description of the issue <i>in less than 5 lines</i>	<p>In order to effectively discuss matters related to food security and to coordinate global food security responses, the CFS must understand the global policy context within which hunger takes place. One of the four pillars of food security as defined by FAO is access and global economic relations set the context for access to food. Trade and investment rules and how we govern these systems has direct implications for food security because it sets the market conditions within which people access food. The rules and governance of them also has implications for what is grown and by whom.</p>		
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>	Challenge	Opportunity	<p>It is both a challenge and an opportunity. If food security, people and the environment are made central objectives of trade and investment rules (rather than market efficiencies or</p>

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			ideas about comparative advantage) the rules have a role to play in supporting food security and nutrition.
<p>Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition</p> <p><i>In less than 10 lines.</i> Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.</p>	<p>As the preeminent place to discuss all matters related to food security, many believe that the CFS needs to have the space to make recommendations to the World Trade Organization on food security measures within the trading regime. The CFS is also a place where the orientation of trade regimes generally and their impact should be discussed. The CFS needs to make clear that it has legitimacy to discuss how trade shapes the context for food security. It has the potential to have a positive influence on food trade norms that can be reformed as necessary to reflect the very real problems of hunger and malnutrition in this world.</p>		

<p>Main response proposed to address the issue</p>	<p>For the CFS to have a standing agenda item on trade rules and to make recommendations to the current trading regime as well as investigate and illuminate efforts to create alternative frameworks that fully support food security and nutrition.</p>		
<p>Main actor(s) concerned or involved in the response proposed</p>	<p>There are numerous IGOs, NGOs and CSOs involved in this issue. FAO, IFAD and WFP are all involved on global food security governance, and FAO in particular does research between global trading and investment systems and food access. Generally, however the focus has been on availability and utilization. QUNO is working with others to develop a new framework for trade and investment with food security as a central objective. It will investigate what new is needed and also what this might imply for existing regimes. A non-exhaustive list of other CSO actors include: Action Aid, The South Center, Biovision, International Centre for Trade and Development, the Nexus Foundation, the ETC Group, the Institute for Agriculture and Trade Policy, the Open Society Institute, Lascaux Process, German Watch, Asociacion Nacional de Empresas Comercializadoras de Productores del Campo, and the Third World Network.</p>		

For the public inquiry fields below are optional

2. Broad typology of the issue

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

(*)	<i>External driver</i>	<i>Internal to food systems</i>	<i>Both</i>
Is the issue either or both?	X		Briefly mention how this may be the case

(*)	<i>Economic (and productive)</i>	<i>Social and Cultural</i>	<i>Governance (institutions, rights, etc.)</i>	<i>Environmental (resources, etc.)</i>	<i>Other (SPECIFY)</i>
Main nature of the issue	X	X	X	X	
Nature of the main impact of the issue on FSN					

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	<i>Classification (**)</i>		
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?	Critical point	X systemic	
2. Breadth: Are there many people affected?	Few	X Many	
3. Scale: local/regional/global?	Local	Region	X Global Affects all
	<i>Indicate here the precise location</i>	<i>Indicate here the precise region</i>	

For items 4-11 below, please use the classification [— — , — , 0, +, ++]:

Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)

4. Impact on Availability	
5. Impact on Access	
6. Impact on Utilization/ nutrition	
7. Impact on Stability	
8. Impact on most vulnerable people	Specify as appropriate
9. Impact on women	
10. Impact on children	
11. Impact on marginalized populations	Specify as appropriate
12. Cost to address the issue	Low Middle High

(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

4. Time Scale

<i>Timeframe (*)</i>	<i>Now/Short term (1-5 years)</i>	<i>Medium term (5-10 years)</i>	<i>Long term (10-20 years +)</i>
Moment when the issue will have an impact			
Moment to act to address the issue			

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.	Low	Middle	High
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6. Additional Supporting Information

<i>Additional information</i>
<i>Evidence</i>
<p><i>Knowledge gaps</i></p> <p>There is a fair amount of work around the relationship between the current trade rules and food security, though precise cause and effect amongst variables are not always well understood. There is a great need to deepen this understanding in order to build a framework of trade rules that support food security and nutrition as a primary goal and use trade rules as means towards that end. Where trade rules can support food security and nutrition and when there is a need for other measures whether within or outside the current regimes is not well understood. CFS is the appropriate forum to have such discussions amongst stakeholders and to share its conclusions widely, including in the form of recommendations to the World Trade Organization.</p>
<p><i>References</i></p> <p>De Schutter, O (2011). The World Trade Organization and the Post-Global Food Crisis Agenda. Putting Food Security First in the International Trade System. UN Special Rapporteur on the Right to Food. Briefing Note No. 4. November</p> <p>Konandreas, P. (2011). "Global Governance: international policy considerations". In Prakash A. (ed) Safeguarding Food Security in Volatile Global Markets. FAO. Rome: 345-376.</p> <p>Meilke K. (2008). Does the WTO have a Role in Food Crises?" The Estey Centre Journal of</p>

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

International Law and Trade Policy (9) 2: 146-155.

Trade and Environment Review 2013 Wake up Before it is Too Late: make agriculture truly sustainable now for food security in a changing climate. UNCTAD/DITC/TED/2012/3 see chapter 5 The Importance of International Trade and Trade Rules for Transforming Global Agriculture. By Lim Li Ching and Martin Khor

Haberli C (2010). Food Security and the WTO Rules. In: Karapinar, B., Haberli, C. (Ed): Food Crises and the WTO. Cambridge University Press

Murphy S (2009). Free trade in agriculture: A bad idea whose time is done. *Monthly Review*, July/August 2009.

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.



HLPE Inquiry

Critical and Emerging Issues for Food Security and Nutrition

Questionnaire

About the respondent

Name, Surname and Institution	Shehu Latunji AKINTOLA, Lagos State University, Nigeria		
Dou you answer on behalf of your institution, or as an individual?	On behalf	* As individual	
Do you agree if this contribution is made available to the public as part of the proceedings?	* Yes	No	
Country of the responding individual/institution Please mention international or regional, the case being	Nigeria/ Lagos State University Regional		

1. Overview of the issue

Issue <i>in 2 lines</i>	Poor data and policy strategy.		
Description of the issue <i>in less than 5 lines</i>	At various government levels, the qualities of data at social and ecological levels are limiting. Again, policy direction emphasizing aquaculture over artisanal fisheries is limiting.		
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>	*Challenge	Opportunity	It depends (please specify)..
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition <i>In less than 10 lines. Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.</i>	* Engagement and interactive session with policy makers along with field experience. Several editions of The State of World Fisheries and Aquaculture		

Main response proposed to address the issue	Engagement of all stakeholders, government, academics and fishers towards fashioning out models that will facilitate the process of data gathering. In the same light, there is the need to provide a forum to discuss the policy direction of the government towards the need to emphasize a win-win situation which push for a deliberate step towards ensuring that both sub sectors are given priority attention in funding and provision of support.
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Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

Main actor(s) concerned or involved in the response proposed	<ul style="list-style-type: none"> ✓ Academics ✓ Governments ✓ NGOs ✓ Fishing communities/ cooperative association ✓ Fish farmers
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For the public inquiry fields below are optional

2. Broad typology of the issue

(*)	<i>External driver</i>	<i>Internal to food systems</i>	<i>Both</i>
Is the issue either or both?			Data is external since data are required at different levels (socio economic, household, production, stock assessment etc). Policy issues are internal as both policy makers and other stakeholders are considered as part of the internal working mechanism of the fish food systems.

(*)	<i>Economic (and productive)</i>	<i>Social and Cultural</i>	<i>Governance (institutions, rights, etc.)</i>	<i>Environmental (resources, etc.)</i>	<i>Other (SPECIFY)</i>
Main nature of the issue	*	*	*	*	
Nature of the main impact of the issue on FSN	*	*		*	

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	<i>Classification (**)</i>		
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?	Critical point	Systemic issue**	
2. Breadth: Are there many people affected?	Few	Many**	
3. Scale: local/regional/global?	Local*	Region	Global
	<i>Indicate here the precise location Nigeria</i>	<i>Indicate here the precise region</i>	

For items 4-11 below, please use the classification [— — , —, 0, +, ++]:
 Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)

4. Impact on Availability	- -
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Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

5. Impact on Access	-	-	
6. Impact on Utilization/ nutrition	-	-	
7. Impact on Stability	-	-	
8. Impact on most vulnerable people	Specify as appropriate Fishing community		
9. Impact on women	-	-	
10. Impact on children	-	-	
11. Impact on marginalized populations	Specify as appropriate Rural and urban poor, small scale fishers		
12. Cost to address the issue	Low	Middle**	High

(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

4. Time Scale

<i>Timeframe (*)</i>	<i>Now/Short term (1-5 years)</i>	<i>Medium term (5-10 years)</i>	<i>Long term (10-20 years +)</i>
Moment when the issue will have an impact		*	
Moment to act to address the issue	*		

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.	Low*	Middle	High
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6. Additional Supporting Information

<i>Additional information</i>
<i>Evidence</i> * There are no fisheries data base in Nigeria at species levels at state tier of governance. The national data are aggregated. Historical data at species level are very critical to planning and management which eventually affects issues of FSN. * Any researcher working on stock assessment for example will have notice that there are so such historical data for which concrete work can be done. Therefore, limiting the capacity of researchers to advice on the mitigation or management.
<i>Knowledge gaps</i> Data acquisition and storage.
<i>References</i> FAO. 2012 <i>The State of World Fisheries and Aquaculture 2012</i> . Rome. 209 pp.

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.



HLPE Inquiry

Critical and Emerging Issues for Food Security and Nutrition

Questionnaire

About the respondent

Name, Surname and Institution	Geoff Tansey	
Dou you answer on behalf of your institution, or as an individual?		As individual
Do you agree if this contribution is made available to the public as part of the proceedings?	Yes	
Country of the responding individual/institution Please mention international or regional, the case being	UK	

1. Overview of the issue

Issue <i>in 2 lines</i>	We need major paradigm shifts to move to fair and sustainable food systems for thriving people	
Description of the issue <i>in less than 5 lines</i>	Without paradigm shifts in our economic, geopolitical and farming approaches the piecemeal, often technocratic, approaches to food security and nutrition will fail to achieve a well-fed world at peace.	
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>		It depends - can be both, depending how it is approached
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition <i>In less than 10 lines.</i> Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.	Reflection on work in peace studies, systems thinking, economics, food ethics and work on food system for 40 years, all briefly summarized, with references, in paper "Food and Thriving people, Paradigm shifts for fair and sustainable food systems" referred to in section 6	

Main response proposed to address the issue	Take up the challenge of addressing these big picture issues – which includes shifts from a fossil fuelled farming systems, refocusing R&D and innovation, new ecological economic frameworks - whilst at the same time building on the various local, national and regional developments, often pioneered by civil society or innovative small businesses that are challenging the prevailing models and paradigms and showing alternatives.
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Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

Main actor(s) concerned or involved in the response proposed	Civil society organisations, critical thinkers in academia and business, policy makers in governments and a range of international organisations
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For the public inquiry fields below are optional

2. Broad typology of the issue

(*)	<i>External driver</i>	<i>Internal to food systems</i>	<i>Both</i>
Is the issue either or both?			The current neo-liberal economic paradigm is external to the system but shapes the direction of travel, nature of innovation, distribution of reward, while many approaches to farming systems changes can be developed within it but only flourish as part of a revision of economics and geo-politics

(*)	<i>Economic (and productive)</i>	<i>Social and Cultural</i>	<i>Governance (institutions, rights, etc.)</i>	<i>Environmental (resources, etc.)</i>	<i>Other (SPECIFY)</i>
Main nature of the issue	x	x	x	x	
Nature of the main impact of the issue on FSN					

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	<i>Classification (**)</i>		
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?			Systemic issue
2. Breadth: Are there many people affected?			Many
3. Scale: local/regional/global?			Global

For items 4-11 below, please use the classification [— — , —, 0, +, ++]:
Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)

4. Impact on Availability	-
5. Impact on Access	-

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

6. Impact on Utilization/ nutrition	-		
7. Impact on Stability	--		
8. Impact on most vulnerable people	Specify as appropriate		
9. Impact on women	-		
10. Impact on children	-		
11. Impact on marginalized populations	Specify as appropriate		
12. Cost to address the issue			High

(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

4. Time Scale

<i>Timeframe (*)</i>	<i>Now/Short term (1-5 years)</i>	<i>Medium term (5-10 years)</i>	<i>Long term (10-20 years +)</i>
Moment when the issue will have an impact	X	X	X
Moment to act to address the issue	X		

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.		Middle	
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6. Additional Supporting Information

<i>Additional information</i>
<i>Evidence</i> Growing inequality globally, failure to meet the many food and nutrition targets and goals set since 1974 world food summit, continuing high level of all forms of malnutrition, inability to address climate change globally, shifting geopolitics with no suitable global governance structure to deal with major private transnational actors, food price volatility and failure to deal adequately with speculation post 2008 crash, financialisation of food system. Numerous reports such as IAASTD, and works by the likes of Ha-Joon Chang, Tim Jackson, Olivier de Schutter, farmers and peasant movements and many more.
<i>Knowledge gaps</i> How to bring about the necessary change in a peaceful ordered way without the conflicts and disruption that historically have brought about such major change. Developing better human development indicators, new trade and investment relationships and rules (including intellectual property rules), sharing knowledge and experience from communities around the world doing things differently but facing challenges in the face of the dominant economic system and power relations.
<i>References</i> "Food and thriving people: Paradigm shifts for fair and sustainable food systems" in <i>Food and Energy Security</i> , Vol 2 No 1, pp1-11, open access http://onlinelibrary.wiley.com/doi/10.1002/fes3.22/full

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.



HLPE Inquiry

Critical and Emerging Issues for Food Security and Nutrition Questionnaire

About the respondent

Name, Surname and Institution	Stella Joy Active Remedy Ltd	
Dou you answer on behalf of your institution, or as an individual?	Active Remedy Ltd	As individual
Do you agree if this contribution is made available to the public as part of the proceedings?	Yes	
Country of the responding individual/institution Please mention international or regional, the case being	United Kingdom	

1. Overview of the issue

Issue <i>in 2 lines</i>	Securing the fresh water cycle through protecting and restoring the environments it depends upon		
Description of the issue <i>in less than 5 lines</i>	Adequate quantity of freshwater is dependent upon the freshwater cycle functioning effectively. This is dependent upon the protection and restoration of the ecosystems it depends upon to fulfill it's renewable and recharge functions.		
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>	Challenge	Opportunity	It is both a challenge and opportunity
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition <i>In less than 10 lines.</i> Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.	Water Security is central to achieving food security. <i>“Ensuring that ecosystems are protected and conserved is central to achieving water security both for people and for nature. Ecosystems are vital to sustaining the quantity and quality of water available within a watershed, on which both nature and people rely.” (U.N Analytical Brief,2013)</i> These ecosystems include mountains, mountain forests, cloud forests and wetlands.		
Main response proposed to address the issue	“Given their important role in water supply and regulation, the protection, sustainable management and restoration of mountain ecosystems will be essential.” (UNESCO, 2013, ‘Climate Change impacts on Mountain Regions of the World’)		

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

Main actor(s) concerned or involved in the response proposed	Governments, UN, Civil Society, Mountain Communities
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For the public inquiry fields below are optional

2. Broad typology of the issue

(*)	External driver	Internal to food systems	Both
Is the issue either or both?	*	*	Water Security affects all aspects of food security, nutrition, health and poverty

(*)	Economic (and productive)	Social and Cultural	Governance (institutions, rights, etc.)	Environmental (resources, etc.)	Other (SPECIFY)
Main nature of the issue	*	*	*	*	
Nature of the main impact of the issue on FSN	*	*	*	*	

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	Classification (**)		
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?	Critical point		
2. Breadth: Are there many people affected?	Many		
3. Scale: local/regional/global?			Global
	<i>Indicate here the precise location</i>	<i>Indicate here the precise region</i>	

For items 4-11 below, please use the classification [— — , —, 0, +, ++]:

Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)

4. Impact on Availability	++
5. Impact on Access	++
6. Impact on Utilization/ nutrition	++
7. Impact on Stability	++
8. Impact on most vulnerable people	Adequate quantity of fresh water affects every body
9. Impact on women	++
10. Impact on children	++
11. Impact on marginalized populations	Poverty reduction through employment

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	opportunities throughout mountain regions worldwide	
12. Cost to address the issue		High

(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

4. Time Scale

<i>Timeframe (*)</i>	<i>Now/Short term (1-5 years)</i>	<i>Medium term (5-10 years)</i>	<i>Long term (10-20 years +)</i>
Moment when the issue will have an impact	*		
Moment to act to address the issue	*		

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.			High*
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6. Additional Supporting Information

Additional information

“Mountain ecosystems such as mountain forests, cloud forests, wetlands and grasslands play vital roles in water storage and supply, erosion prevention, reduction of peak flows, reduction of flood risks, water filtering and improvement of water quality.”

(UNESCO, 2013, ‘Climate Change impacts on Mountain Regions of the World’)

“ Progress in many of the future post-2015 goals will be determined by how governments respond to the water crisis and whether they value water-related ecological services and incorporate these services into decision-making and development strategies.” (UNDP, 2006). (UN Analytical Brief)

Evidence

“We recognize the key role that ecosystems play in maintaining water quantity and quality and support actions within the respective national boundaries to protect and sustainably manage these ecosystems.”

(The Future We Want RES/A/66/288 para.122)

“Water security is also the foundation for food and energy security, and for overall long-term social and economic development. Water underpins health, nutrition, equity, gender equality, well-being and economic progress, especially in developing countries. But equitable water supply and quality problems are also threatening the security of some of the most developed countries in the world. In the USA, for example, water availability has already been identified as a national security concern, threatening its ability to meet the country’s water, food and energy needs.” (U.N Water Security 2012)

Knowledge gaps

References

UN The Future We Want RES/A/66/288 para.122

UNESCO, 2013, ‘Climate Change impacts on Mountain Regions of the World’

U.N Analytical Brief, 2013

U.N Water Security 2012, The Global Water Crisis Addressing an Urgent Security Issue



**Enquête du Groupe d'experts de haut niveau (HLPE)
Questions cruciales et émergentes pour la sécurité
alimentaire et la nutrition**

Questionnaire

Renseignements concernant le contributeur

Nom, prénom et institution	POPOCKO Boniface, Institut Centrafricain de la Recherche Agronomique (ICRA)	
Répondez-vous au nom de votre institution ou à titre privé?		À titre privé:
Acceptez-vous que cette contribution soit mise à la disposition du public dans le cadre des actes de la consultation?	Oui	
Pays de la personne ou de l'institution qui répond. Veuillez mentionner, le cas échéant, «international» ou «régional».	République Centrafricaine	

1. Aperçu de la question/du phénomène

Énoncé <i>en 2 lignes</i> .	Impact de la recrudescence des événements militaires politiques sur la sécurité alimentaire et la nutrition en République Centrafricaine	
Description <i>en moins de 5 lignes</i> .		
La question/le phénomène est-il un <i>défi</i> et/ou une <i>opportunité</i> pour la sécurité alimentaire et la nutrition? <i>Veuillez cocher la case appropriée.</i>	Défi	
Méthode et approche utilisées pour déterminer la question/le phénomène et évaluer son importance pour la sécurité et la nutrition. <i>En moins de 10 lignes.</i> Des informations complémentaires ou descriptives (publications, rapports, rapports d'experts, analyses, etc.) peuvent être fournies dans la section 5 ci-dessous.	<p>La République Centrafricaine tire la majeure partie de ses ressources de l'agriculture. Le niveau de vie de la population en dépend largement.</p> <p>Cependant la recrudescence des crises militaires-politiques qu'a connues le pays a accentué l'appauvrissement en milieu rural provoquant ainsi l'insécurité alimentaire et la malnutrition. Ainsi en 2008 l'enquête superficie rendement et production dans certaines préfectures du pays a permis de disposer une nouvelle physionomie de l'agriculture centrafricaine</p>	
Principale action proposée pour résoudre le problème (ou saisir l'opportunité).	<ul style="list-style-type: none"> - Améliorer le cadre de vie de la population rurale ; - Atteindre l'autosuffisance et la sécurité alimentaire de la Nation - Contribuer durablement à la relance de la croissance économique nationale. 	

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

Principal (aux) acteur(s) concerné(s) ou participant à l'action proposée.	Cette action proposée concerne : - L'appui des partenaires au développement tels que Union Européenne, BAD, BM, FIDA et OPEP - La contribution de l'Etat ; - La participation des bénéficiaires.
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Les champs suivants sont facultatifs pour l'enquête publique

2. Typologie élargie de la question/du phénomène

(*)	Facteur déterminant externe	Interne aux systèmes alimentaires	Les deux
Le phénomène est-t-il l'un, l'autre ou les deux?			Expliquez brièvement

(*)	Économique (et productive)	Sociale et culturelle	Gouvernance (institutions, droits, etc.)	Environnemental (ressources, etc.)	Autre PRÉCISER
Nature du phénomène					Militaro politique
Nature de l'impact du phénomène sur la sécurité alimentaire et la nutrition	*	*		*	

(*) Veuillez cocher les cases. Des informations complémentaires ou descriptives (publications, rapports, rapports d'experts, analyses, etc.) peuvent être fournies dans la section 6 ci-dessous.

3. Attributs du phénomène

	Classification (**)	
1. Étendue: Est-il pertinent pour les systèmes alimentaires et nutritionnels dans leur ensemble ou pour des parties spécifiques de ces systèmes?	Point critique	
2. Portée: Combien de personnes touche-t-il?		Beaucoup
3. Échelle: locale/régionale/mondiale?	Locale	Régionale
		8 Préfectures de la République Centrafricaine : Lobaye, Ombellam'Poko Kemo, Ouaka, Basse-Kotto Ouham-Pende Ouham Mbomou

Pour les points 4 à 11 ci-dessous, veuillez utiliser l'échelle [— — , — , 0, +, ++]:

Impact très négatif (— —) / négatif (—) / faible (0) / positif (+) / très positif (++)

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

4. Impact sur la disponibilité	—		
5. Impact sur l'accès	—		
6. Impact sur l'utilisation/la nutrition	— —		
7. Impact sur la stabilité	—		
8. Impact sur les personnes les plus vulnérables	— —		
9. Impact sur les femmes	— —		
10. Impact sur les enfants	— —		
11. Impact sur les populations marginalisées	— — (peuhl)		
12. Coût de la résolution du problème (ou pour saisir l'opportunité)			Élevé

(**) Veuillez cocher les cases ou classer les impacts et fournir des données synthétiques si besoin est. Des informations complémentaires ou descriptives peuvent être fournies dans la section 6 ci-dessous.

4. Période

<i>Horizon (*)</i>	<i>Actuellement/ À court terme (1-5 ans)</i>	<i>À moyen terme (5-10 ans)</i>	<i>À long terme (10-20 ans ou plus)</i>
Moment où le phénomène aura un impact			*
Moment où il faudra intervenir pour traiter la question	*		

(*) Veuillez cocher les cases. Des informations complémentaires ou descriptives (publications, rapports, rapports d'experts, analyses, etc.) peuvent être fournies dans la section 6 ci-dessous.

5. Degré de confiance

Solidité de la base de connaissances actuellement disponible			Élevée
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6. Informations complémentaires

le régime alimentaire se dégradera encore plus, la prévalence de la malnutrition augmentera, et il faut s'attendre à la mort des déplacés les moins résistants; la production agricole de la campagne 20014/2015 chutera à cause d'une:

- réduction substantielle des superficies emblavées;
- réduction des rendements du manioc, des céréales et des légumineuses à cause d'une récolte précoce;
- les perspectives d'une chute de production et donc de la disponibilité dans la zone (sous l'hypothèse que le commerce reste bloqué) pourrait créer une pénurie alimentaire de produits locaux et un fléchissement des prix.

Il est évident que l'aide alimentaire est seulement l'un de types d'intervention nécessaire. Elle doit s'intégrer dans un appui multidimensionnel comprenant également la fourniture des semences, la protection, un appui aux services de santé et à l'amélioration de l'accès à l'eau potable, etc...

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

- 13 pour cent des enfants < 5 ans souffrent de malnutrition aiguë globale (poids /taille), alors que
- 3 pour cent des enfants < 5 ans sont affectés par la forme sévère;
- 35 pour cent des enfants < 5 ans ont un retard global de croissance (poids / age); et
- 30 pour cent des enfants < 5 ans présentent une insuffisance pondérale modérée (taille / âge).

Éléments probants

Régions	Longueurs des pistes rurales (km)	Part des pistes en bon état	Indice de pauvreté
Plateaux	1935	20,1	64,3
Equateur	3459	16,5	64,7
Yadé	3128	9,1	79,7
Kagas	1697	9,9	82,6
Fertis	2908	29,3	72,5
Oubangui	2141	7,5	71,2
RCA	15268	16,1	72,9

Source : Ministère Equipement et Transports, 2004, ECVR 2003

Lacunes en matière de connaissances

L'enquête n'a eu lieu que dans les huit (8) préfectures de la République Centrafricaine et cela depuis 2008. Alors que le pays compte plus de seize (16) préfectures. Pour l'heure la situation est alarmante. Les données sur la statistique agricoles sur toute l'étendue du territoire ne sont pas disponible depuis 2009.

Bibliographie

1. Document de Stratégie du Développement Rural, MDRA, décembre 2007
2. Bâtir une vision du secteur rural, PAM, 2010
3. Revue du secteur rural, document de travail du MDRA, 2006
4. Plan de Développement Agricole (PDA), 2002
5. Appui au renforcement des organisations professionnelles agricoles, rapport de mission FAO TCP/CAF/2912, Maria Teresa Cobelli, 2004
6. Rapport d'activité Projet d'Appui aux Structures Rurales (PASR), 2004
7. Document de Stratégie de Réduction de la Pauvreté (DSRP) I, Ministère du Plan, 2007
8. Pacte du Programme Détaillé pour le Développement de l'Agriculture Africaine (PDDAA) en République Centrafricaine, 2011

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.



HLPE Inquiry

Critical and Emerging Issues for Food Security and Nutrition

Questionnaire

About the respondent

Name, Surname and Institution	Bhavan NaRayana Kovutarapu., IAMMA (Institute of Agricultural Marketing, Management and Administration)	
Dou you answer on behalf of your institution, or as an individual?	On behalf IAMMA	As individual
Do you agree if this contribution is made available to the public as part of the proceedings?	Yes <input checked="" type="checkbox"/>	No
Country of the responding individual/institution Please mention international or regional, the case being	USA & India International	

1. Overview of the issue

Issue <i>in 2 lines</i>			
Description of the issue <i>in less than 5 lines</i>	Issues of food security @ country level Plan		
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>	Challenge <input checked="" type="checkbox"/>	Opportunity <input type="checkbox"/>	It depends (please specify) -/ Challenge and oppertunity
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition <i>In less than 10 lines. Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.</i>	<p>A country level network to be established</p> <p>Analysis of food production</p> <p>Analysis of food consumption</p> <p>M&E establishment of last 10 yrs</p> <p>Forecast the population growth</p> <p>Compare and contrast of food vs population vs nutrition requirement –</p> <ol style="list-style-type: none"> 1. Current position , 2. Fast position 3. Future position 2. Forecast for 10yrs -15-20 yrs food production in view of climate change and population change and available resources 3. Analyse and forecst the imports of food present , future needs 		

Main response proposed to address the issue	<p>Country evaluations</p> <ol style="list-style-type: none"> 1.population 2.climate tech., 3. food production vs consumption 4. food wastages--- how to control 5. statistical evolution of food security
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Main actor(s) concerned or involved in the response proposed	Scope of further food production Climate impact Economic senerio of the country and world Imports and exports and its price structure Food bills / free food systems Food price at farm front and consumer front Linking of chain markets including involving local farmers markets, and gender base markets Sustainable agriculture on Farm front
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For the public inquiry fields below are optional

2. Broad typology of the issue

(*)	<i>External driver</i>	<i>Internal to food systems</i>	<i>Both</i>
Is the issue either or both?	When it imports	Production point view	Briefly mention how this may be the case Because the price and market systems

(*)	<i>Economic (and productive)</i>	<i>Social and Cultural</i>	<i>Governance (institutions, rights, etc.)</i>	<i>Environmental (resources, etc.)</i>	<i>Other (SPECIFY)</i>
Main nature of the issue	Climate smart Agriculture	Sustainable	By the governments with private operators	Climate resilience with slow co2 release	Market oriented
Nature of the main impact of the issue on FSN	Market and prices	availability	Private face obligations	Stop wasteing food	Smart decession making and decentral food storage

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	<i>Classification (**)</i>		
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?	Critical point In shor term	Systemic issue In long range	
2. Breadth: Are there many people affected?	Few/ many	Many & economy	
3. Scale: local/regional/global? This like in local –decentralised system for food storage and indigenous food systems/storage Regionally buffer stocks... globally only exports and imports – excess produce...	Local <i>Indicate here the precise location</i>	Region <i>Indicate here the precise region</i>	Global

For items 4-11 below, please use the classification [— — , —, 0, +, ++]:

Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)

4. Impact on Availability	+
5. Impact on Access	+

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6. Impact on Utilization/ nutrition	+		
7. Impact on Stability	++		
8. Impact on most vulnerable people	+middle and low income		
9. Impact on women	++		
10. Impact on children	+		
11. Impact on marginalized populations	- Specify as appropriate		
12. Cost to address the issue	Low	Middle +	High

(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

4. Time Scale

<i>Timeframe (*)</i>	<i>Now/Short term (1-5 years)</i>	<i>Medium term (5-10 years)</i>	<i>Long term (10-20 years +)</i>
Moment when the issue will have an impact	draught	Plan failure	If not rectified mistakes
Moment to act to address the issue	To be planned	Planning by years	Ground level

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.	Low	Middle	High +
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6. Additional Supporting Information

Additional information

It had to address the issue in three important factor..

1. Developing country/s
2. Developed countries with farmers population >10%
3. Developed countries with farmers <10% (example ..USA etc)

Food security:
In indegenus food security
Buffer stocks
Cold storage ... linking private operators ... chain markets
Encourage local markets for rural, urban and semi urban == areas. gender encouragement
Others ... if a plan is needed be given for one country , which can be scaled as per necessary with modifications.

Please note a Global solution is only a theory with statistical and mathes approach..
With the Claiculations ... approaches devded based on resources... However abrest system to be kept in mind a Trade or free trade not controversial to WTO

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Evidence

Looking to the Developing country like india had developed food buffer stocks ... from last 2-3 decades, with that experience, a food bill introduced to secure food with the involvement of small and marginal farmers production induction, wherein 50% of population of india as a small and marginal involved in agriculture as a job/profession and 10% big farmers who catters another seasonal labor for 15% involved large job facility And food security....

Lapses.... Chain management, cold storage failure/infrastructure failure, transport cost etc.. and poor in Governance... etc...

In USA – 1% population farmers , with heavy food wastage... a large number of illegal labor in agriculture which impacts food security and nutritional impairs due is non legal... no stable living conditions... etc

Knowledge gaps

Knowledge --- Gap to draw and synthesis of the centralized and decentralized plan and execution and governance with development....

No scientist is with multi approaches, results impacts either governance, production or market systems. Sometime political implications and uncertain political systems?

Poor training of country population against the patriatisam and faithness.

References

1. Agro-economy is super economy under transitional economy...eg.India., IAMMA proceedings 1999,2000,2004,2010... 2006 FAO conf. in Africa., etc., by KBN rayana, ..1999,2000, Food security 2020, by Ned`land Govt. conference, Wagen. Univ, Holland 2000.
2. Agrarian crises in India in post Transitional economy ... 2004, 2006, proceedings at 2006 Univ. of Delhi/India..KBN Rayana
3. Methods and modes of food security at farmer and farm level... 2001..KBN Rayana
4. Primary and secondary market systems for food security and risk evaluations .. 1998,-- IAMMA,KBN ., training module--- for market staff-india.. & others...

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HLPE Inquiry

Critical and Emerging Issues for Food Security and Nutrition

Questionnaire

About the respondent

Name, Surname and Institution	Bhavan NaRayana Kovutarapu., IAMMA (Institute of Agricultural Marketing, Management and Administration)	
Dou you answer on behalf of your institution, or as an individual?	On behalf	As individual KBN Rayana
Do you agree if this contribution is made available to the public as part of the proceedings?	Yes <input type="checkbox"/>	No
Country of the responding individual/institution Please mention international or regional, the case being	USA & India International	

1. Overview of the issue

Issue <i>in 2 lines</i>			
Description of the issue <i>in less than 5 lines</i>	Issues of food security @ country level Plan		
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>	Challenge <input type="checkbox"/>	Opportunity <input type="checkbox"/>	It depends (please specify) -/ Challenge and opportunity Because of excess waste at one place by the consumer but another place waste due to lack of infrastructure.
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition <i>In less than 10 lines. Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.</i>	<p>A country level network to be established</p> <p>Analysis of food production , wastes</p> <p>Analysis of food consumption, and diff. wastages</p> <p>M&E establishment of last 30 yrs</p> <p>Forecast the population growth</p> <p>Compare and contrast of food vs population vs nutrition requirement –</p> <ol style="list-style-type: none"> 4. Current position , 2. Fast position 3. Future position 5. Forecast for 10yrs -15-20 yrs food production in view of climate change and population change and available resources 6. Analyse and forecst the imports of food present , future needs 7. See the prices vs food wastes vs production 		

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	cost ... workout benefit ratio and identify where lapses and corrections required
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Main response proposed to address the issue	Country evolutions 1.population 2.climate tech./change 3. food production vs consumption 4. food wastages--- how to control 5. statistical evolution of food security 6.how cut down food imports .. scops and chances
Main actor(s) concerned or involved in the response proposed	Scope of further food production Climate impact Economic senerio of the country and world Imports and exports and its price structure Food bills / free food systems Food price at farm front and consumer front Linking of chain markets including involving local farmers markets, and gender base markets Sustainable agriculture on Farm front Consumer flexibility and necessity

For the public inquiry fields below are optional

2. Broad typology of the issue

(*)	<i>External driver</i>	<i>Internal to food systems</i>	<i>Both</i>
Is the issue either or both? both	When it imports Price and competation of domestic market and production of same produce	Production point view Cost benefit ratio and efficacy to improve productivity in safer non toxic manner	Briefly mention how this may be the case Because the price and market systems vs production cost

(*)	<i>Economic (and productive)</i>	<i>Social and Cultural</i>	<i>Governance (institutions, rights, etc.)</i>	<i>Environmental (resources, etc.)</i>	<i>Other (SPECIFY)</i>
Main nature of the issue	Climate smart Agriculture /cost effective	Sustainable	By the governments with private operators	Climate resilence with slow co2 release	Market oriented Consumer needs
Nature of the main impact of the issue on FSN	Market and prices	availability	Private face obligations	Stop wasteing food	Smart decession making and decentral food storage

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

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3. Attributes of the Issue

	Classification (**)		
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?	Critical point	Systemic issue	
2. Breadth: Are there many people affected?	Few	Many	
3. Scale: local/regional/global?	Local	Region	Global
	<i>Indicate here the precise location</i>	<i>Indicate here the precise region</i>	
For items 4-11 below, please use the classification [— — , — , 0, +, ++]: Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)			
4. Impact on Availability	+		
5. Impact on Access	+		
6. Impact on Utilization/ nutrition	++		
7. Impact on Stability	++		
8. Impact on most vulnerable people	++Specify as appropriate		
9. Impact on women	++		
10. Impact on children	+		
11. Impact on marginalized populations	++Specify as appropriate		
12. Cost to address the issue	Low ++	Middle +	High -

(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

4. Time Scale

Timeframe (*)	Now/Short term (1-5 years)	Medium term (5-10 years)	Long term (10-20 years +)
Moment when the issue will have an impact	Draught	floods	Population increase
Moment to act to address the issue	Current trends	Plan effeectivel	Address both plan and development

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.	Low Due to climate change	Middle Depends upon costs and prices	High Cost front
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6. Additional Supporting Information

Additional information

Although it is available in all countries production and consumption systems, based on fast experiences a workout plan developed by simulating its natural resources, vs climate vs land vs crops vs populations. Fast, present and future – based on development evaluate the imports and exports between amid economic system, and market chain and involvement of private broker/middlemen/operator.. to enable no lapses knowingly... (a risk free solution developed) and coorelated the same at globally once they come up a plan with CSF ... a secure plan by analyzing country plan vs global plan... (devide of region wise impacts to enable to cut down co2 during transportation)

If needed a work out plan of model will be sent separately ... however if HLPE thinks to see it

Evidence

Some food bills: success of on going ration/PDS--- systems offerd to develop the food security bill.
USA –fully secured one but at once look back when globally prices up inflated food prices.... ?
China-- failed to accurate food system results impot of Vietnam (marginal priced rice) rice to the current situation of food security...
Still Africa yet to over come its food poverty...
Europe – unprecedented draught and food born diseases , some countries high prices..
Swiss—public even now procure their grocessary from the neighboring countries due to lesser prices
Russia still searching for better food systems
etc

Knowledge gaps

Unforeseen climate change – like floods, draughts , and crop failures , higher prices..
Misuse of natural resources makes a big gap in Agric. Production, \
Ecological imbalance impacts on agric.production in certain crops, and animal life
Technology misuse due to lack of established educative systems at farm and farmers level – a big problem – in developing and developed world.

References

5. Agro-economy is super economy under transitional economy...eg.India., IAMMA proceedings 1999,2000,2004,2010... 2006 FAO conf. in Africa., etc., by KBN rayana, ..1999,2000, Food security 2020, by Ned`land Govt. conference, Wagen. Univ, Holland 2000.
6. Agrarian crises in India in post Transitional economy ... 2004, 2006, proceedings at 2006 Univ. of Delhi/India..KBN Rayana
7. Methods and modes of food security at farmer and farm level... 2001..KBN Rayana
8. Primary and secondry market systems for food security and risk evaluations .. 1998,-- IAMMA,KBN ., training module--- for market staff-india..

& others...

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HLPE Inquiry
Critical and Emerging Issues for Food Security and Nutrition
Questionnaire

About the respondent

Name, Surname and Institution	Maria Antip, International Fertilizer Industry Associations (IFA)	
Do you answer on behalf of your institution, or as an individual?	On behalf	As individual
Do you agree if this contribution is made available to the public as part of the proceedings?	Yes	No
Country of the responding individual/institution Please mention international or regional, the case being	International	

1. Overview of the issue

Issue <i>in 2 lines</i>	Micronutrient undernutrition affects 2 billion people worldwide and 165 million stunted children.		
Description of the issue <i>in less than 5 lines</i>	Growing concerns about nutrient deficiencies in food systems have been addressed by the updated Lancet report on mother and child nutrition, which highlights the imperative need for better nutrient data in order to devise a global approach targeting hidden hunger hotspots.		
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>	Challenge	Opportunity	It depends (please specify) While micronutrient deficiencies pose a serious challenge, addressing them through transformative partnership can constitute an opportunity
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition <i>In less than 10 lines. Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.</i>	Research has demonstrated that deficiencies in nutrients reduce crop yields by 40-60%, but also affect the people who live in areas with high micronutrient deficiencies.		

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<p>Main response proposed to address the issue</p>	<p>Adding micronutrients to fertilizers can increase the content and bioavailability of vitamins and nutrients thus diminishing an array of human health risks such as stunting, heart disease and diarrhea, which directly benefit children in developing countries as well as women in the early stages of pregnancy.</p> <p>Micronutrient fertilization directly addresses one of the five goals of the Zero Hunger Challenge, namely the eradication of stunting.</p> <p>Micronutrient fertilization is a simple, affordable and sustainable solution to eradicate deficiencies globally, in particular in the case of zinc, selenium and iodine. This makes it a viable program which can be tailored to regional and national needs and implemented worldwide. Partnerships already exist in some countries. For example, the HarvestZinc initiative explores and tests fertilizer use to improve zinc concentration in various staple food crops such as wheat and rice in India, Brazil and China.</p> <p>Scientific experiments show that zinc, selenium and iodine are the nutrients that can be most effectively provided to humans via micronutrient fertilization.</p> <ul style="list-style-type: none"> - In Finland commercial fertilizers nationwide are enriched with selenium to help mitigate the risk of human heart and cancer diseases. - In Turkey, fertilizers are enriched with zinc to increase wheat, potato and fruit yields, as well as to improve the zinc nutrition status of its citizens. - In Chile and Australia research has been conducted with iodine added to fertilizers in tomatoes and lettuce to mitigate risks of increased salt uptake.
<p>Main actor(s) concerned or involved in the response proposed</p>	<ul style="list-style-type: none"> -Regional and national governments, -private sector, -research institutes <p>The above 3 have major contributions to bring to address micronutrient deficiencies. Once researchers identify the specific deficiency, governments should devise nutrient sensitive policies and should then partner with the private sector to implement these tailored policies.</p>

For the public inquiry fields below are optional

2. Broad typology of the issue

(*)	<i>External driver</i>	<i>Internal to food systems</i>	<i>Both</i>
Is the issue either or both?		X	Briefly mention how this may be the case

(*)	<i>Economic</i>	<i>Social and</i>	<i>Governance</i>	<i>Environmental</i>	<i>Other</i>
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	<i>(and productive)</i>	<i>Cultural</i>	<i>(institutions, rights, etc.)</i>	<i>(resources, etc.)</i>	<i>(SPECIFY)</i>
Main nature of the issue	X				
Nature of the main impact of the issue on FSN	X				

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	Classification (**)		
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?	Critical point		Systemic issue
2. Breadth: Are there many people affected?	Few		Many
3. Scale: local/regional/global?	Local	Region	Global
	<i>Indicate here the precise location</i>	<i>Indicate here the precise region</i>	

For items 4-11 below, please use the classification [— — , — , 0, +, ++]:

Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)

4. Impact on Availability	+		
5. Impact on Access	+		
6. Impact on Utilization/ nutrition	+		
7. Impact on Stability	+		
8. Impact on most vulnerable people	Specify as appropriate		
9. Impact on women	++		
10. Impact on children	++		
11. Impact on marginalized populations	Specify as appropriate		
12. Cost to address the issue	Low	Middle	High

(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

4. Time Scale

Timeframe (*)	Now/Short term (1-5 years)	Medium term (5-10 years)	Long term (10-20 years +)
Moment when the issue will have an impact	X		
Moment to act to address the issue	X		

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

5. Degree of confidence

Solidity of currently available knowledge base.	Low	Middle	High
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6. Additional Supporting Information

Additional information

- *Fertilizing Crops to Improve Human Health book:*
<http://www.fertilizer.org/ifa/HomePage/LIBRARY/Publication-database.html/Fertilizing-Crops-to-Improve-Human-Health-A-Scientific-Review.html>
- *4 Infographics on Micronutrient Deficiencies:*
- please see attachments to e-mail
- *3 scientific studies on iodine biofortification*
- please see attachments to e-mail

Evidence

Knowledge gaps

References

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.



HLPE Inquiry

Critical and Emerging Issues for Food Security and Nutrition

Questionnaire

About the respondent

Name and organisation	Dirk Jan-Verdonk, World Society for the Protection of Animals	
Dou you answer on behalf of your institution, or as an individual?	On behalf	As individual
Do you agree if this contribution is made available to the public as part of the proceedings?	Yes	No
Country of the responding individual/institution Please mention international or regional, the case being	International	

1. Overview of the issue

Issue <i>in 2 lines</i>	Sustainable livestock production plays a central role in food security by providing food, employment, income and a social safety net. A key issue emerging in this area is animal health and welfare, which can function as catalyst for a broad range of social and environmental benefits.		
Description of the issue <i>in less than 5 lines</i>	Grain-based intensification of livestock has allowed vast increases in production and consumption in recent decades, but it has also resulted in negative impacts on smallholders, food security, the environment and animal welfare, the latter being a growing global concern. Continuing along the path of industrial livestock intensification and the westernization of human diets will have dramatic consequences on land use and environmental pollution globally, while making food security more challenging in areas which are already food insecure, including parts of Africa, Asia and Latin America. Additionally international trade in animal feedstuffs can increase vulnerability of these regions to world market price shocks. A focus on animal health and welfare will enable a move towards sustainable, humane farming systems that contribute to food security while ensuring social and environmental benefits.		
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>	Challenge	Opportunity	It depends (please specify)
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition <i>In less than 10 lines. Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.</i>	Food security and farm animal welfare A joint report by the World Society for the Protection of Animals and Compassion in World Farming containing recent modeling and review of key research and reports related to food, livestock and food security:		

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	<p><u>Approach:</u></p> <p>The study aimed to:</p> <ul style="list-style-type: none">• Analyse the role of livestock in food security• To quantify and analyse feed demand and the global feed trade• To analyse how changes in the livestock sector impact on food security• To model future livestock production and consumption options at the global and regional levels <p><u>Methodology:</u></p> <p>The authors used a literature review to provide insights into the complex interrelations between livestock, changing market patterns and food security.</p> <p>To quantify and analyse feed demand and global trade, the authors used the international statistics of the Food and Agriculture Organisation of the United Nations (FAO). They also used a biomass balance model, developed by Erb et al as the basis for exploring changes in livestock and impacts on food security and to model future options at the global and regional levels.</p>
<p>Main response proposed to address the issue</p>	<p>The aspect of food security most commonly studied is that of food availability (supply). However, increased food supply alone does not guarantee food security. The concept of food security builds strongly on central aspects of sustainability, such as equity, but often excludes issues such as human livelihoods or animal welfare.</p> <p>Livestock play a central role in food security – both directly and indirectly. Farm animals provide food as well as employment, income, draft power and manure for arable crops. However, they can also negatively affect food security – in particular, by consuming feed that could be used to feed humans directly.</p> <p><u>Key recommendations:</u></p> <ul style="list-style-type: none">• The development of humane-sustainable food security strategies with the inclusion of farm animal welfare in future food security assessments and policies.• Question the industrialisation of livestock farming. Intensification of livestock has resulted in an increasing share of the world's cereals and other crops being used

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	<p>for livestock feed rather than directly for human food. As this can compromise food security more research and data are needed to manage the contradictions between the projected intensification of farming, global food security and impacts in animal welfare.</p> <ul style="list-style-type: none"> • Recent intensification and increases in production have failed to improve food security for many groups of the world population, including rural and urban poor. Targeted programmes and policies are needed to make sure these groups are not excluded from the food security related benefits of livestock. • The study finds that food import dependent developing regions are particularly likely to be negatively affected by livestock intensification, including Southern Asia and Sub-saharan Africa where food security is already problematic. • The modeling options for 2050 indicates that future paths do not inevitably have to follow full-scale intensification strategies. More moderate pathways are possible if these are accompanied with strategies aimed at optimizing both production and consumption.
Main actor(s) concerned or involved in the response proposed	Governments, IGO's and food business.

For the public inquiry fields below are optional

2. Broad typology of the issue

(*)	<i>External driver</i>	<i>Internal to food systems</i>	<i>Both</i>
Is the issue either or both?			Briefly mention how this may be the case

(*)	<i>Economic (and productive)</i>	<i>Social and Cultural</i>	<i>Governance (institutions, rights, etc.)</i>	<i>Environmental (resources, etc.)</i>	<i>Other (SPECIFY)</i>

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

Main nature of the issue					
Nature of the main impact of the issue on FSN					

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	Classification (**)		
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?	Critical point		Systemic issue
2. Breadth: Are there many people affected?	Few		Many
3. Scale: local/regional/global?	Local	Region	Global
	<i>Indicate here the precise location</i>	<i>Indicate here the precise region</i>	

For items 4-11 below, please use the classification [— — , —, 0, +, ++]:

Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)

4. Impact on Availability	
5. Impact on Access	
6. Impact on Utilization/ nutrition	
7. Impact on Stability	
8. Impact on most vulnerable people	Specify as appropriate
9. Impact on women	
10. Impact on children	
11. Impact on marginalized populations	Specify as appropriate
12. Cost to address the issue	Low Middle High

(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

4. Time Scale

<i>Timeframe (*)</i>	<i>Now/Short term (1-5 years)</i>	<i>Medium term (5-10 years)</i>	<i>Long term (10-20 years +)</i>
Moment when the issue will have an impact	√	√	√
Moment to act to address the issue	√	√	√

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.	Low	Middle	High
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6. Additional Supporting Information

<p><i>Additional information</i></p> <p>Animal welfare is a globally emerging issue, amongst citizens/consumers, farmers and farmer organisations, businesses, academic institutions and intergovernmental organisations and governments. For example, most leading global food companies have public animal welfare policies; the World Animal Health Organisation (178 member states) has developed animal welfare guidelines and a growing number of governments (67 at the moment of writing) agreed, in principle, to support a Universal Declaration on Animal Welfare. ISO26000, the international guidance on social responsibility, states as an important ethical principle: 'respect for animal welfare, when affecting their lives and existence, including by providing decent conditions for keeping, breeding, producing, transporting and using animals'. Moreover, it calls for the adoption of 'sustainable agricultural, fishing, and forestry practices including aspects related to animal welfare [...]'</p>
<p><i>Evidence</i></p>
<p><i>Knowledge gaps</i></p>
<p><i>References</i></p> <ul style="list-style-type: none"> • Karl-Heinz Erb, Andreas Mayer, Thomas Kastner, Kristine-Elna Sallet and Helmut Haberl (2012), <i>The Impact of Industrial Grain Fed Livestock Production on Food Security: an extended literature review</i>, Institute of Social Ecology, Alpen Adria Universitat Klagenfurt, Vienna, Austria. • ISO26000, Social Responsibility • International Finance Corporation (2006), Good Practice Note Animal Welfare in Livestock Operations

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.



HLPE Inquiry

Critical and Emerging Issues for Food Security and Nutrition Questionnaire

About the respondent

Name, Surname and Institution	Cary Adams, Chair, The NCD Alliance	
Do you answer on behalf of your institution, or as an individual?		
Do you agree if this contribution is made available to the public as part of the proceedings?	Yes	
Country of the responding individual/institution Please mention international or regional, the case being	Switzerland	

1. Overview of the issue

Issue <i>in 2 lines</i>	The relationship between the growing prevalence of unhealthy diets, obesity, and nutrition- and diet-related non-communicable diseases (NCDs).	
Description of the issue <i>in less than 5 lines</i>	NCDs are responsible for approximately 36 million deaths per year, a majority of which are preventable and occur in low- and middle- income countries. Inadequate nutrition, unhealthy diets, and rising global obesity rates are major risk factors for NCDs (see "additional information" below). Changes in the global food system and access/ availability to adequate nutrition directly impact the NCD burden.	
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>	Challenge	
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition <i>In less than 10 lines.</i> Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.	The issue was identified based on the latest data on the relative contribution of NCDs to global ill-health, and the contribution of diet and poor nutrition to the global NCD burden (Lancet Global Burden of Diseases Study, 2012).	

Main response proposed to address the issue	<p>Three main responses:</p> <ol style="list-style-type: none"> 1. Establishment of global policy framework to address obesity and NCDs by WHO (WHO, 2014) 2. Implementation of policy interventions to promote healthier diets, as set out in the 2004 WHO Global Strategy on Diet, Physical Activity and Health, the 2011 UN Political Declaration on NCDs, and the WHO Global NCD Action Plan 2013-2020) 3. Identification and implementation of effective food
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Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

	systems solutions to NCDs at the national and global level (Hawkes, 2014)
Main actor(s) concerned or involved in the response proposed	World Health Organization (WHO), Food and Agricultural Organization (FAO), and national governments

For the public inquiry fields below are optional

2. Broad typology of the issue

(*)	<i>External driver</i>	<i>Internal to food systems</i>	<i>Both</i>
Is the issue either or both?			Obesity and NCDs are an external driver of food systems change as they change demand for food; they are also internal to food systems because they have emerged in direct response to the “globalization” of food systems and the policies that drive it i.e. the shift from a “state-managed” approach to a “consumer driven food system.”

(*)	<i>Economic (and productive)</i>	<i>Social and Cultural</i>	<i>Governance (institutions, rights, etc.)</i>	<i>Environmental (resources, etc.)</i>	<i>Other (SPECIFY)</i>
Main nature of the issue	x		x	x	Health
Nature of the main impact of the issue on FSN	x				

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	<i>Classification (**)</i>	
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?		Systemic issue
2. Breadth: Are there many people affected?		Many
3. Scale: local/regional/global?		Global

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For items 4-11 below, please use the classification [— — , —, 0, +, ++]:
 Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)

4. Impact on Availability	-		
5. Impact on Access	-		
6. Impact on Utilization/ nutrition	--		
7. Impact on Stability	0		
8. Impact on most vulnerable people	--		
9. Impact on women	-		
10. Impact on children	-		
11. Impact on marginalized populations	-		
12. Cost to address the issue	Low		

(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

4. Time Scale

<i>Timeframe (*)</i>	<i>Now/Short term (1-5 years)</i>	<i>Medium term (5-10 years)</i>	<i>Long term (10-20 years +)</i>
Moment when the issue will have an impact	X	X	X
Moment to act to address the issue	X	X	X

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.			High
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6. Additional Supporting Information

Additional information

Nutrients, foods and diets are established risk factors for NCDs. **Eating red and processed meat** increases risk of developing colorectal cancer. **Saturated fat and trans fats** increase blood cholesterol and cardiovascular risk. Higher **sodium/salt intake** is a major risk factor for elevated blood pressure and cardiovascular diseases, and probably stomach cancer. Diets high in meat and dairy also increase blood pressure. Diets high in **energy-dense, highly-processed foods and refined starches and/or sugary beverages contribute to overweight and obesity**.

At the same time, **consuming predominantly plant-based diets** reduces the risk of developing obesity, diabetes, cardiovascular diseases, and some forms of cancer. Plant-based diets are high in vegetables and fruits, wholegrains, pulses, nuts and seeds, and have only modest amounts of meat and dairy. These diets help to achieve and maintain a healthy weight, reduce blood pressure, and are also rich in sources of dietary fibre (which protects against colorectal cancer).

Fruits and vegetables independently contribute to preventing cardiovascular disease. It is likely that particular vegetables and fruits, including cruciferous vegetables such as cabbage and broccoli, and

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

many fruits or vegetables that are rich in folate, also protect from developing cancers of the colon and rectum, mouth, pharynx, larynx and oesophagus.

For more information see WCRF International/NCD Alliance (2013)

Evidence

There is clear evidence that the changing nature of food systems has been one factor in driving the growth of unhealthy diets, obesity and NCDs worldwide (de Schutter, 2012). There is a body of literature which shows that the globalization of food systems has facilitated the growth in consumption of foods and diets associated with obesity and NCDs (Popkin, 2006). The established scientific links between nutrient, foods, diets and NCDs are explained in the section above (“Additional Information”).

There is also evidence that there is a lack of policy coherence between efforts designed to alleviate obesity and NCDs, and policies and food systems policies (Hawkes et al, 2013).

Knowledge gaps

Changes in food systems are a driver of obesity and NCDs. Consequently, food systems solutions are needed to address the problem, as is greater policy coherence (Hawkes et al 2013, 2014). Identifying these solutions will be critical to addressing the global burden of obesity and NCDs, but research and engagement with policy makers is needed to do so.

References

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Hawkes C, Thow A-M, Downs S, Ghosh-Jerath S, Snowdon W, Morgan E, Thiam I, Jewell J. Leveraging agriculture and food systems for healthier diets and noncommunicable disease prevention: the need for policy coherence. Expert Background Paper for ICN2. Available at: <http://www.fao.org/food/nutritional-policies-strategies/icn2/expert-papers/en/>

Hawkes C, Thow A-M, Downs S, Ling AL, Ghosh-Jerath S, Snowdon W, Morgan E, Thiam I, Jewell J. Identifying effective food systems solutions for nutrition and noncommunicable diseases: creating policy coherence in the fats supply chain. SCN News 40, 2014Nineteenth session Agenda item 3.

Lancet Global Burden Of Disease Study, 2012. Available at: <http://www.thelancet.com/themed/global-burden-of-disease>

Popkin B. Global nutrition dynamics: the world is shifting rapidly toward a diet linked with noncommunicable diseases. *Am J Clin Nutr* 2006;84:289–98. Available at: <http://ajcn.nutrition.org/content/84/2/289.long>

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WHO (2014). Noncommunicable diseases and Mental Health. Documents available at: <http://www.who.int/nmh/en/>

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.



HLPE Inquiry

Critical and Emerging Issues for Food Security and Nutrition Questionnaire

About the respondent

Name, Surname and Institution	CORINNA HAWKES, World cancer research fund international	
Dou you answer on behalf of your institution, or as an individual?	On behalf	
Do you agree if this contribution is made available to the public as part of the proceedings?	Yes	
Country of the responding individual/institution Please mention international or regional, the case being	UNITED KINGDOM	

1. Overview of the issue

Issue <i>in 2 lines</i>	The growing prevalence of unhealthy diets, obesity & nutrition- & diet-related noncommunicable diseases (NCDs)	
Description of the issue <i>in less than 5 lines</i>	NCDs cause approximately 36 million deaths per year, or 63% of annual global mortality. Diet & inadequate nutrition are major risk factors for NCDs (see “Additional Information” below). A majority of NCD deaths are preventable, occur in low- & middle-income countries and co-exist with the burden of undernutrition. ,	
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>	Challenge	
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition <i>In less than 10 lines.</i> Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.	The issue was identified due to the relative contribution of NCDs to global ill-health, and the significant contribution diet and poor nutrition makes to the NCD burden contribution (Lancet Global Burden of Disease Study, 2012).	

Main response proposed to address the issue	<p>Three main responses:</p> <ol style="list-style-type: none"> 1. Establishment of global architecture to address obesity and NCDs by the WHO (WHO, 2014) 2. Implementation of the policy interventions to promote healthier diets, as set out in the 2004 WHO Global Strategy on Diet, Physical Activity and Health, the 2011 UN Political Declaration on NCDs, and the 2013-2020 WHO Global Action Plan on NCDs (WHO, 2014) 3. Effective food systems solutions to NCDs (Hawkes, 2014)
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Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

Main actor(s) concerned or involved in the response proposed	WORLD HEALTH ORGANIZATION, FOOD AND AGRICULTURAL ORGANIZATION OF THE UNITED NATIONS, NATIONAL GOVERNMENTS
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For the public inquiry fields below are optional

2. Broad typology of the issue

(*)	<i>External driver</i>	<i>Internal to food systems</i>	<i>Both</i>
Is the issue either or both?			Obesity and NCDs are a external driver of food systems change because they change demand for food; they are also internal to food systems because they have emerged in direct response to the “globalization” of food systems and the policies that drive it i.e. the shift from a “state-managed” approach to a “consumer driven food system.”

(*)	<i>Economic (and productive)</i>	<i>Social and Cultural</i>	<i>Governance (institutions, rights, etc.)</i>	<i>Environmental (resources, etc.)</i>	<i>Other (SPECIFY)</i>
Main nature of the issue					Health
Nature of the main impact of the issue on FSN	Economic				

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	<i>Classification (**)</i>		
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?			Systemic issue
2. Breadth: Are there many people affected?			Many
3. Scale: local/regional/global?			Global

For items 4-11 below, please use the classification [— — , —, 0, +, ++]:
 Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)

4. Impact on Availability	—
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Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

5. Impact on Access			
6. Impact on Utilization/ nutrition		--	
7. Impact on Stability			
8. Impact on most vulnerable people		-	
9. Impact on women		-	
10. Impact on children		-	
11. Impact on marginalized populations			
12. Cost to address the issue	Low		

(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

4. Time Scale

<i>Timeframe (*)</i>	<i>Now/Short term (1-5 years)</i>	<i>Medium term (5-10 years)</i>	<i>Long term (10-20 years +)</i>
Moment when the issue will have an impact	Y	Y	Y
Moment to act to address the issue	Y	Y	Y

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.			High
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6. Additional Supporting Information

Additional information

Nutrients, foods and diets are established risk factors for NCDs. **Eating red and processed meat** increases risk of developing colorectal cancer. **Saturated fat and trans fats** increase blood cholesterol and cardiovascular risk. Higher **sodium/salt intake** is a major risk factor for elevated blood pressure and cardiovascular diseases, and probably stomach cancer. Diets high in meat and dairy also increase blood pressure. Diets high in **energy-dense, highly-processed foods and refined starches and/or sugary beverages contribute to overweight and obesity**.

At the same time, **consuming predominantly plant-based diets** reduces the risk of developing obesity, diabetes, cardiovascular diseases, and some forms of cancer. Plant-based diets are high in vegetables and fruits, wholegrains, pulses, nuts and seeds, and have only modest amounts of meat and dairy. These diets help to achieve and maintain a healthy weight, reduce blood pressure, and are also rich in sources of dietary fibre (which protects against colorectal cancer).

For more information see WCRF International /NCD Alliance (2013)

Evidence

There is clear evidence that the changing nature of food systems has been one factor in driving the growth of unhealthy diets, obesity and NCDs worldwide (de Schutter, 2012; Hawkes, 2012). There is a body of literature which shows that the globalization of food systems have facilitated the growth in consumption of nutrients, foods and diets associated with obesity and NCDs (Popkin, 2006).. The established scientific links between nutrient, foods, diets and NCDs are explained in the section above ("Additional Information").

There is also evidence that there is a lack of policy coherence between efforts designed to alleviate

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

obesity and NCDs, and policies and food systems policies (Hawkes et al, 2013).

Knowledge gaps

Changes in food systems are a driver of obesity and NCDs. Consequently, food systems solutions are needed to address the problem, as is greater policy coherence (Hawkes et al 2013, 2014). Identifying these solutions will be critical to addressing the global burden of obesity and NCDs, but research and engagement with policy makers is needed to do so.

References

De Schutter O, 2012. Human Rights Council Nineteenth session Agenda item 3. *Report submitted by the Special Rapporteur on the right to food, Olivier De Schutter*. Available at: http://www.srfood.org/images/stories/pdf/officialreports/20120306_nutrition_en.pdf

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Hawkes C, Thow A-M, Downs S, Ling AL, Ghosh-Jerath S, Snowdon W, Morgan E, Thiam I, Jewell J. Identifying effective food systems solutions for nutrition and noncommunicable diseases: creating policy coherence in the fats supply chain. *SCN News 40*, 2014

Lancet Global Burden Of Disease Study, 2012. Available at: <http://www.thelancet.com/themed/global-burden-of-disease>

Popkin B. Global nutrition dynamics: the world is shifting rapidly toward a diet linked with noncommunicable diseases. *Am J Clin Nutr* 2006;84:289–98. Available at: <http://ajcn.nutrition.org/content/84/2/289.long>

WCRF International /NCD Alliance (2013). *Food, nutrition, diet and non-communicable diseases Key reasons to consider NCDs in policies to address major nutritional challenges*. http://www.wcrf.org/PDFs/PPA_NCD_Alliance_Nutrition.pdf

WHO (2014). *Noncommunicable Diseases and Mental Health*. Available at: <http://www.who.int/nmh/en/>

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

P21A



HLPE Inquiry

Critical and Emerging Issues for Food Security and Nutrition

Questionnaire

About the respondent

Name, Surname and Institution	Carlos Gonzalez Fischer, Compassion in World Farming	
Dou you answer on behalf of your institution, or as an individual?	On behalf	<i>As individual</i>
Do you agree if this contribution is made available to the public as part of the proceedings?	Yes	<i>No</i>
Country of the responding individual/institution Please mention international or regional, the case being	International	

1. Overview of the issue

Issue <i>in 2 lines</i>	The practice of feeding human-edible crops to animals reduces overall food availability.		
Description of the issue <i>in less than 5 lines</i>	For every 100 calories that we feed to animals in the form of human-edible crops, we receive on average just 30 calories in the form of meat and milk. That practice does not only wastes those crops, but also the resources that were used to grow them		
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>	Challenge	<i>Opportunity</i>	<i>It depends (please specify)</i>
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition <i>In less than 10 lines. Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.</i>	We frequently read that global crop demands will likely increase by 60–120% by the year 2050. This projected increase of global crop demand is partly due to a growing global population, but a larger driver is increasing global affluence and associated changes in diet (specially the increase in the consumption of meat). Currently, 36% of the calories produced by the world's crops are being used for animal feed, and only 12% of those feed calories ultimately contribute to the human diet.		

Main response proposed to address the issue	<p>Reduce the amount of human edible crops that are currently been feed to animals by incentivising grazing systems for ruminants and feeding monogastric animals with waste and surplus food.</p> <p>Curb the consumption of animal products in the west, and incentivize the consumption of plant based diets.</p>
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Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

Main actor(s) concerned or involved in the response proposed	Governments and other policy makers, via policies that encourage change in production systems (grass fed and waste) and consumption patterns (less animal products in western diets). Consumers.
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For the public inquiry fields below are optional

2. Broad typology of the issue

(*)	<i>External driver</i>	<i>Internal to food systems</i>	<i>Both</i>
Is the issue either or both?		X	Briefly mention how this may be the case

(*)	<i>Economic (and productive)</i>	<i>Social and Cultural</i>	<i>Governance (institutions, rights, etc.)</i>	<i>Environmental (resources, etc.)</i>	<i>Other (SPECIFY)</i>
Main nature of the issue		X			
Nature of the main impact of the issue on FSN	X			X	

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	<i>Classification (**)</i>		
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?	Critical point		Systemic issue
2. Breadth: Are there many people affected?	Few		Many
3. Scale: local/regional/global?	Local	Region	Global
	<i>Indicate here the precise location</i>	<i>Indicate here the precise region</i>	

For items 4-11 below, please use the classification [— — , — , 0, +, ++]:

Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)

4. Impact on Availability	— —
5. Impact on Access	—
6. Impact on Utilization/ nutrition	— —
7. Impact on Stability	— —
8. Impact on most vulnerable people	Specify as appropriate
9. Impact on women	—
10. Impact on children	—

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

11. Impact on marginalized populations	Specify as appropriate		
12. Cost to address the issue	Low	Middle	High

(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

4. Time Scale

<i>Timeframe (*)</i>	<i>Now/Short term (1-5 years)</i>	<i>Medium term (5-10 years)</i>	<i>Long term (10-20 years +)</i>
Moment when the issue will have an impact	X	X	X
Moment to act to address the issue	X		

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.	Low	Middle	High
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6. Additional Supporting Information

Additional information

We frequently read that global crop demands will likely increase by 60–120% by the year 2050 (from baseline year 2005) ^{1, 2} depending on assumptions of population growth, income growth and dietary changes. This projected increase of global crop demand is partly due to a growing global population, but a larger driver is increasing global affluence and associated changes in diet ². As global incomes increase, diets typically shift from those comprised of mostly grains, to diets that contain a greater proportion of meat, dairy, and eggs ²⁻⁵. It is estimated approximately 40% of the world's population will undergo this shift to more animal consumption by the year 2050 ². In order to meet these demands, global livestock production systems are shifting from using mostly waste products, crop residues, and marginal lands to more industrial systems that require less land and use higher value feed crops ^{5, 6}. In developing countries with high rates of increasing animal product demands, a greater proportion of cereals are being directed to animals ⁷.

A central issue facing the global food system is that animal products often require far more calories to produce than they end up contributing to the food system ^{8, 9}. While efficiencies of feed-to-edible food conversions have increased over time ^{7, 10}, the ratio of animal product calories to feed calories is, on average, still only about 10% ^{8, 11}. This suggests using human-edible crops to feed animals is an inefficient way to provide calories to humans.

Currently, 36% of the calories produced by the world's crops are being used for animal feed, and only 12% of those feed calories ultimately contribute to the human diet (as meat and other animal products) ¹². Cassidy et al. showed that global calorie availability could be increased by as much as 70% (or 3.88×10^{15} calories) by shifting crops away from animal feed (and biofuels) to human consumption ¹².

Evidence

Knowledge gaps

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

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Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.



HLPE Inquiry

Critical and Emerging Issues for Food Security and Nutrition Questionnaire

About the respondent

Name, Surname and Institution	Anna Herforth, Independent Consultant	
Do you answer on behalf of your institution, or as an individual?	On behalf	As individual
Do you agree if this contribution is made available to the public as part of the proceedings?	Yes	No
Country of the responding individual/institution Please mention international or regional, the case being	USA	

1. Overview of the issue

Issue <i>in 2 lines</i>	Monitoring of access to adequate nutritious food		
Description of the issue <i>in less than 5 lines</i>	Currently, no globally-collected indicators track access to adequate nutritious food to meet dietary needs. Indicators of access to calories, income, and food grain production are insufficient to monitor whether nutritious food is available and affordable to all.		
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>	Challenge	Opportunity	It depends (please specify)
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition <i>In less than 10 lines. Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.</i>	<ol style="list-style-type: none"> 1. Awareness of FAO food security definition and zero hunger challenge goals 2. Identification of food-related indicators in MDGs, FAO SOFI reports, UNICEF SOWC reports, and those collected at national level in some countries; thorough awareness of existing food security indicators. 3. Identification of increasing prevalence of triple burden of malnutrition occurring in low and middle-income countries. 		
Main response proposed to address the issue	Indicators to reflect availability, access, and utilization/consumption: <ol style="list-style-type: none"> 1 National level availability of nutritious food 2 Local-level affordability (relative prices of different food groups within a food basket) 3 Household level access (an experiential measure such as Food Insecurity Experience Scale) 4 Individual-level diet quality 		

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Main actor(s) concerned or involved in the response proposed	<p>Conceptually: Global community, post-MDGs, CFS, SUN; academic or technical groups to develop and validate indicators</p> <p>Operationally: FAO statistics, globally comparable surveys (such as DHS and MICS), national surveys (such as HCES), national bureaus of statistics and agricultural statistics</p>
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For the public inquiry fields below are optional

2. Broad typology of the issue

(*)	<i>External driver</i>	<i>Internal to food systems</i>	<i>Both</i>
Is the issue either or both?			Briefly mention how this may be the case

(*)	<i>Economic (and productive)</i>	<i>Social and Cultural</i>	<i>Governance (institutions, rights, etc.)</i>	<i>Environmental (resources, etc.)</i>	<i>Other (SPECIFY)</i>
Main nature of the issue					
Nature of the main impact of the issue on FSN					

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	<i>Classification (**)</i>		
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?	Critical point	Systemic issue	
2. Breadth: Are there many people affected?	Few	Many	
3. Scale: local/regional/global?	Local	Region	Global
	<i>Indicate here the precise location</i>	<i>Indicate here the precise region</i>	

For items 4-11 below, please use the classification [— — , —, 0, +, ++]:
Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)

4. Impact on Availability	
5. Impact on Access	
6. Impact on Utilization/ nutrition	
7. Impact on Stability	
8. Impact on most vulnerable people	Specify as appropriate
9. Impact on women	
10. Impact on children	

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11. Impact on marginalized populations	Specify as appropriate		
12. Cost to address the issue	Low	Middle	High

(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

4. Time Scale

<i>Timeframe (*)</i>	<i>Now/Short term (1-5 years)</i>	<i>Medium term (5-10 years)</i>	<i>Long term (10-20 years +)</i>
Moment when the issue will have an impact	Short	Medium	Long
Moment to act to address the issue	Now		

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.	Low	Middle evidence that needed metrics are available/ easily developed	High confidence in the rationale
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6. Additional Supporting Information

Additional information

This issue is written up in:

Herforth A. 2014 (forthcoming). Access to Adequate Food: New indicators to guide action in the agriculture and food sector. In: Sahn, D (ed.): New Directions in the Fight against Hunger and Malnutrition. Ithaca, NY: Cornell University Press

Draft available at:

<http://ppafest.nutrition.cornell.edu/authors/herforth.html>

Evidence

Inadequate access to sufficient nutritious food is one of the three main underlying causes of malnutrition (UNICEF 1990)

Undernourishment and undernutrition are not strongly correlated. (FAO SOFI 2013)

Obesity and non-communicable diseases (such as diabetes) are increasing, fastest in Africa.

Dietary risks are the top cause of years of life lost in all developing countries combined. (IHME 2013)

Given current food supply data compared to dietary recommendations, it is theoretically possible for everyone to eat *enough*, but it is impossible for everyone to eat *nutritious diets*. (Herforth 2014)

Food demand trends (such as increasing demand for meat and ultra-processed foods) are a significant driver of negative environmental outcomes (non-climate-smart agriculture). (Marlow et al. 2008, Kastner et al. 2012)

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Knowledge gaps

- Global dietary recommendations (that should also take environmental sustainability into account).
- How to construct a locally-valid, globally comparable, easy-to-collect measure of diet quality.
- How to construct a locally-valid, globally comparable index of food prices that gives information about relative prices of different food groups (such as fruits and veg, legume and nut, dairy, meat, egg, fish, starchy staples, sugars, ultra-processed foods), and not just an aggregate food price indicator.

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Institute of Health Metrics and Evaluation (IHME). 2013. Global Burden of Disease Compare tool. University of Washington. Available at: <http://viz.healthmetricsandevaluation.org/gbd-compare/>

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Marlow et al. 2008. Diet and environment: does what you eat matter? Am J Clin Nutr 2009;89(suppl):1699S–703S.

UNICEF. 1990. Strategy for Improved Nutrition of Children and Women in Developing Countries. New York: UNICEF.

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.



Enquête du Groupe d'experts de haut niveau (HLPE) Questions cruciales et émergentes pour la sécurité alimentaire et la nutrition

Questionnaire

Renseignements concernant le contributeur

Nom, prénom et institution	OSWALD Marc APDRA Pisciculture Paysanne	
Répondez-vous au nom de votre institution ou à titre privé?	APDRA Pisciculture Paysanne www.apdra.org	À titre privé:
Acceptez-vous que cette contribution soit mise à la disposition du public dans le cadre des actes de la consultation?	Oui	
Pays de la personne ou de l'institution qui répond. Veuillez mentionner, le cas échéant, «international» ou «régional».	Je suis basé en France mais l'APDRA est une organisation internationale qui intervient surtout en Afrique	

1. Aperçu de la question/du phénomène

Énoncé <i>en 2 lignes</i> .	A la différence de la pêche artisanale, la contribution nette de la pisciculture paysanne à l'augmentation du disponible de poisson et à la sécurité alimentaire n'est pas reconnue.
Description <i>en moins de 5 lignes</i> .	<p>La pisciculture paysanne n'est pas/peu promue, alors qu'elle augmente la disponibilité de poisson et participe à la sécurité alimentaire.</p> <p>Il y a un désintéressement pour les questions d'aménagement, d'intégration et de diversification qui permettent de valoriser des ressources accessibles aux paysans. Pourtant, cette production participe à une intensification écologique des processus de production agricoles en améliorant globalement la valorisation des ressources disponibles lorsqu'elle s'intègre aux autres activités.</p> <p>On assiste actuellement à une focalisation sur les facteurs classiques d'intensification (aliment, génétique), facteurs sur lesquels les paysans ne peuvent disposer des économies d'échelle des PME.</p> <p>Il y a eu beaucoup de confusion, la pisciculture paysanne est trop souvent, à tort qualifiée de pisciculture d'autoconsommation, même si une partie importante des produits est vendue en local. Tout une littérature s'interroge sur la rentabilité du capital, mais beaucoup moins sur qu'est ce qu'il y a de plus intéressant à améliorer ou à faire pour une unité de production agricole au vu de sa situation initiale. Les mécanismes d'agrégation de ce type de connaissances sont peu réfléchis. Beaucoup de stratégies politiques visent à faire passer des</p>

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	paysans pisciculteurs à des entrepreneurs utilisant de l'aliment et les souches améliorées, ce qui les forcent aussi à se désintéresser du marché de consommation des pauvres.		
<p>La question/le phénomène est-il un <i>défi</i> et/ou une <i>opportunité</i> pour la sécurité alimentaire et la nutrition? <i>Veillez cocher la case appropriée.</i></p>	<p>Défi Délaissement de pans entiers de populations rurales plus ou moins vulnérables</p>	<p>Opportunité Cette voie est en capacité d'accroître très fortement le disponible net de la pisciculture, le poisson ne concurrençant pas les autres productions animales pour les intrants.</p>	
<p>Méthode et approche utilisées pour déterminer la question/le phénomène et évaluer son importance pour la sécurité et la nutrition.</p> <p><i>En moins de 10 lignes. Des informations complémentaires ou descriptives (publications, rapports, rapports d'experts, analyses, etc.) peuvent être fournies dans la section 5 ci-dessous.</i></p>	<p>Des études de cas de nombreuses campagnes agricoles. Des suivis de trajectoires d'exploitations et de réseaux d'exploitations.</p> <p>Des réussites de développement de nouvelles formes de pisciculture paysanne sont en cours dans différentes parties du monde.</p>		
<p>Principale action proposée pour résoudre le problème (ou saisir l'opportunité).</p>	<p>L'assistance et la promotion à la conception de nouvelles formes de piscicultures paysannes (tant au niveau de l'aménagement que du système d'élevage) participant à l'intensification écologique doit être maintenu en parallèle de la promotion des nouvelles technologies en pisciculture (sélection génétique, aliment performant) ,</p> <p>Ces conceptions ne peuvent se faire qu'au sein de réseau avec une véritable dimension sociale pour porter les apprentissages et des actions de moyen terme pour les évaluer et les réorienter.</p> <p>Il est urgent d'arrêter toutes les approches qui isolent la pisciculture du reste de l'exploitation agricole et où l'intérêt de la subvention est jugée a priori uniquement sur l'impact sur le poisson.</p>		

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Principal(aux) acteur(s) concerné(s) ou participant à l'action proposée.	Les états, les administrations techniques, les bailleurs de fonds, les organisations professionnelles qui n'arrivent pas à prendre en compte la diversité des acteurs qui les composent.
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Les champs suivants sont facultatifs pour l'enquête publique

2. Typologie élargie de la question/du phénomène

(*)	<i>Facteur déterminant externe</i>	<i>Interne aux systèmes alimentaires</i>	<i>Les deux</i>
Le phénomène est-t-il l'un, l'autre ou les deux?	<p>Une certaine vision, particulièrement en Europe, fait qu'une simplification des questions des enjeux écologiques, préfère voir du poisson produit dans des industrie high tech ... ou importé en se souciant peu des impacts environnementaux de ces systèmes sur leur environnement d'origine.</p> <p>La promotion d'un développement par le privé incite à ce que les solutions proposées par ces opérateurs prennent le devant de la scène alors qu'elles ne portent que sur des leviers limités.</p>		Expliquez brièvement

(*)	<i>Économique (et productive)</i>	<i>Sociale et culturelle</i>	<i>Gouvernance (institutions, droits, etc.)</i>	<i>Environnemental (ressources, etc.)</i>	<i>Autre PRÉCISER</i>
Nature du phénomène	La question est économique	La viabilité de ces piscicultures nécessite de dépasser le cadre du poisson, de l'étang	Désintérêt global pour ces formes de production pourtant historiquement les plus réputées et, aujourd'hui,	Elle est aussi environnementale (quel est la voie la plus efficiente écologiquement)	

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		ou du bassin.	toujours les plus importantes.		
Nature de l'impact du phénomène sur la sécurité alimentaire et la nutrition	Moindre disponibilité de ces poissons dans les circuits courts en périphérie de ces piscicultures.				

(*) Veuillez cocher les cases. Des informations complémentaires ou descriptives (publications, rapports, rapports d'experts, analyses, etc.) peuvent être fournies dans la section 6 ci-dessous.

3. Attributs du phénomène

	Classification (**)		
1. Étendue: Est-il pertinent pour les systèmes alimentaires et nutritionnels dans leur ensemble ou pour des parties spécifiques de ces systèmes?	Point critique		Entrée d'abord par l'alimentation des populations actives dans la production agricoles.
2. Portée: Combien de personnes touche-t-il?	Peu		Beaucoup
3. Échelle: locale/régionale/mondiale?	Locale	Régionale	Mondiale
	<i>Indiquez ici le lieu exact</i>	Nombreuses régions avec un passé important en pisciculture ou des potentialités fortes.	

Pour les points 4 à 11 ci-dessous, veuillez utiliser l'échelle [— — , — , 0, +, ++]:

Impact très négatif (— —) / négatif (—) / faible (0) / positif (+) / très positif (++)

4. Impact sur la disponibilité	-- Aujourd'hui au niveau mondial, les poissons issus de systèmes paysans (qualifiés de non nourris à faiblement nourris par la FAO, ou les espèces de bas de chaîne trophique constituent le plus gros apport du tonnage produit par les poissons en aquaculture), peu de monde s'interroge sur leur potentiel de développement en Asie, mais aussi en Afrique et en Amérique du Sud par exemple.
5. Impact sur l'accès	-- Les produits de ces piscicultures ne sont pas disponibles sur les mêmes marchés que ceux des piscicultures de type PME et capitalistiques.
6. Impact sur l'utilisation/la nutrition	-- Les produits des piscicultures paysannes participent moins aux chaînes de valeur autour du poisson mais distribuent localement du poisson aux catégories sociales proches
7. Impact sur la stabilité	- Cela dépend du contexte du pays, ceux en forte croissance économique sont

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	moins impactés du délaissement de la pisciculture paysanne, les effets de ce délaissement sont différents mais cependant toujours présents.		
8. Impact sur les personnes les plus vulnérables	Impact négatif sur la consommation de protéine animale au niveau des pauvres – particulièrement ceux des campagnes (les plus nombreux).		
9. Impact sur les femmes	-- (Dans les unités de productions paysannes, les femmes jouent un rôle essentiel dans la production et surtout dans la vente, dans les unités entrepreneuriales, ce sont les salariés qui ont en charge ces fonctions).		
10. Impact sur les enfants	-- L'impact de cette évolution est très négatif au niveau des enfants des campagnes		
11. Impact sur les populations marginalisées	-- Impact fort au niveau des populations les plus vulnérables des campagnes qui avaient accès aux rebuts de ces élevages (avec des pêches autorisées après récolte ou des cadeaux en nature).		
12. Coût de la résolution du problème (ou pour saisir l'opportunité)			Élevé

(**) Veuillez cocher les cases ou classer les impacts et fournir des données synthétiques si besoin est. Des informations complémentaires ou descriptives peuvent être fournies dans la section 6 ci-dessous.

4. Période

<i>Horizon (*)</i>	<i>Actuellement/ À court terme (1-5 ans)</i>	<i>À moyen terme (5-10 ans)</i>	<i>À long terme (10-20 ans ou plus)</i>
Moment où le phénomène aura un impact	Des systèmes traditionnels ou innovants ne sont pas respectivement défendus/ promus, leur développement est donc freiné, restreint	Le moyen de subventionner intelligemment la conception de meilleurs aménagements et d'améliorer la formation des pisciculteurs en lien avec leur pratique réelle de l'activité est susceptible de renforcer cette voie.	Des clés majeures d'une intensification écologiques pourraient se dégager.
Moment où il faudra intervenir pour traiter la question	Dès à présent, des formes avec de fortes potentialités sont délaissées	Des processus de développement alternatifs ne peuvent pas être encouragés	

(*) Veuillez cocher les cases. Des informations complémentaires ou descriptives (publications, rapports, rapports d'experts, analyses, etc.) peuvent être fournies dans la section 6 ci-dessous.

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5. Degré de confiance

Solidité de la base de connaissances actuellement disponible			Élevée
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6. Informations complémentaires

Informations complémentaires

L'agriculture familiale contribue à la SA et fait preuve d'une impressionnante productivité mais cette capacité n'est pas reconnue (notamment pour l'Afrique) en pisciculture. Si les systèmes d'aquaculture de subsistance proposés (sans dimension économique) ont échoué en matière de réduction de la pauvreté et de SA&N (un consensus existe sur cette question), le nouveau paradigme d'une aquaculture exclusivement de type agrobusiness n'a pas encore fait la preuve de sa rentabilité et durabilité.

Éléments probants

Des réussites locales sont tout à fait intéressante et décrites en Guinée et en Côte d'Ivoire.

Succès de la pisciculture paysanne dans les Etats du Sud brésilien lorsque les politiques publiques facilitent les interactions entre les 4 composantes du développement : production (apprentissage, producteur et organisation), formation (transfert technique et organismes de développement), sciences (instituts de R&D) et financement. (voir réf. Brésil ci-jointes)

Importance maintenue de la contribution de la pisciculture paysanne dans des pays de tradition piscicole notamment la Chine (voir FAO, 2012)

Lacunes en matière de connaissances

Évaluation approfondie des impacts socio-économiques et environnementaux de la pisciculture paysanne

La mesure de l'impact négatif des subventions lorsqu'elles sont mal ciblées, est ignorée. Le fait aussi que des pisciculteurs ayant tenté des modèles plus « intensifs » soient revenus à des modèles plus intégrés trouvant qu'ils y avaient plus avantage, est insuffisamment évalué et pris en compte dans la définition des politiques.

Les modalités de renforcement des connaissances de réseaux de paysans est très peu étudié.

Évaluation approfondie des impacts socio-économiques et environnementaux de la pisciculture paysanne

Bibliographie

NB : cette liste ne se veut pas un plébiscite des actions de l'APDRA mais elle montre que dans toutes les situations où elle est intervenue, des modèles techniques adaptés pour les paysans existent et sont méconnus ou ignorés sauf dans de rares cas, où ils sont repris comme modèle à l'échelle d'une région (Brésil) ou d'un pays (Guinée). Les contributions pour le Brésil ont été apportées par Olivier Mikolasek du Cirad. Nous avons rajouté une référence pour la France.

Pour la zone d'économie de plantation et pour Madagascar, ces publications témoignent d'un intense travail de terrain, avec une multitude de rapports de stage de mission, d'entretiens.

Cette liste ne doit pas être comprise comme une revue de la littérature.

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Pour l'Afrique de l'Ouest de la zone d'économie de plantation :

FAO, 2004. Aquaculture extension in sub-saharan Africa. FAO Fisheries Circular. N° 1002. Rome, FAO. 55 pp.

Halftermeyer S., 2009. Construire un réseau de producteurs ruraux autour d'une nouvelle production - L'exemple du Projet Piscicole de Guinée Forestière (PPGF). Traverses, N° 32, 1-43, http://www.groupe-initiatives.org/IMG/pdf/Traverses_32.pdf

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Pour Madagascar :

BENTZ B. et OSWALD M. 2010 "Respective roles of national institutions and farmers groups in the implementation of an innovation enabling smallholders to reproduce carp inside their rice fields in Betafo (Madagascar)". Colloque IDSA, 28 juin- 1er juillet 2010 ; Montpellier, France. <http://hal.archives-ouvertes.fr/hal-00522795/fr/>

Pour la zone Sahélienne :

DORAY (M.), MIKOLASEK (O.), BOUREIMA (A.) et OSWALD (M.) : « Savoir-faire paysan et exploitation piscicole de mares temporaires en zone sahélienne » 13 p. Actes du colloque GIRN-ZIT (Bamako 2000), colloques et séminaires IRD-Paris.

MIKOLASEK O., M. MASSOU, E. ALLAGDABA, 2000. Appropriation et gestion des espaces piscicoles nigériens par les populations villageoises riveraines. In Didier Gascuel, Pierre Chavance, Nicolas Bez, Alain Biseau (éd.): *Les espaces de l'halieutique*, Paris, IRD : 517-526.

OSWALD (M) 2002 : « Enhanced fisheries on the small water bodies of Burkina Faso : what strategy should be used ? », SFLP Bulletin PMEDP – September 2002, 20-22.

TOMEDI M., VANDER STUYFT S, MIKOLASEK O., 2006, Approche méthodologique de la co-gestion des ressources en poissons des petites et moyennes collections d'eau en zone soudano-sahélienne du Nord Cameroun. Proceedings 2nd RNSCC International Seminar. Community-Based Conservation. Yaoundé, Cameroun. pp 101-111

Avec en plus les comptes rendus de vidanges et de pêches de pisciculteurs.

Pour le Brésil :

Casaca J.M., 2008. Policultivos de peixes integrados à produção vegetal: avaliação econômica e sócio

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

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Silva N.J.R., J.E. Beuret, O. Mikolasek, G. Fontenelle, L. Dabbadie, M. I. E. Geraldo Martins, 2005. Development Dynamics of Finfish Freshwater Aquaculture and Public Policies in The Ribeira Watershed, São Paulo State, Brazil. Cahiers Agricultures vol. 14, n°1, janvier 2005

TAMASSIA T. J. S., 2011. Indicadores técnico-econômicos para o Gerenciamento do modelo Alto Vale do Itajaí de Piscicultura Integrada (Mavipi). Tese apresentada ao Curso de Pós-Graduação em Aqüicultura do Centro de Aqüicultura da UNESP, Campus Jaboticabal, como parte das exigências para a obtenção do título de Doutor em Aqüicultura, 230 p

Pour la France

Billard Roland, 2010 : « Derrière chez moi, il y a un étang ». Editions Quae, 303 p.

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Enquête du Groupe d'experts de haut niveau (HLPE) Questions cruciales et émergentes pour la sécurité alimentaire et la nutrition

Questionnaire

Renseignements concernant le contributeur

Nom, prénom et institution	OSWALD Marc APDRA Pisciculture Paysanne	
Répondez-vous au nom de votre institution ou à titre privé?	APDRA Pisciculture Paysanne www.apdra.org	
Acceptez-vous que cette contribution soit mise à la disposition du public dans le cadre des actes de la consultation?	Oui	
Pays de la personne ou de l'institution qui répond. Veuillez mentionner, le cas échéant, «international» ou «régional».	Je suis basé en France mais l'APDRA est une organisation internationale qui intervient surtout en Afrique	

1. Aperçu de la question/du phénomène

Énoncé <i>en 2 lignes</i> .	L'alimentation en protéine animale des populations rurales des zones d'économies de plantation de l'Afrique de l'Ouest est problématique	
Description <i>en moins de 5 lignes</i> .	Le poisson, première source de protéine animale, première dépense alimentaire des ménages ruraux, subit deux pressions. - Les pélagiques issus de stocks exploités voire sur exploités ne peuvent servir les besoins de la population d'autant plus que ces poissons sont de mieux en mieux appréciés par le marché international. - Le niveau de vie de ces populations a peu augmenté et la démographie progresse. La situation globale se détériore.	
La question/le phénomène est-il un <i>défi</i> et/ou une <i>opportunité</i> pour la sécurité alimentaire et la nutrition? <i>Veuillez cocher la case appropriée.</i>	Défi	Autre (veuillez préciser)
Méthode et approche utilisées pour déterminer la question/le phénomène et évaluer son importance pour la sécurité et la nutrition. <i>En moins de 10 lignes.</i> Des informations complémentaires ou descriptives (publications, rapports, rapports d'experts, analyses, etc.) peuvent être fournies dans la section 5 ci-dessous.	Nous avons procédé à des relevés de prix sur les marchés ruraux, croisés avec des paniers d'achats des ménagères et de l'alimentation distribuée à la famille de façon régulière durant un an, au Libéria (2010), en Guinée (2002) et au Cameroun (2009). Ces premières données ont été vérifiées dans d'autres entretiens et en d'autres localisations à d'autres moments en Guinée, Côte d'Ivoire, Ghana, Bénin et Cameroun). Globalement, plusieurs points convergent : Les approvisionnements sont d'abord ceux de l'océan débarqué par des flottes internationales puis du poisson séché/fumé pêché dans des lacs ou parfois en provenance de la mer. Pour ces populations :	

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	<p>Le poisson pêché localement a une toute petite contribution tout comme les viandes.</p> <p>Le poisson constitue de très loin la première protéine animale consommée à plus de 80 %.</p> <p>Le poisson constitue le premier poste de dépense alimentaire devant les céréales.</p>
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Principale action proposée pour résoudre le problème (ou saisir l'opportunité).	La promotion de la pisciculture paysanne est un élément de réponse à cette question.
Principal(aux) acteur(s) concerné(s) ou participant à l'action proposée.	<p>Les états et les administrations.</p> <p>Les acteurs spécialisés</p> <p>les organisation professionnelles effectivement impliquées dans la défense de la situation des petits planteurs.</p>

Les champs suivants sont facultatifs pour l'enquête publique

2. Typologie élargie de la question/du phénomène

(*)	<i>Facteur déterminant externe</i>	<i>Interne aux systèmes alimentaires</i>	<i>Les deux</i>
Le phénomène est-t-il l'un, l'autre ou les deux?	<p>Baisse des stocks, accroissement de la pression mondiale sur les ressources marines</p> <p>Peu de systèmes de production animale effectivement performants dans les régions concernées.</p> <p>L'une des zones de la planète où il y aura le plus fort accroissement démographique dans les prochaines décennies.</p>	Le poisson est la source de protéine animale préférée dans ces régions, c'est aussi la moins chère.	Ce sont les deux, il faut combiner les deux réponses

(*)	<i>Économique (et productive)</i>	<i>Sociale et culturelle</i>	<i>Gouvernance (institutions, droits, etc.)</i>	<i>Environnemental (ressources, etc.)</i>	<i>Autre PRÉCISER</i>
Nature du phénomène	Faible efficacité de la		Le plus souvent connu mais pas	Baisse des stocks	Eparpillé au niveau

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	plupart des voies alternatives proposées		considéré comme un thème mobilisateur en ce moment.	halieutiques.	d'une multitude de ménages ruraux dans des situations différentes.
Nature de l'impact du phénomène sur la sécurité alimentaire et la nutrition	Subissant les aléas du marché du poisson et de l'évolution des revenus des populations.			Raréfaction de l'offre, augmentation du prix, consommation allant en diminuant en tendance Ce point est au moins spécifique de la zone de plantation de l'Afrique de l'Ouest (à peu près du milieu de la Sierra Léone jusqu'au Congo)	Difficulté de proposer des réponses adaptées, le plus souvent les réponses sont locales. Des formes de piscicultures assez extensives ont eu localement d'excellent résultats.

(*) Veuillez cocher les cases. Des informations complémentaires ou descriptives (publications, rapports, rapports d'experts, analyses, etc.) peuvent être fournies dans la section 6 ci-dessous.

3. Attributs du phénomène

	Classification (**)		
1. Étendue: Est-il pertinent pour les systèmes alimentaires et nutritionnels dans leur ensemble ou pour des parties spécifiques de ces systèmes?	Il est pertinent en ce sens qu'il illustre que de grandes zones avec des effectifs importants de population sont parfois oubliées par les grandes solutions proposées, ceci veut dire qu'il faut s'orienter vers un éventail plus large de solutions et ne pas restreindre les axes de résolution du problème.		Question systémique Ce point est au moins spécifique de la zone de plantation de l'Afrique de l'Ouest
2. Portée: Combien de personnes touche-t-il?			Beaucoup (au moins 50 millions de personnes peut être le double, la situation du Nigéria étant mal identifiée).
3. Échelle: locale/régionale/mondiale?	Locale	Régionale	Mondiale

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	<i>Indiquez ici le lieu exact</i>	(à peu près du milieu de la Sierra Léone jusqu'au Congo, la limite nord étant celle de la limite des économies de plantation et passe au dessus de la guinée forestière, descent jusqu'à Kpalimé, frôle Porto Novo puis remonte jusqu'au dessus du centre du Cameroun et de la RCA forestière).
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Pour les points 4 à 11 ci-dessous, veuillez utiliser l'échelle [— — , —, 0, +, ++]:

Impact très négatif (— —) / négatif (—) / faible (0) / positif (+) / très positif (++)

4. Impact sur la disponibilité	+/- Pour le moment la disponibilité globale n'est pas affectée, par contre les populations sont dans une situation se détériorant vis à vis de l'approvisionnement en protéine animale qui se traduit par une baisse de leur consommation.
5. Impact sur l'accès	-- L'accès des populations diminue.
6. Impact sur l'utilisation/la nutrition	-- Problème croissant de la carence relative en protéine.
7. Impact sur la stabilité	- Dans les nombreux conflits qui ont affecté ces zones, ce problème n'est pas cité. Mais il est remarqué que les politiques de développement agricole ont été dans l'incapacité de proposer de véritables voies de mise en valeur des bas-fonds où les jeunes pourraient s'installer. A l'inverse les systèmes extensifs de pisciculture se sont montrés résilients à travers la crise récente de la Côte d'Ivoire (à la sortie de la crise, la Direction des Pêches considérait qu'ils représentaient la majorité du tonnage de la pisciculture produit en RCI).
8. Impact sur les personnes les plus vulnérables	Ce sont bien entendu les personnes des familles rurales les plus pauvres qui seront le plus touchées.
9. Impact sur les femmes	-- Pas de façon spécifique
10. Impact sur les enfants	-- Oui probablement, ce sont chez eux que ce manifeste le plus les effets des carences en protéines avec une mortalité infantile très élevée.
11. Impact sur les populations marginalisées	--- (surtout en cas de conflit, les approvisionnements ne se font plus correctement)

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12. Coût de la résolution du problème (ou pour saisir l'opportunité)			Élevé
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(**) Veuillez cocher les cases ou classer les impacts et fournir des données synthétiques si besoin est. Des informations complémentaires ou descriptives peuvent être fournies dans la section 6 ci-dessous.

4. Période

<i>Horizon (*)</i>	<i>Actuellement/ À court terme (1-5 ans)</i>	<i>À moyen terme (5-10 ans)</i>	<i>À long terme (10-20 ans ou plus)</i>
Moment où le phénomène aura un impact	Oui, première source de carence, contrainte forte à l'amélioration de la situation nutritionnelle et sanitaire des campagnes	Oui	Impossible à prévoir à ce jour, mais il vaudrait mieux que des solutions soient trouvées au vu du fort accroissement démographique que ces zones vont connaître (parmi les plus rapide de la planète).
Moment où il faudra intervenir pour traiter la question	Il n'est pas normal que ce problème soit si peu pris en compte.	La promotion de voies de diversification des exploitations agricoles adaptées aux exploitations agricoles et proposant des produits compétitifs sur les marchés locaux.	

(*) Veuillez cocher les cases. Des informations complémentaires ou descriptives (publications, rapports, rapports d'experts, analyses, etc.) peuvent être fournies dans la section 6 ci-dessous.

5. Degré de confiance

Solidité de la base de connaissances actuellement disponible			Élevée (quand à la dépendance actuelle des populations vis à vis du poisson) et l'alternative possible par une pisciculture semi-extensive.
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6. Informations complémentaires

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

Informations complémentaires

Prise en compte encore très limitée du rôle socioéconomique de la pisciculture paysanne au niveau de politiques nationales en Afrique de l'Ouest et Centrale à l'exception de quelques pays où elle est soutenue comme en Guinée.

Ce développement est compatible avec celui promu au Ghana qui vise la promotion d'unités industrielles visant les marchés intermédiaires.

Éléments probants

L'alimentation en protéine animale est orientée à la baisse. La mortalité infantile diminue très peu dans ces campagnes.

Des développements locaux de pisciculture se renforcent dans plusieurs localités depuis une à trois décennies.

Lacunes en matière de connaissances

Nombreuses :

L'impact de la formation et de la mise en réseau des acteurs n'est globalement pas ou peu perçu. Seules quelques descriptions locales de son impact existent.

Aucune réflexion sur les dispositifs pour inciter ces développements par les administrations publiques qui n'ont généralement pas les moyens d'apporter le conseil et la formation au niveau des bénéficiaires.

Peu de réflexion sur les dispositifs de promotion qui préfèrent se réfugier dans des approches caricaturales de subvention à court terme.

L'anticipation des évolutions que ces modèles sont susceptibles d'avoir est faible par la recherche, peu de travaux sur le suivi des aménagements, de leurs impacts, de la polyculture et de l'intensification du système.

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A compléter par de nombreux travaux internes : études sur la consommation du poisson (en Guinée et documents de l'études) au Libéria et les comptes-rendus de mission, rapports de stage et d'activité et les entretiens avec les producteurs en Guinée, Côte d'Ivoire, Libéria, Bénin, Cameroun, Congo et RCA.

Pour l'alternative piscicole :

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HLPE Inquiry

Critical and Emerging Issues for Food Security and Nutrition

Questionnaire

About the respondent

Name, Surname and Institution	Jennifer Clapp, University of Waterloo		
Do you answer on behalf of your institution, or as an individual?		As Individual	
Do you agree if this contribution is made available to the public as part of the proceedings?	Yes		
Country of the responding individual/institution Please mention international or regional, the case being	Canada		

1. Overview of the issue

Issue <i>in 2 lines</i>	Financialization of food and natural resources		
Description of the issue <i>in less than 5 lines</i>	Agricultural and food commodities, farmland and biodiversity are increasingly being traded as forms of financial derivatives. Broader financial market trends, including speculative investments, can affect food security through these mechanisms.		
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>	Challenge	Opportunity	It depends (please specify)
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition <i>In less than 10 lines.</i> Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.	The implications of financialized markets for food, farmland and nature for food security outcomes are debated in the academic literature and in policy settings. Some studies show a strong link to food price volatility and compromised rights to land and nature, while others see no evidence to this effect. Although this debate continues, there is a growing consensus in policy settings that the potential impacts on food security are real and require further investigation and possible regulation.		

Main response proposed to address the issue	It is proposed that the HLPE undertake research on this topic. A thorough examination of the literature will help to illuminate the factors behind increased financialization in the food, farmland and nature sectors, as well as the impacts and potential impacts of financial markets on food security outcomes. This will enable the CFS to make sound recommendations for potential policy action.
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Main actor(s) concerned or involved in the response proposed	HLPE should undertake research on this topic. Research by HLPE should include discussion with financial actors that invest in food and agriculture commodities, farmland and other kinds of nature-based (e.g. biodiversity) financial derivatives such as futures, index funds and offsets. It should also include discussion with governments and intergovernmental bodies on financial market regulation in relation to this issue.
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For the public inquiry fields below are optional

2. Broad typology of the issue

(*)	<i>External driver</i>	<i>Internal to food systems</i>	<i>Both</i>
Is the issue either or both?	X		Briefly mention how this may be the case

(*)	<i>Economic (and productive)</i>	<i>Social and Cultural</i>	<i>Governance (institutions, rights, etc.)</i>	<i>Environmental (resources, etc.)</i>	<i>Other (SPECIFY)</i>
Main nature of the issue	X		X	X	
Nature of the main impact of the issue on FSN					

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	<i>Classification (**)</i>		
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?	Critical point		Systemic issue
2. Breadth: Are there many people affected?	Few		Many
3. Scale: local/regional/global?	Local	Region	Global
	<i>Indicate here the precise location</i>	<i>Indicate here the precise region</i>	

For items 4-11 below, please use the classification [— — , — , 0, +, ++]:

Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)

4. Impact on Availability	0
5. Impact on Access	--
6. Impact on Utilization/ nutrition	0
7. Impact on Stability	--
8. Impact on most vulnerable people	Very negative impact on poorest people
9. Impact on women	-
10. Impact on children	-

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11. Impact on marginalized populations	Marginalized populations may lose rights		
12. Cost to address the issue	Low	Middle	High

(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

4. Time Scale

<i>Timeframe</i> (*)	<i>Now/Short term</i> <i>(1-5 years)</i>	<i>Medium term</i> <i>(5-10 years)</i>	<i>Long term</i> <i>(10-20 years +)</i>
Moment when the issue will have an impact	X	X	
Moment to act to address the issue	X	X	

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.	Low	Middle	High
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6. Additional Supporting Information

Additional information

Financialization of food, farmland and nature can affect food security in the following interconnected ways:

- **Access:** higher and more volatile food prices associated with financialization of food commodities can affect access to food, especially for those who spend a high proportion of their income on food; Financialized markets for farmland and nature can affect access to productive resources for producing food by affecting rights to land and nature/biodiversity.
- **Stability:** higher and more volatile food prices associated with financialization can affect stability of access, especially in the short to medium term; Financial investment in land can affect stability of supply, depending on the crops grown (food crops vs. non-food crops, for example).
- **Availability:** financialized markets for land and nature can affect food availability in certain regions. Investments in land and farming operations may shift land use from food crops to non-food crops, or may shift from domestic food production to production for export.
- **Utilization:** higher and more volatile food prices associated with financialization may result in people switching to less nutritious foods that are less expensive

Evidence

The impacts of financialized markets for food, farmland and nature have many theoretical connections to food security and insecurity, particularly via their impact on food prices and investment decisions, as outlined above. Because of the abstract nature of financial markets, drawing direct causal lines between a financial investment and incidence of hunger or compromised rights to productive assets has been challenging to date (Clapp 2014). Immediate concern and debate over the impact of financial speculation in food commodities emerged in the aftermath of the 2008 food crisis (e.g. Ghosh 2010; IATP 2011). This work has been followed with a growing body of academic and policy research that has begun to tease out potential impacts in more depth (Fairbairn 2014; Lagi et al. 2011; Basak and Pavlova 2013; Cotula 2012; Worthy 2011; Bush 2012). Further, a number of international organizations, including the Bank for International Settlements (BIS 2011) and the UN Centre on Trade and Development (UNCTAD 2011), as well as the UN Special Rapporteur on the Right to Food (de Schutter 2010), have noted that financialization has likely exacerbated volatility in food prices and influenced land investment decisions, regardless of whether it is a leading cause of these trends. A number of governments, including the EU and the USA, have proposed some financial market

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legislation that aims to reduce excessive financial speculation in food and agricultural commodities (US Senate 2009; Clapp and Helleiner 2012). There is also growing concern over the financialization of nature, including biodiversity and carbon sequestration, and the impact these new markets (as part of a broader 'Green Economy' approach to environmentalism) can have on access to productive resources as well as nature conservation (Sullivan 2013; Bracking 2012; Lohmann 2010). Enacting more effective financial market regulations to prevent excessive speculation in food commodities, farmland and nature-based derivatives is a relatively low-cost response to this problem. CFS should study the elements such regulation this might incorporate, and how better regulated financial markets might be achieved.

Knowledge gaps

There is a need for further conceptual work to map out all potential linkages between financialization of food, farmland and nature and food security outcomes. This conceptual work will need to be followed up with further empirical studies that verify these linkages. It is important for the CFS to conduct its own assessment of this issue, in particular the linkages between financialization and food security, given the ongoing debate about the extent to which financialization is a driver of more volatile food prices and whether it affects access to land and nature rights. It is also important to consider how financialization relates to ongoing CFS processes, such as development of guidelines on responsible agricultural investment.

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HLPE Inquiry

Critical and Emerging Issues for Food Security and Nutrition

Questionnaire

About the respondent

Name, Surname and Institution	Mike Michener, Farming First	
Dou you answer on behalf of your institution, or as an individual?	<input checked="" type="checkbox"/> On behalf	<input type="checkbox"/> As individual
Do you agree if this contribution is made available to the public as part of the proceedings?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Country of the responding individual/institution Please mention international or regional, the case being	International	

1. Overview of the issue

Issue <i>in 2 lines</i>	Building capacity and improving local access	
Description of the issue <i>in less than 5 lines</i>	Fundamental resources should be available to farmers (including women and young farmers) to build their technical capacity (i.e. extension services) and to improve their access to resources, training, information, inputs, and markets.	
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>	<input type="checkbox"/> Challenge	<input checked="" type="checkbox"/> Opportunity <input type="checkbox"/> It depends (please specify)
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition <i>In less than 10 lines.</i> Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.	UNDP “default” Capacity Assessment Framework: capacity development process, including capacity assessment and definition of capacity development strategies, integrated into the planning and programming process at the level of MDG-based strategies, poverty reduction strategies as well as UN Common Country Assessments and UNDAFs. UNDG Capacity Assessment Methodology: capacity assessment framework, process and a supporting tool for assessing capacity assets and needs.	

Main response proposed to address the issue	Secure access to land and water resources; provide rural access to microfinance services; build infrastructure, e.g. roads and ports, to improve access to regional markets; establish training programs in infrastructure management, operations and maintenance for local and regional settings; improve customs and border operations; increase access to agricultural inputs and services; encourage and co-ordinate multiple local actors to ensure extension services, training, information and supplies for farmers; invest in bioenergy where it contributes to energy security and to rural development.
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Main actor(s) concerned or involved in the response proposed.	Farmers, scientists, engineers, agro-industry, government, development organizations.
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For the public inquiry fields below are optional

2. Broad typology of the issue

(*)	External driver	Internal to food systems	Both
Is the issue either or both?		X	Briefly mention how this may be the case

(*)	Economic (and productive)	Social and Cultural	Governance (institutions, rights, etc.)	Environmental (resources, etc.)	Other (SPECIFY)
Main nature of the issue			X	X	
Nature of the main impact of the issue on FSN	X				

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	Classification (**)		
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?	Critical point	X Systemic issue	
2. Breadth: Are there many people affected?	Few	X Many	
3. Scale: local/regional/global?	Local	Region	X Global
	<i>Indicate here the precise location</i>	<i>Indicate here the precise region</i>	

For items 4-11 below, please use the classification [— — , — , 0, +, ++]:

Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)

4. Impact on Availability	++
5. Impact on Access	++
6. Impact on Utilization/ nutrition	+
7. Impact on Stability	++
8. Impact on most vulnerable people	+ multiplier effect will reach vulnerable
9. Impact on women	++
10. Impact on children	+

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

11. Impact on marginalized populations	++ marginalized will benefit most		
12. Cost to address the issue	Low	X Middle	High

(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

4. Time Scale

<i>Timeframe (*)</i>	<i>Now/Short term (1-5 years)</i>	<i>Medium term (5-10 years)</i>	<i>Long term (10-20 years +)</i>
Moment when the issue will have an impact		X	
Moment to act to address the issue	X		

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.	Low	Middle	X High
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6. Additional Supporting Information

<i>Additional information</i>
<i>Evidence</i>
<i>Knowledge gaps</i>
<i>References</i>

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.



HLPE Inquiry

Critical and Emerging Issues for Food Security and Nutrition

Questionnaire

About the respondent

Name, Surname and Institution	Thierry Kesteloot, Oxfam-Solidarity	
Dou you answer on behalf of your institution, or as an individual?		As Individual
Do you agree if this contribution is made available to the public as part of the proceedings?	Yes	
Country of the responding individual/institution Please mention international or regional, the case being	Belgium	

1. Overview of the issue

Issue <i>in 2 lines</i>	Ensuring sufficient decent Rural Employment by 2025	
Description of the issue <i>in less than 5 lines</i>	Today extreme poverty is by 70% rural. Income from farming and rural employment are key to get poor out of poverty, By 2025, an additional billion young will look for jobs. Rural transformation is required to ensure sufficient, equitable and decent rural jobs.	
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>	Challenge	Opportunity It depends (please specify) Low wages, under/unemployment in rural areas are critical. However, creating sufficient productive decent jobs would be a powerful opportunity for rural development.
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition <i>In less than 10 lines.</i> Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.	There is a consensus about the critical role of small scale food producers in FSN, poverty reduction, rural development. Agricultural development often focusses on economies of scale and efficiencies with little attention to impacts on decent employment perspectives. This needs to be done in a comprehensive way, looking at diverse issues including livelihoods and markets, demographics, local territorial development, access to limited natural resources, gender and equity, knowledge systems, adaptation and risks, migration. What food systems are needed to ensure a future for small scale food producers?	

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Main response proposed to address the issue	<p>It is proposed that the HLPE undertakes a comprehensive research to highlight the main drivers of decent rural employment deficits and opportunities taking into account the main challenges for FSN by 2025 and taking into account the evolving rural economic and governance environment.</p> <p>It should analyze the policy responses and shortcomings, identify what rural transformation would look like, and what its main components should be.</p> <p>This analysis should also consider how youth can participate in shaping the policies and practices that will affect their future. This will enable the CFS to make sound recommendations for potential policy action.</p>
Main actor(s) concerned or involved in the response proposed	<p>Research by HLPE should include policy makers, in particular at local and national levels. Specific methods should be developed to ensure a solid participation of small scale food producers, social movements, youth organisations, migration organisations. (In)formal knowledge systems/transfer. Intergenerational approaches would be beneficial. Discussions with governments and intergovernmental bodies on secure access to productive resources, sustainable rural livelihoods policies and risk mitigation responses.</p>

For the public inquiry fields below are optional

2. Broad typology of the issue

(*)	External driver	Internal to food systems	Both
Is the issue either or both?			Focus on rural employment is internal to the food system, but its evolution also depends on external factors

(*)	Economic (and productive)	Social and Cultural	Governance (institutions, rights, etc.)	Environmental (resources, etc.)	Other (SPECIFY)
Main nature of the issue	X	X Inter-generational	X	X	
Nature of the main impact of the issue on FSN	Rural livelihoods		Accountability and participation	Potential intensification in use of natural resources	

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	Classification (**)	
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?	Critical point	Systemic issue

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

2. Breadth: Are there many people affected?	Few	Many
3. Scale: local/regional/global?	Local <i>Indicate here the precise location</i>	Region <i>Rural areas (but in relation with urban and global regions through migration)</i>
		Global

For items 4-11 below, please use the classification [— — , — , 0 , + , ++]:

Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)

4. Impact on Availability	If nothing is being done in medium term -
5. Impact on Access	If nothing is being done in medium term --
6. Impact on Utilization/ nutrition	If nothing is being done in medium term -
7. Impact on Stability	If nothing is being done in medium term -
8. Impact on most vulnerable people	If nothing is being done in medium term --
9. Impact on women	If nothing is being done in medium term -
10. Impact on children	-
11. Impact on marginalized populations	high
12. Cost to address the issue	Low Middle High

(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

4. Time Scale

Timeframe (*)	Now/Short term (1-5 years)	Medium term (5-10 years)	Long term (10-20 years +)
Moment when the issue will have an impact		X	X
Moment to act to address the issue	X	X	

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.	Low	Middle	High
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6. Additional Supporting Information

Additional information

Decent rural employment should be at the heart of the debates of FSN, including by identifying the required conditions for the young generations to develop vibrant local and national food systems.

- **Access:** decent rural employment opportunities based on family farming and through local processing/distribution will impact production outputs and rural incomes affecting access to food; Rural employment policies will also affect access to productive resources for producing food for the current and future generation. Without sufficient opportunities, access might also be affected, depending on (potentially insufficient) external income opportunities, including rural/urban balance
- **Stability:** vibrant rural areas can have multiplier effects in rural areas via production, income and consumption potentially leading increased investments by small scale producers and lower

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dependency on external food markets. This might have a more stabilizing effect on local food markets.

- **Availability:** Without increased involvement of youth in agriculture, long-term shortages in skilled agricultural labour will inevitably occur. Failure to reverse this trend is likely to negatively affect agricultural productivity, output and food supply, which in turn may undermine household and national food security. Availability can be impacted by the modes of production, where small scale food production and improved sustainable resource intensification (incl labour), could positively impact availability in poorer rural areas
- **Utilization:** future of rural employment might affect feminization of agriculture and indirectly the utilization of nutritious foods

Evidence

There is broad agreement that growth in agriculture usually generates the greatest improvements for the poorest people – particularly in poor, agriculture-based economies. Rural employment is a key factor for FSN, with 40% of the active population globally. This proportion tends to diminish, but continues to raise in absolute numbers. The livelihoods of poor rural households are diverse across regions and countries, and within countries. Livelihoods are derived, to varying degrees, from smallholder farming – including livestock production and artisanal fisheries – agricultural wage labour, wage or self-employment in the rural non-farm economy and migration. Certain groups – particularly rural women, youth, indigenous peoples and ethnic minorities – are often disproportionately held back by disadvantages rooted in inequalities.

Some regions are facing differentiated situation, where the EU and US are confronted with aging farming populations, while some southern regions face large numbers of youth looking for a job (eg. by 2025, 330 million in Africa, 570 million in South Asia). Rural exodus does impact gender and generational balances in rural areas, with increasingly women, elderly and children left to farm. In some regions youth that want to develop a future in agriculture are facing difficulties in access productive resources, markets, income, services.

Today, rural labour markets in most developing countries do not provide sufficient decent work opportunities for women and men. In particular for young, because labour is often the only asset that rural youth possess, their participation in the labour market is one of the principal determinants of their well-being. If employment opportunities are limited and of poor quality, rural poor will continue to struggle. Decent work deficits that rural poor face include: insecure and low incomes; little or no access to land, markets, finance and knowledge; increased pressure on natural resources; weak enforcement of labour legislation; poor health, safety and environmental conditions; gender inequality in pay and opportunities; the exploitation of migrant workers; inadequate social protection; and weak social dialogue. The resulting unemployment, underemployment and poverty among rural population, including rural youth, present a serious threat to their livelihood and food security.

The research highlights how the disjunction between policy on the one hand, and understanding and evidence on the other, is unlikely to lead to effective policy and good development outcomes. Policy responses therefore must articulate with ongoing economic, political and social transitions AND rural poor -and in particular young people's- own imperatives, aspirations, strategies and activities.

Policy prescriptions tend to see the replacement of small subsistence farmers by large food-selling farmers as evolutionary, normal and desirable as seen as an increasingly "inefficient" use of resources as countries develop. Its reduction is seen as a natural process, to be accelerated by good policy.

Though rural and urban unemployment has been much more severe and persistent in countries neglecting agriculture, or adopting large-farm strategy, than where green revolutions have been sought mainly via small/subsistence farms. Rural transformation requires attention to : adequate policy support to small scale food producers, labour intensive food production; revisiting the farming models to encompass employment generation issues; inclusion of income, employment and environment in FSN policies.

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Knowledge gaps

Many governments lack the knowledge and capacities needed to effectively generate decent employment opportunities for rural poor and in particular to rural youth. National policy frameworks need to better account for the creation of both *sufficient* and *decent* employment opportunities in rural areas.

How can local and national production and distribution systems generate sufficient added-value, jobs and common goods to ensure a decent and sustainable rural livelihood for (young) rural poor ?

What transformations in the production systems are required, which type of public and private investments are needed ?

Increased food prices have revamped interest in agriculture. What support to agriculture must be couched within broader support to create vibrant, prosperous rural communities where agriculture is well-rewarded, an engine for people's entitlements through wealth creation, diversification, local investments, employment and incomes, taking into consideration the evolving context of food economies, rural/urban relations (including increasing attention to small cities and rural boroughs with strong local linkages), limited natural resources and increased risks.

References

<http://www.future-agricultures.org/research/youth-n-agriculture#.UyMZiHc2Hp0> (Future agricultures is an academic collective from universities and research centres in Europe and Africa focused on 10 issues, one of which is youth and agriculture)

Bruno Losch, Prévention des crises en Afrique subsaharienne – Relever le défi de l'emploi : l'agriculture au centre, Perspective N°19, Cirad, octobre 2012

ILO. ILO Global employment trends for youth 2013. Geneva, 2013. ILO.

IFAD, Rural Poverty Report, Rome. 2012

Michael Lipton, Demographic transition in sub-Saharan Africa: How big will the economic dividend be? With Robert Eastwood. Population Studies, 65, 1: 9-35

Michael Lipton, Staples production: efficient 'subsistence' smallholders are key to poverty reduction, development, and trade, UNCTAD Global Commodities Forum, Geneva, 18-19 March, 2013

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.



HLPE Inquiry

Critical and Emerging Issues for Food Security and Nutrition

Questionnaire

About the respondent

Name, Surname and Institution	ETC-NL	
Do you answer on behalf of your institution, or as an individual?	<input checked="" type="checkbox"/> On behalf	
Do you agree if this contribution is made available to the public as part of the proceedings?	<input checked="" type="checkbox"/> Yes	
Country of the responding individual/institution Please mention international or regional, the case being	Netherlands (international)	

1. Overview of the issue

Issue <i>in 2 lines</i>			
Description of the issue <i>in less than 5 lines</i>	<p>We would like to support the statement in para 19:</p> <p>The United Nations system must work more effectively together (...) Therefore ETC suggests to incorporate the rights angle taken by the UN Special Rapporteur on the right to food – see http://www.srfood.org/en/official-reports.</p>		
Is the issue a <i>challenge</i> and/or an <i>opportunity</i> for FSN? <i>Please tick the appropriate box</i>	<input type="checkbox"/> Challenge	<input checked="" type="checkbox"/> Opportunity	<input type="checkbox"/> It depends (please specify)
Methodology and approach used to identify the issue and assess its importance for Food Security and Nutrition	<p>Texts such as the above in our opinion rightly stress the urgency of the matter and also convincingly argue that “business as usual” will not do</p>		
<i>In less than 10 lines. Additional supporting or describing information (literature, reports, expert report, analysis, etc.) can be provided in section 5 below.</i>	<p>De Schutter’s recent final report includes a sector-by-sector list of recommendations and in so doing addresses various comments on the ICN2 Zero Draft.</p>		

Main response proposed to address the issue	<p>Quote from conclusion of above report:</p> <p>“The eradication of hunger and malnutrition is an achievable goal. Reaching it requires, however, that we move away from business as usual and improve coordination across sectors, across time and across levels of governance. Empowering communities at the local level, in order for them to identify the obstacles that they face and the solutions that suit them best, is a first step. This must be complemented by supportive policies at the national level that ensure the right sequencing between the various policy reforms that are needed, across all relevant sectors, including agriculture, rural development, health, education and social protection. In turn, local-level and national-level</p>
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	<p>policies should benefit from an enabling international environment, in which policies that affect the ability of countries to guarantee the right to food – in the areas of trade, food aid, foreign debt alleviation and development cooperation – are realigned with the imperative of achieving food security and ensuring adequate nutrition. Understood as a requirement for democracy in the food systems, which would imply the possibility for communities to choose which food systems to depend on and how to reshape those systems, food sovereignty is a condition for the full realization of the right to food. But it is the paradox of an increasingly interdependent world that this requires deepening the cooperation between States.”</p>
Main actor(s) concerned or involved in the response proposed	<p>Joanne Harnmeijer Arine Valstar</p>

For the public inquiry fields below are optional

2. Broad typology of the issue

(*)	<i>External driver</i>	<i>Internal to food systems</i>	<i>Both</i>
Is the issue either or both?			Multi-sectoral

(*)	<i>Economic (and productive)</i>	<i>Social and Cultural</i>	<i>Governance (institutions, rights, etc.)</i>	<i>Environmental (resources, etc.)</i>	<i>Other (SPECIFY)</i>
Main nature of the issue	x	x	x	All! Need for a holistic/systemic approach towards sustainable food systems	
Nature of the main impact of the issue on FSN					Improved sustainability

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

3. Attributes of the Issue

	<i>Classification (**)</i>		
1. Depth: Is it relevant to food and nutrition systems as a whole, or specific parts of those systems?	Critical point	XSystemic issue	
2. Breadth: Are there many people affected?	Few	XMany	
3. Scale: local/regional/global?	Local	Region	XGlobal

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	<i>Indicate here the precise location</i>	<i>Indicate here the precise region</i>
For items 4-11 below, please use the classification [— — , —, 0, +, ++]: Very negative (— —) / Negative (—) / Low (0) / Positive (+) / Very positive impact (++)		
4. Impact on Availability		
5. Impact on Access		
6. Impact on Utilization/ nutrition		
7. Impact on Stability		
8. Impact on most vulnerable people	Specify as appropriate	
9. Impact on women		
10. Impact on children		
11. Impact on marginalized populations	Specify as appropriate	
12. Cost to address the issue	Low	Middle
		High

(**) Please tick the boxes or classify the impacts and provide synthetic data where required. Additional supporting or describing information, data, sources can be provided in section 6 below.

4. Time Scale

<i>Timeframe (*)</i>	<i>Now/Short term (1-5 years)</i>	<i>Medium term (5-10 years)</i>	<i>Long term (10-20 years +)</i>
Moment when the issue will have an impact	x	x	x
Moment to act to address the issue	x	x	x

(*) Please tick the boxes. Additional supporting or describing information can be provided in section 6 below.

5. Degree of confidence

Solidity of currently available knowledge base.	Low	Middle	xHigh
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6. Additional Supporting Information

<i>Additional information</i> The report includes multiple references that support the recommendations made.
<i>Evidence</i>
<i>Knowledge gaps</i>
<i>References</i>



**Enquête du Groupe d'experts de haut niveau (HLPE)
Questions cruciales et émergentes pour la sécurité
alimentaire et la nutrition**

Questionnaire

Renseignements concernant le contributeur

Nom, prénom et institution	PASCAL Peggy Action Contre la Faim		
Répondez-vous au nom de votre institution ou à titre privé?	ACF		
Acceptez-vous que cette contribution soit mise à la disposition du public dans le cadre des actes de la consultation?	Oui		
Pays de la personne ou de l'institution qui répond. Veuillez mentionner, le cas échéant, «international» ou «régional».	ACF International		

1. Aperçu de la question/du phénomène

Énoncé <i>en 2 lignes</i> .	Quelles sont les conditions nécessaires pour que le développement agricole soit favorable à la sécurité alimentaire et nutritionnelle ?		
Description <i>en moins de 5 lignes</i> .	Contrairement à une idée répandue, le développement agricole n'entraîne pas automatiquement l'amélioration de la sécurité alimentaire et nutritionnelle. Il peut parfois même avoir des effets négatifs. Cette relation est encore peu étudiée et mérite plus d'attention pour identifier à quelles conditions on peut obtenir un effet d'entraînement positif et comment limiter les impacts potentiels négatifs.		
La question/le phénomène est-il un <i>défi</i> et/ou une <i>opportunité</i> pour la sécurité alimentaire et la nutrition? <i>Veuillez cocher la case appropriée.</i>	Défi	Opportunité	A la fois risque et opportunité
Méthode et approche utilisées pour déterminer la question/le phénomène et évaluer son importance pour la sécurité et la nutrition. <i>En moins de 10 lignes.</i> Des informations complémentaires ou descriptives (publications, rapports, rapports d'experts, analyses, etc.) peuvent être fournies dans la section 5 ci-dessous.	Les projets ou les politiques de développement sont rarement évalués ex-ante dans leurs effets sur la sécurité alimentaire et nutritionnelle. Les études d'évaluation ex-post existantes ont tendance à se focaliser sur des projets de développement localisés (et moins sur le niveau des politiques), sur les problèmes de sous-nutrition (au détriment de la prise en compte des problèmes de surnutrition et de double fardeau), en ayant recours à des méthodologies très spécifiques. Elles ont néanmoins l'intérêt de montrer que les effets des projets de développement agricole ne sont pas systématiquement positifs.		

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Principale action proposée pour résoudre le problème (ou saisir l'opportunité).	Intégrer des analyses des effets sur la sécurité alimentaire et nutritionnelle dans toutes ses dimensions, depuis la conception jusqu'au suivi et à l'évaluation des projets comme des politiques de développement agricole. Former les professionnels du développement agricole aux effets sur la sécurité alimentaire et nutritionnelle des actions dans leur domaine. Inversement, former les nutritionnistes à la façon dont les interventions agricoles peuvent contribuer à la nutrition, ceci dans un souci de coordination intersectorielle
Principal(aux) acteur(s) concerné(s) ou participant à l'action proposée.	Acteurs des politiques et des projets de développement agricole Ecoles agronomiques et agronomes Nutritionnistes Economistes agricoles Acteurs du système agro-alimentaire

Les champs suivants sont facultatifs pour l'enquête publique

2. Typologie élargie de la question/du phénomène

(*)	Facteur déterminant externe	Interne aux systèmes alimentaires	Les deux
Le phénomène est-t-il l'un, l'autre ou les deux?	Le développement agricole peut avoir des effets sur la régularité des revenus, sur la santé, sur les soins, etc. et affecter ainsi la nutrition.	Le développement agricole a des effets sur les disponibilités, les prix et la qualité des aliments et leur régularité	

(*)	Économique (et productive)	Sociale et culturelle	Gouvernance (institutions, droits, etc.)	Environnemental (ressources, etc.)	Autre PRÉCISER
Nature du phénomène					
Nature de l'impact du phénomène sur la sécurité alimentaire et la nutrition	Disponibilités. Prix des aliments Régularité des prix et des revenus	Santé des agriculteurs /trices Budget-temps et donc soin Statut social	Relations de genre, au sein des familles (ainés/ cadets, hommes et femmes, ...) pour les décisions agricoles, budgétaires, de santé et alimentaires. Accès au soin	Accès à un environnement sanitaire de qualité : eau, pesticides, biodiversité....	

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

(*) Veuillez cocher les cases. Des informations complémentaires ou descriptives (publications, rapports, rapports d'experts, analyses, etc.) peuvent être fournies dans la section 6 ci-dessous.

3. Attributs du phénomène

	Classification (**)		
1. Étendue: Est-il pertinent pour les systèmes alimentaires et nutritionnels dans leur ensemble ou pour des parties spécifiques de ces systèmes?	Point critique		Question systémique
2. Portée: Combien de personnes touche-t-il?	Peu		Beaucoup
3. Échelle: locale/régionale/mondiale?	Locale	Régionale	Mondiale
	<i>Indiquez ici le lieu exact</i>	<i>Indiquez ici la région exacte</i>	

Pour les points 4 à 11 ci-dessous, veuillez utiliser l'échelle [— — , — , 0, +, ++]:

Impact très négatif (— —) / négatif (—) / faible (0) / positif (+) / très positif (++)

4. Impact sur la disponibilité	oui		
5. Impact sur l'accès	oui		
6. Impact sur l'utilisation/la nutrition	Oui		
7. Impact sur la stabilité	Oui		
8. Impact sur les personnes les plus vulnérables	Oui par accroissement des inégalités		
9. Impact sur les femmes	Oui		
10. Impact sur les enfants	Oui		
11. Impact sur les populations marginalisées	Oui sur les 842 millions de personnes qui souffrent de la faim et 180 millions de malnutrition Le cas échéant précisez		
12. Coût de la résolution du problème (ou pour saisir l'opportunité)	Faible	Moyen	Élevé

(**) Veuillez cocher les cases ou classer les impacts et fournir des données synthétiques si besoin est. Des informations complémentaires ou descriptives peuvent être fournies dans la section 6 ci-dessous.

4. Période

Horizon (*)	Actuellement/ À court terme (1-5 ans)	À moyen terme (5-10 ans)	À long terme (10-20 ans ou plus)
Moment où le phénomène aura un impact			
Moment où il faudra intervenir pour traiter la question			

(*) Veuillez cocher les cases. Des informations complémentaires ou descriptives (publications, rapports, rapports d'experts, analyses, etc.) peuvent être fournies dans la section 6 ci-dessous.

5. Degré de confiance

Solidité de la base de connaissances actuellement disponible	Faible	Moyenne	Élevée
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Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

6. Informations complémentaires

Informations complémentaires

Action contre la Faim (ACF) et le Cirad viennent de réaliser une revue de la littérature scientifique sur les relations entre développement agricole et la nutrition :

<http://www.actioncontrelafaim.org/fr/content/identifier-et-limiter-les-risques-des-interventions-agricoles-sur-la-nutrition>

Éléments probants

Plusieurs « chemins » qui relient le développement agricole et la nutrition ont été identifiés

Lacunes en matière de connaissances

Encore peu d'études sur les relations entre le développement agricole et la sécurité alimentaire et nutritionnelle.

Bibliographie

http://www.actioncontrelafaim.org/sites/default/files/publications/fichiers/risques_ida_nutrition_final_log_oacf_cirad.doc

<http://www.actioncontrelafaim.org/en/content/seeds-of-good-nutrition>

http://www.fao.org/fsnforum/sites/default/files/file/76_agriculture_and_nutrition/PROCEEDINGS_76_Agriculture_and_Nutrition.pdf

http://unscn.org/files/Agriculture-Nutrition-CoP/Agriculture-Nutrition_Key_recommendations.pdf

<http://www.thelancet.com/series/maternal-and-child-nutrition>



**Enquête du Groupe d'experts de haut niveau (HLPE)
Questions cruciales et émergentes pour la sécurité
alimentaire et la nutrition**

Questionnaire

Renseignements concernant le contributeur

Nom, prénom et institution	GISA	
Répondez-vous au nom de votre institution ou à titre privé?	Au nom de: GISA	À titre privé:
Acceptez-vous que cette contribution soit mise à la disposition du public dans le cadre des actes de la consultation?	Oui	Non
Pays de la personne ou de l'institution qui répond. Veuillez mentionner, le cas échéant, «international» ou «régional».	FRANCE	

1. Aperçu de la question/du phénomène

Énoncé <i>en 2 lignes</i> .	Analyser la place des femmes et des rapports sociaux de genre dans les systèmes alimentaires et leur rôle dans la sécurité alimentaire et la nutrition.		
Description <i>en moins de 5 lignes</i> .	<p>Les femmes souffrent davantage de malnutrition que les hommes et pourtant elles jouent un rôle essentiel dans la sécurité alimentaire et la nutrition qu'elles soient urbaines ou rurales. Dans les campagnes, la prise en compte du genre concerne surtout les questions de production, en ville surtout les questions de modes de consommation et d'accès aux produits alimentaires.</p> <p>L'approche par le genre des questions de sécurité alimentaire et nutritionnelle permet de poser au cœur des questions de production, d'approvisionnement, de transformation et de consommation l'analyse des rapports sociaux et de leurs conséquences sur la sécurité alimentaire et la nutrition.</p>		
La question/le phénomène est-il un <i>défi</i> et/ou une <i>opportunité</i> pour la sécurité alimentaire et la nutrition? <i>Veuillez cocher la case appropriée.</i>	Défi	<u>Opportunité</u>	Autre (veuillez préciser)
<p>Méthode et approche utilisées pour déterminer la question/le phénomène et évaluer son importance pour la sécurité et la nutrition.</p> <p><i>En moins de 10 lignes.</i> Des informations complémentaires ou descriptives (publications, rapports, rapports d'experts, analyses, etc.) peuvent être fournies dans la section 5 ci-dessous.</p>	<p>Les rôles sociaux assignent souvent les femmes au secteur dit reproductif (soin des enfants, cuisine ...) et les hommes au secteur dit productif. Or s'engager pour la sécurité alimentaire et nutritionnelle suppose de comprendre et de travailler sur les interrelations entre ces deux secteurs. Les femmes occupent un rôle central dans la production, le stockage, la</p>		

	<p>transformation, et la vente de nourriture.</p> <p>Ce manque de connaissance et de reconnaissance du rôle des femmes dans le système alimentaire au sens large a des conséquences directes sur la sécurité alimentaire.</p> <p>On peut citer notamment :</p> <ol style="list-style-type: none"> 13. le rôle dans le stockage des semences locales, la sélection et la collecte des plantes sauvages et cultivées, leur stockage et leur transformation (activités non reconnue qui risque donc d'être perdue) ; 14. le rôle dans la production agricole, les femmes ont souvent leur propre champ et travaillent également sur le champ du mari (forte inégalité d'accès aux ressources productives, notamment le foncier) ; dans ces champs et jardins, les femmes préservent l'agrobiodiversité or les pratiques agricoles et la diversité des plantes qui y sont cultivées sont méconnues ; 15. le rôle dans les savoirs culinaires et les connaissances entre production et consommation (savoirs souvent non reconnus) 16. le rôle dans la transformation des aliments en ville (commerce de rue) et à la maison (cette activité est très importante car elle permet de compléter le revenu du ménage, mais ce secteur informel mérite d'être accompagné) 17. le rôle dans la commercialisation des aliments. <p>Analyser les politiques adressées aux femmes et évaluer leurs impacts sur la sécurité alimentaire.</p>
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<p>Principale action proposée pour résoudre le problème (ou saisir l'opportunité).</p>	<p>Répertorier les savoirs culinaires des femmes : production, collecte, stockage, transformation des plantes sauvages et cultivées.</p> <p>Soutenir les activités productives des femmes : les accompagner dans leurs besoins en ressources productives. Accompagner leur revendication de droits fonciers sécurisés.</p> <p>Soutenir les mouvements de femmes qui revendiquent souvent une valorisation de l'agroécologie (vision systémique du sol au plat).</p> <p>Recenser les expériences et actions possibles pour diminuer la charge de travail des femmes.</p> <p>Travailler sur le statut des femmes agricultrices et des femmes cheffes de famille.</p>
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Principal(aux) acteur(s) concerné(s) ou participant à l'action proposée.	

Les champs suivants sont facultatifs pour l'enquête publique

2. Typologie élargie de la question/du phénomène

(*)	<i>Facteur déterminant externe</i>	<i>Interne aux systèmes alimentaires</i>	<i>Les deux</i>
Le phénomène est-t-il l'un, l'autre ou les deux?		Les femmes jouent un rôle fondamental dans les systèmes alimentaires de la production à la consommation	

(*)	<i>Économique (et productive)</i>	<i>Sociale et culturelle</i>	<i>Gouvernance (institutions, droits, etc.)</i>	<i>Environnemental (ressources, etc.)</i>	<i>Autre PRÉCISER</i>
Nature du phénomène	X	X	X		
Nature de l'impact du phénomène sur la sécurité alimentaire et la nutrition	X	X	X	X	

(*) Veuillez cocher les cases. Des informations complémentaires ou descriptives (publications, rapports, rapports d'experts, analyses, etc.) peuvent être fournies dans la section 6 ci-dessous.

3. Attributs du phénomène

	<i>Classification (**)</i>		
1. Étendue: Est-il pertinent pour les systèmes alimentaires et nutritionnels dans leur ensemble ou pour des parties spécifiques de ces systèmes?	Point critique		Question systémique
2. Portée: Combien de personnes touche-t-il?	Peu		Beaucoup
3. Échelle: locale/régionale/mondiale?	Locale	Régionale	Mondiale
	<i>Indiquez ici le lieu exact</i>	<i>Indiquez ici la région exacte</i>	

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Pour les points 4 à 11 ci-dessous, veuillez utiliser l'échelle [— — , — , 0, +, ++]:
Impact très négatif (— —) / négatif (—) / faible (0) / positif (+) / très positif (++)

4. Impact sur la disponibilité	++		
5. Impact sur l'accès	++		
6. Impact sur l'utilisation/la nutrition	++		
7. Impact sur la stabilité	+		
8. Impact sur les personnes les plus vulnérables	++ (les femmes et les enfants) Le cas échéant précisez		
9. Impact sur les femmes	++		
10. Impact sur les enfants	++		
11. Impact sur les populations marginalisées	Le cas échéant précisez		
12. Coût de la résolution du problème (ou pour saisir l'opportunité)	Faible	Moyen	Élevé

(**) Veuillez cocher les cases ou classer les impacts et fournir des données synthétiques si besoin est. Des informations complémentaires ou descriptives peuvent être fournies dans la section 6 ci-dessous.

4. Période

<i>Horizon (*)</i>	<i>Actuellement/ À court terme (1-5 ans)</i>	<i>À moyen terme (5-10 ans)</i>	<i>À long terme (10-20 ans ou plus)</i>
Moment où le phénomène aura un impact	X	X	
Moment où il faudra intervenir pour traiter la question	X		

(*) Veuillez cocher les cases. Des informations complémentaires ou descriptives (publications, rapports, rapports d'experts, analyses, etc.) peuvent être fournies dans la section 6 ci-dessous.

5. Degré de confiance

Solidité de la base de connaissances actuellement disponible	Faible	Moyenne	Élevée
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6. Informations complémentaires

<i>Informations complémentaires</i>

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Éléments probants

Lacunes en matière de connaissances

Il y a des travaux importants mais le problème est leur lecture/connaissance par des lecteurs/acteurs politiques hors du cercle convaincu des personnes qui travaillent sur les questions de genre. Il y a un cloisonnement important des connaissances.

Bibliographie

Bina Agarwal que nous avons fait traduire pour l'ouvrage :VERSCHUUR, C., GUETAT-BERNARD, H, GUERIN, I.,(éd.), 2014 , *Sous le développement, le genre*, IRD, coll. « Objectifs sud » (sous presse). Version anglaise publiée chez Palgrave.

[à compléter]



**Enquête du Groupe d'experts de haut niveau (HLPE)
Questions cruciales et émergentes pour la sécurité
alimentaire et la nutrition**

Questionnaire

Renseignements concernant le contributeur

Nom, prénom et institution		
Répondez-vous au nom de votre institution ou à titre privé?	GISA	
Acceptez-vous que cette contribution soit mise à la disposition du public dans le cadre des actes de la consultation?	Oui	
Pays de la personne ou de l'institution qui répond. Veuillez mentionner, le cas échéant, «international» ou «régional».	France	

1. Aperçu de la question/du phénomène

Énoncé <i>en 2 lignes</i> .	Quelles sont les conditions pour que le développement agricole soit favorable à la sécurité alimentaire et nutritionnelle ?		
Description <i>en moins de 5 lignes</i> .	Le développement agricole n'entraîne pas automatiquement l'amélioration de la sécurité alimentaire et nutritionnelle. Les liens entre développement agricole et sécurité alimentaire et nutritionnelle sont peu connus. Cette relation est encore peu étudiée et mérite plus d'attention pour identifier à quelles conditions on peut obtenir un effet d'entraînement positif.		
La question/le phénomène est-il un <i>défi</i> et/ou une <i>opportunité</i> pour la sécurité alimentaire et la nutrition? <i>Veuillez cocher la case appropriée.</i>	Défi	Opportunité	A la fois risque et opportunité
Méthode et approche utilisées pour déterminer la question/le phénomène et évaluer son importance pour la sécurité et la nutrition. <i>En moins de 10 lignes.</i> Des informations complémentaires ou descriptives (publications, rapports, rapports d'experts, analyses, etc.) peuvent être fournies dans la section 5 ci-dessous.	Les projets ou les politiques de développement sont rarement évalués ex-ante dans leurs effets sur la sécurité alimentaire et nutritionnelle. Les études d'évaluation ex-post existantes ont tendance à se focaliser sur des projets de développement localisés (et moins sur le niveau des politiques), sur les problèmes de sous-nutrition (au détriment de la prise en compte des problèmes de surnutrition et de double fardeau), en ayant recours à des méthodologies très spécifiques. A partir de différentes études de cas ex ante et ex post (politiques et projets de développement agricole), il conviendra de s'interroger sur les conditions à réunir pour que le développement agricole entraîne des impacts positifs sur la sécurité alimentaire et nutritionnelle.		

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Principale action proposée pour résoudre le problème (ou saisir l'opportunité).	Intégrer des analyses des effets sur la sécurité alimentaire et nutritionnelle dans toutes ses dimensions, depuis la conception jusqu'au suivi et à l'évaluation des projets comme des politiques de développement agricole. Former les professionnels du développement agricole aux effets sur la sécurité alimentaire et nutritionnelle des actions dans leur domaine. Inversement, former les nutritionnistes à la façon dont les interventions agricoles peuvent contribuer à la nutrition, ceci dans un souci de coordination intersectorielle.
Principal(aux) acteur(s) concerné(s) ou participant à l'action proposée.	Acteurs des politiques et des projets de développement agricole Ecoles agronomiques et agronomes Nutritionnistes Economistes agricoles Acteurs du système agro-alimentaire

Les champs suivants sont facultatifs pour l'enquête publique

2. Typologie élargie de la question/du phénomène

(*)	Facteur déterminant externe	Interne aux systèmes alimentaires	Les deux
Le phénomène est-t-il l'un, l'autre ou les deux?	Le développement agricole peut avoir des effets sur les revenus, sur la santé, sur les soins, etc.	Le développement agricole peut avoir des effets sur les disponibilités, les prix et la qualité des aliments et leur régularité	

(*)	Économique (et productive)	Sociale et culturelle	Gouvernance (institutions, droits, etc.)	Environnemental (ressources, etc.)	Autre PRÉCISER
Nature du phénomène					
Nature de l'impact du phénomène sur la sécurité alimentaire et la nutrition	Disponibilités. Prix des aliments Régularité des prix et des revenus	Santé des agriculteurs /trices Budget-temps et donc soin Statut social	Relations de genre, au sein des familles (ainés/ cadets, hommes et femmes, ...) pour les décisions agricoles, budgétaires, de santé et alimentaires. Accès au soin	Accès à un environnement sanitaire de qualité : eau, pesticides, biodiversité....	

(*) Veuillez cocher les cases. Des informations complémentaires ou descriptives (publications, rapports, rapports d'experts, analyses, etc.) peuvent être fournies dans la section 6 ci-dessous.

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

3. Attributs du phénomène

	Classification (**)		
1. Étendue: Est-il pertinent pour les systèmes alimentaires et nutritionnels dans leur ensemble ou pour des parties spécifiques de ces systèmes?	Point critique		Question systémique
2. Portée: Combien de personnes touche-t-il?	Peu		Beaucoup
3. Échelle: locale/régionale/mondiale?	Locale	Régionale	Mondiale
	<i>Indiquez ici le lieu exact</i>	<i>Indiquez ici la région exacte</i>	
Pour les points 4 à 11 ci-dessous, veuillez utiliser l'échelle [— — , — , 0, +, ++]: Impact très négatif (— —) / négatif (—) / faible (0) / positif (+) / très positif (++)			
4. Impact sur la disponibilité	oui		
5. Impact sur l'accès	oui		
6. Impact sur l'utilisation/la nutrition	Oui		
7. Impact sur la stabilité	Oui		
8. Impact sur les personnes les plus vulnérables	Oui par accroissement des inégalités		
9. Impact sur les femmes	Oui		
10. Impact sur les enfants	Oui		
11. Impact sur les populations marginalisées	Oui sur les 842 millions de personnes qui souffrent de la faim et 180 millions de malnutrition		
12. Coût de la résolution du problème (ou pour saisir l'opportunité)	Faible	Moyen	Élevé

(**) Veuillez cocher les cases ou classer les impacts et fournir des données synthétiques si besoin est. Des informations complémentaires ou descriptives peuvent être fournies dans la section 6 ci-dessous.

4. Période

Horizon (*)	Actuellement/ À court terme (1-5 ans)	À moyen terme (5-10 ans)	À long terme (10-20 ans ou plus)
Moment où le phénomène aura un impact			
Moment où il faudra intervenir pour traiter la question			

(*) Veuillez cocher les cases. Des informations complémentaires ou descriptives (publications, rapports, rapports d'experts, analyses, etc.) peuvent être fournies dans la section 6 ci-dessous.

5. Degré de confiance

Solidité de la base de connaissances actuellement disponible	Faible	Moyenne	Élevée
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6. Informations complémentaires

Informations complémentaires

Action contre la Faim (ACF) et le Cirad viennent de réaliser une revue de la littérature scientifique sur les relations entre développement agricole et la nutrition :

<http://www.actioncontrelafaim.org/fr/content/identifier-et-limiter-les-risques-des-interventions-agricoles-sur-la-nutrition>

Éléments probants

Plusieurs « chemins » qui relient le développement agricole et la nutrition ont été identifiés

Lacunes en matière de connaissances

Encore peu d'études sur les relations entre le développement agricole et la sécurité alimentaire et nutritionnelle.

Bibliographie

http://www.actioncontrelafaim.org/sites/default/files/publications/fichiers/risques_ida_nutrition_final_logoacf_cirad.doc

<http://www.actioncontrelafaim.org/en/content/seeds-of-good-nutrition>

http://www.fao.org/fsnforum/sites/default/files/file/76_agriculture_and_nutrition/PROCEEDINGS_76_Agriculture_and_Nutrition.pdf

http://unscn.org/files/Agriculture-Nutrition-CoP/Agriculture-Nutrition_Key_recommendations.pdf

<http://www.thelancet.com/series/maternal-and-child-nutrition>



**Enquête du Groupe d'experts de haut niveau (HLPE)
Questions cruciales et émergentes pour la sécurité
alimentaire et la nutrition**

Questionnaire

Renseignements concernant le contributeur

Nom, prénom et institution		
Répondez-vous au nom de votre institution ou à titre privé?	GISA	
Acceptez-vous que cette contribution soit mise à la disposition du public dans le cadre des actes de la consultation?	Oui	Non
Pays de la personne ou de l'institution qui répond. Veuillez mentionner, le cas échéant, «international» ou «régional».	France	

1. Aperçu de la question/du phénomène

Énoncé <i>en 2 lignes</i> .	La très faible inclusion financière des populations rurales est un obstacle majeur pour la SAN.		
Description <i>en moins de 5 lignes</i> .	Les populations rurales, y compris les agriculteurs, n'ont quasiment pas accès aux services financiers. Or, ils sont essentiels pour développer leurs activités économiques, et pour réduire leur vulnérabilité donc pour la SAN.		
La question/le phénomène est-il un <i>défi</i> et/ou une <i>opportunité</i> pour la sécurité alimentaire et la nutrition? <i>Veuillez cocher la case appropriée.</i>	<u>Défi</u>	Opportunité	Autre (veuillez préciser)
Méthode et approche utilisées pour déterminer la question/le phénomène et évaluer son importance pour la sécurité et la nutrition. <i>En moins de 10 lignes.</i> Des informations complémentaires ou descriptives (publications, rapports, rapports d'experts, analyses, etc.) peuvent être fournies dans la section 5 ci-dessous.	L'accès à des services financiers (épargne, crédit, assurance) pour les besoins productifs et de protection (couverture des risques) n'atteint pas 30% en zones rurales, particulièrement en ASS. Or ils sont une condition <i>sine qua non</i> de leur sécurité alimentaire et leur résilience. Les raisons sont multiples : manque d'innovation des outils financiers, incompréhension (méconnaissance) entre la population rurale et les institutions financières. Il est nécessaire d'étudier comment les services peuvent s'adapter pour répondre efficacement aux besoins des populations rurales de façon durable.		

Principale action proposée pour résoudre le problème (ou saisir l'opportunité).	Il s'agit d'un problème récurrent mais qui n'a jusqu'à présent pas donné lieu, malgré son importance, à une mobilisation suffisante des acteurs. Il faut établir des constats sur la base des diagnostics et expériences existantes, évaluer les besoins (en particulier en matière de formation des principaux concernés institutions financières, populations rurales femmes et
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	agriculteurs), et mettre en avant le potentiel d'innovation pour aider à la construction d'une approche intégrée permettant de mobiliser les acteurs des institutions financières sur les secteur rural. Les travaux du HLPE pourraient jouer ce rôle de catalyseur et formuler des recommandations pour des stratégies d'action globales (politiques publiques dont politiques agricoles, institutions financières, organisations de producteurs, bailleurs de fonds, société civile, acteurs privés).
Principal (aux) acteur(s) concerné(s) ou participant à l'action proposée.	L'ensemble des populations rurales (pour des activités agricoles ou non agricoles) sont concernées. De nombreuses très petites, et moyennes entreprises actives en milieu rural ou dans le secteur agricole sont concernées. Les acteurs sont les Etats, les institutions financières (banques, institutions de micro finance formelles ou informelles), les entreprises privées des filières agricoles, les organismes de stockage agricole, les organisations de producteurs, les sociétés d'assurance, etc.

Les champs suivants sont facultatifs pour l'enquête publique

2. Typologie élargie de la question/du phénomène

(*)	Facteur déterminant externe	Interne aux systèmes alimentaires	Les deux
Le phénomène est-t-il l'un, l'autre ou les deux?	Contrainte externe au développement de systèmes alimentaires durables.		Expliquez brièvement

(*)	Économique (et productive)	Sociale et culturelle	Gouvernance (institutions, droits, etc.)	Environnemental (ressources, etc.)	Autre PRÉCISER
Nature du phénomène					
Nature de l'impact du phénomène sur la sécurité alimentaire et la nutrition					

(*) Veuillez cocher les cases. Des informations complémentaires ou descriptives (publications, rapports, rapports d'experts, analyses, etc.) peuvent être fournies dans la section 6 ci-dessous.

3. Attributs du phénomène

	Classification (**)
1. Étendue: Est-il pertinent pour les systèmes alimentaires et nutritionnels dans leur ensemble ou pour des parties spécifiques de ces systèmes?	Tous les acteurs des systèmes sont concernés, des producteurs agricoles aux consommateurs

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		vulnérables	
2. Portée: Combien de personnes touche-t-il?	Peu	X	
3. Échelle: locale/régionale/mondiale?	Locale	Régionale	Mondiale
	X	X	
Pour les points 4 à 11 ci-dessous, veuillez utiliser l'échelle [— — , —, 0, +, ++]: Impact très négatif (— —) / négatif (—) / faible (0) / positif (+) / très positif (++)			
4. Impact sur la disponibilité	++		
5. Impact sur l'accès	++		
6. Impact sur l'utilisation/la nutrition	+		
7. Impact sur la stabilité	++		
8. Impact sur les personnes les plus vulnérables	++		
9. Impact sur les femmes	++		
10. Impact sur les enfants	+		
11. Impact sur les populations marginalisées	++		
12. Coût de la résolution du problème (ou pour saisir l'opportunité)	Faible	+	Élevé

(**) Veuillez cocher les cases ou classer les impacts et fournir des données synthétiques si besoin est. Des informations complémentaires ou descriptives peuvent être fournies dans la section 6 ci-dessous.

4. Période

<i>Horizon (*)</i>	<i>Actuellement/ À court terme (1-5 ans)</i>	<i>À moyen terme (5-10 ans)</i>	<i>À long terme (10-20 ans ou plus)</i>
Moment où le phénomène aura un impact	X	X	X
Moment où il faudra intervenir pour traiter la question	X		

(*) Veuillez cocher les cases. Des informations complémentaires ou descriptives (publications, rapports, rapports d'experts, analyses, etc.) peuvent être fournies dans la section 6 ci-dessous.

5. Degré de confiance

Solidité de la base de connaissances actuellement disponible	Faible	X	Élevée
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6. Informations complémentaires

L'agriculture est largement laissée pour compte des services financiers alors que les besoins en capitaux sont très importants. Les raisons sont multiples et connues : coûts de transaction élevés, manque de garantie, importance des risques propres au secteur mais aussi manque d'outils financiers adaptés. D'autres facteurs sont beaucoup moins documentés (voir ci-dessous).

En ce qui concerne la finance agricole et agroalimentaire, les approches « banques agricoles » et « micro finance » ont montré leurs limites. La question requiert une vision systémique, intégrant les multiples dimensions en jeu (rôle des Etats : régulation y compris du secteur financier, politique commerciale, politique agricole y compris infrastructures rurales, conseil à l'exploitation, formations, fonds de calamités, foncier, etc. ; rôle des institutions financières : adaptation des outils, procédures, formations ; rôle des acteurs dans les filières : agro-industries, PME de transformation, organisations de producteurs, etc.).

Pour proposer des produits adaptés à l'agriculture, notamment pour des durées à moyen et long terme, les institutions financières doivent pouvoir accéder à des financements sur ces durées, ce qui semblent les limiter à l'heure actuelle.

Lacunes en matière de connaissances

18. Très peu d'agriculteurs ont des capacités en gestion financière et réciproquement, les responsables des institutions financières (de la direction aux agents de crédit) ont peu de connaissance du secteur agricole et rural. En conséquence, les incompréhensions entre ces acteurs sont nombreuses. Des formations de part et d'autre semblent nécessaires. Par ailleurs, pour accompagner les acteurs dans ce processus il est nécessaire de développer des outils d'évaluation et de classification du risque des activités agricoles afin de proposer des produits financiers adaptés aux besoins et aux capacités des bénéficiaires. Des services de proximité sont donc nécessaires. Quels modèles existent pour rentabiliser un service de proximité ?

- De nouvelles innovations au service de la finance rurale et agricole sont possibles comme le nantissement des stocks, banque à distance, leasing, etc. et demeurent peu explorés.

Bibliographie

Quelques documents AFD sur le sujet :

Etude "Finances rurales" AFD et études pays Mali, Sénégal, Tunisie, etc.

Etude « Contractualisation » AFD

Etude « Nantissement des stocks » en cours de réalisation

Etude « Assurance indicielle et warrantage » GRET, etc.

Autres sources :

Etude « Financement de l'agriculture au Mali » (Crédit agricole, FAO, FARM, 2010)

Etude « Pays Investisseurs » au Mali (Université libre de Bruxelles, SOS Faim, avril 2012)



**Enquête du Groupe d'experts de haut niveau (HLPE)
Questions cruciales et émergentes pour la sécurité
alimentaire et la nutrition**

Questionnaire

Renseignements concernant le contributeur

Nom, prénom et institution		
Répondez-vous au nom de votre institution ou à titre privé?	GISA	À titre privé:
Acceptez-vous que cette contribution soit mise à la disposition du public dans le cadre des actes de la consultation?	Oui	Non
Pays de la personne ou de l'institution qui répond. Veuillez mentionner, le cas échéant, «international» ou «régional».	FRANCE	

1. Aperçu de la question/du phénomène

Énoncé <i>en 2 lignes</i> .	Rôle et impact des maladies animales dans la sécurité alimentaire et nutritionnelle		
Description <i>en moins de 5 lignes</i> .	Les maladies animales sont susceptibles d'affecter gravement la sécurité alimentaire, notamment : 19. En affectant le bien-être des populations (maladies / mortalités, sécurité sanitaire des aliments) ; 20. En affectant la productivité ; 21. En accroissant la pauvreté des populations vulnérables (valeur des cheptels, obstacle à l'intensification, perturbation des flux commerciaux d'approvisionnement).		
La question/le phénomène est-il un <i>défi</i> et/ou une <i>opportunité</i> pour la sécurité alimentaire et la nutrition? <i>Veuillez cocher la case appropriée.</i>	<u>DEFI</u>	Opportunité	Autre (veuillez préciser)
Méthode et approche utilisées pour déterminer la question/le phénomène et évaluer son importance pour la sécurité et la nutrition. <i>En moins de 10 lignes.</i> Des informations complémentaires ou descriptives (publications, rapports, rapports d'experts, analyses, etc.) peuvent être fournies dans la section 5 ci-dessous.	Enquêtes/données relatives aux maladies d'origine animale, travaux d'évaluation des risques Données relatives aux impacts sanitaires des maladies animales épizootiques et endémiques (mortalité, morbidité, chutes de production) Analyses des impacts socio-économiques des maladies animales		

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

Principale action proposée pour résoudre le problème (ou saisir l'opportunité).	<p>Sécuriser les élevages en aidant les éleveurs familiaux à maîtriser leurs principales contraintes, au premier rang desquelles les contraintes zootechniques (habitat, alimentation, reproduction) et la santé des animaux.</p> <p>Accroître les ressources dédiées à la lutte contre les maladies animales épizootiques et endémiques</p> <p>Renforcer aux échelons régionaux la coordination des politiques de lutte contre les maladies animales</p> <p>Renforcer la veille et les systèmes de surveillances sur les maladies émergentes.</p> <p>Développer / renforcer l'approche « One health »</p>
Principal(aux) acteur(s) concerné(s) ou participant à l'action proposée.	<p>Organisations internationales (FAO, OMS, OIE)</p> <p>Organisations économiques ou initiatives régionales</p> <p>Services nationaux de santé et de santé animale</p> <p>Bailleurs de fonds</p> <p>Acteurs de terrain</p>

Les champs suivants sont facultatifs pour l'enquête publique

2. Typologie élargie de la question/du phénomène

(*)	<i>Facteur déterminant externe</i>	<i>Interne aux systèmes alimentaires</i>	<i>Les deux</i>
Le phénomène est-t-il l'un, l'autre ou les deux?			X

(*)	<i>Économique (et productive)</i>	<i>Sociale et culturelle</i>	<i>Gouvernance (institutions, droits, etc.)</i>	<i>Environnemental (ressources, etc.)</i>	<i>Autre PRÉCISER</i>
Nature du phénomène				X	sanitaire
Nature de l'impact du phénomène sur la sécurité alimentaire et la nutrition	X	X	X		sanitaire

(*) Veuillez cocher les cases. Des informations complémentaires ou descriptives (publications, rapports, rapports d'experts, analyses, etc.) peuvent être fournies dans la section 6 ci-dessous.

3. Attributs du phénomène

	<i>Classification (**)</i>	
1. Étendue: Est-il pertinent pour les systèmes alimentaires et nutritionnels dans leur ensemble ou pour des parties spécifiques de ces systèmes?	Point critique	Question systémique

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

2. Portée: Combien de personnes touche-t-il?	Peu		Beaucoup	
3. Échelle: locale/régionale/mondiale?	Locale		Régionale	
	<i>Indiquez ici le lieu exact</i>		<i>Indiquez ici la région exacte</i>	
Mondiale				
Pour les points 4 à 11 ci-dessous, veuillez utiliser l'échelle [— — , —, 0, +, ++]: Impact très négatif (— —) / négatif (—) / faible (0) / positif (+) / très positif (++)				
4. Impact sur la disponibilité	++			
5. Impact sur l'accès	++			
6. Impact sur l'utilisation/la nutrition	++			
7. Impact sur la stabilité	++			
8. Impact sur les personnes les plus vulnérables	++ notamment les populations rurales			
9. Impact sur les femmes	+			
10. Impact sur les enfants	++			
11. Impact sur les populations marginalisées	+ populations rurales			
12. Coût de la résolution du problème (ou pour saisir l'opportunité)	Faible	Moyen (très inférieur aux coûts sans lutte)		Élevé

(**) Veuillez cocher les cases ou classer les impacts et fournir des données synthétiques si besoin est. Des informations complémentaires ou descriptives peuvent être fournies dans la section 6 ci-dessous.

4. Période

<i>Horizon (*)</i>	<i>Actuellement/ À court terme (1-5 ans)</i>	<i>À moyen terme (5-10 ans)</i>	<i>À long terme (10-20 ans ou plus)</i>
Moment où le phénomène aura un impact	X	X	X
Moment où il faudra intervenir pour traiter la question	X	X	X

(*) Veuillez cocher les cases. Des informations complémentaires ou descriptives (publications, rapports, rapports d'experts, analyses, etc.) peuvent être fournies dans la section 6 ci-dessous.

5. Degré de confiance

Solidité de la base de connaissances actuellement disponible	Faible	Moyenne	Élevée
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6. Informations complémentaires

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

Informations complémentaires

Éléments probants

Lacunes en matière de connaissances

Bibliographie

les travaux Animal Source Food publiés notamment dans le JN :

<http://jn.nutrition.org/content/133/11/3932S.short>

[à compléter]



**Enquête du Groupe d'experts de haut niveau (HLPE)
Questions cruciales et émergentes pour la sécurité
alimentaire et la nutrition**

Questionnaire

Renseignements concernant le contributeur

Nom, prénom et institution		
Répondez-vous au nom de votre institution ou à titre privé?	GISA	
Acceptez-vous que cette contribution soit mise à la disposition du public dans le cadre des actes de la consultation?	Oui	
Pays de la personne ou de l'institution qui répond. Veuillez mentionner, le cas échéant, «international» ou «régional».	France	

1. Aperçu de la question/du phénomène

Énoncé <i>en 2 lignes</i> .	Interactions entre régimes alimentaires et offres sur les marchés : quelle place pour les politiques publiques ?	
Description <i>en moins de 5 lignes</i> .	Quelles politiques publiques pour orienter l'offre et la demande alimentaire vers des consommations plus saines et durables, dans une perspective de sécurité alimentaire et nutritionnelle ?	
La question/le phénomène est-il un <i>défi</i> et/ou une <i>opportunité</i> pour la sécurité alimentaire et la nutrition? <i>Veuillez cocher la case appropriée.</i>	Défi	
Méthode et approche utilisées pour déterminer la question/le phénomène et évaluer son importance pour la sécurité et la nutrition. <i>En moins de 10 lignes.</i> Des informations complémentaires ou descriptives (publications, rapports, rapports d'experts, analyses, etc.) peuvent être fournies dans la section 5 ci-dessous.	L'évolution des régimes alimentaires est en partie déterminée par des facteurs globaux (transitions démographiques et urbanisation, restructuration des filières agroalimentaires...), parmi lesquels les marchés de produits alimentaires, lesquels sont eux-mêmes orientés en retour par l'évolution des régimes alimentaires. Or les politiques publiques ont jusqu'ici abordé ces dimensions de l'offre et de la demande dans des perspectives segmentées (de santé humaine, de sécurité sanitaire des aliments, de commerce extérieur...) plutôt que dans une perspective intégrée de sécurité alimentaire et nutritionnelle au niveau des ménages.	

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<p>Principale action proposée pour résoudre le problème (ou saisir l'opportunité).</p>	<p>Analyse :</p> <ul style="list-style-type: none"> - Des déterminants et leviers de l'offre alimentaire (qualité, diversité, prix, stabilité) aux différents niveaux - Des déterminants et leviers des comportements alimentaires et des changements de régimes alimentaires au niveau des ménages (comportements et pratiques) - De leurs impacts réciproques <p>Revue des politiques publiques permettant d'agir sur ces déterminants et leviers au niveau de l'offre (marchés nationaux et internationaux) comme de la demande (politiques d'éducation en terme d'alimentation / santé nutrition, actions de communication), y compris les écueils rencontrés).</p>
<p>Principal(aux) acteur(s) concerné(s) ou participant à l'action proposée.</p>	<p>Experts en matière :</p> <p>22. d'évolution des régimes alimentaires et de consommation des ménages,</p> <p>23. de comportements alimentaires, sociologues</p> <p>24. de marchés de produits agricoles et alimentaires</p> <p>25. de politiques publiques liées à l'offre et à la demande alimentaires</p>

Les champs suivants sont facultatifs pour l'enquête publique

2. Typologie élargie de la question/du phénomène

(*)	Facteur déterminant externe	Interne aux systèmes alimentaires	Les deux
<p>Le phénomène est-t-il l'un, l'autre ou les deux?</p>		<p>Interactions entre les différents acteurs (ménages, acteurs de la chaîne de production transformation et distribution alimentaire, gouvernements) et les différents niveaux (ménages – marchés locaux/ mondiaux – politiques nationales)</p>	<p>Expliquez brièvement</p>

(*)	Économique (et productive)	Sociale et culturelle	Gouvernance (institutions, droits, etc.)	Environnemental (ressources, etc.)	Autre PRÉCISER
<p>Nature du phénomène</p>	<p>oui</p>	<p>oui</p>	<p>oui</p>	<p>oui</p>	<p>Santé</p>
<p>Nature de l'impact du phénomène sur la sécurité alimentaire et la</p>	<p>oui</p>	<p>oui</p>	<p>oui</p>	<p>oui</p>	<p>idem</p>

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

nutrition					
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(*) Veuillez cocher les cases. Des informations complémentaires ou descriptives (publications, rapports, rapports d'experts, analyses, etc.) peuvent être fournies dans la section 6 ci-dessous.

3. Attributs du phénomène

	Classification (**)		
1. Étendue: Est-il pertinent pour les systèmes alimentaires et nutritionnels dans leur ensemble ou pour des parties spécifiques de ces systèmes?	Point critique	Question systémique	
2. Portée: Combien de personnes touche-t-il?		Beaucoup	
3. Échelle: locale/régionale/mondiale?	Locale		Mondiale
Pour les points 4 à 11 ci-dessous, veuillez utiliser l'échelle [— — , — , 0, +, ++]: Impact très négatif (— —) / négatif (—) / faible (0) / positif (+) / très positif (++)			
4. Impact sur la disponibilité	Renforcer la cohérence entre offre et nutrition		
5. Impact sur l'accès	Renforcer la cohérence entre accès et nutrition		
6. Impact sur l'utilisation/la nutrition	Les évolutions de l'utilisation et de la nutrition constituent le cœur du défi à traiter par les politiques publiques		
7. Impact sur la stabilité			
8. Impact sur les personnes les plus vulnérables	Le cas échéant précisez		
9. Impact sur les femmes			
10. Impact sur les enfants			
11. Impact sur les populations marginalisées	Le cas échéant précisez		
12. Coût de la résolution du problème (ou pour saisir l'opportunité)	Faible	Moyen	Élevé

(**) Veuillez cocher les cases ou classer les impacts et fournir des données synthétiques si besoin est. Des informations complémentaires ou descriptives peuvent être fournies dans la section 6 ci-dessous.

4. Période

Horizon (*)	Actuellement/ À court terme (1-5 ans)	À moyen terme (5-10 ans)	À long terme (10-20 ans ou plus)
Moment où le phénomène aura un impact		X	
Moment où il faudra intervenir pour traiter la question	X		

(*) Veuillez cocher les cases. Des informations complémentaires ou descriptives (publications, rapports, rapports d'experts, analyses, etc.) peuvent être fournies dans la section 6 ci-dessous.

5. Degré de confiance

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

Solidité de la base de connaissances actuellement disponible		Moyenne	
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6. Informations complémentaires

<i>Informations complémentaires</i>
<i>Éléments probants</i>
<i>Lacunes en matière de connaissances</i>
<i>Bibliographie</i>

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.



**Enquête du Groupe d'experts de haut niveau (HLPE)
Questions cruciales et émergentes pour la sécurité
alimentaire et la nutrition**

Questionnaire

Renseignements concernant le contributeur

Nom, prénom et institution		
Répondez-vous au nom de votre institution ou à titre privé?	GISA	À titre privé:
Acceptez-vous que cette contribution soit mise à la disposition du public dans le cadre des actes de la consultation?	Oui	Non
Pays de la personne ou de l'institution qui répond. Veuillez mentionner, le cas échéant, «international» ou «régional».	France	

1. Aperçu de la question/du phénomène

Énoncé <i>en 2 lignes</i> .	Comment faire face au défi de l'emploi des populations rurales pour assurer leur sécurité alimentaire ?		
Description <i>en moins de 5 lignes</i> .	Dans les pays majoritairement agricole, où la diversification économique est limitée, et la croissance démographique forte, le secteur agricole et rural devra offrir des emplois en nombre pour éviter des risques politiques majeurs.		
La question/le phénomène est-il un <i>défi</i> et/ou une <i>opportunité</i> pour la sécurité alimentaire et la nutrition? <i>Veuillez cocher la case appropriée.</i>	<u>Défi</u>	Opportunité	Défi pour lutter contre la pauvreté des zones rurales, opportunité pour engager plus de main d'œuvre dans les activités économiques
Méthode et approche utilisées pour déterminer la question/le phénomène et évaluer son importance pour la sécurité et la nutrition. <i>En moins de 10 lignes.</i> Des informations complémentaires ou descriptives (publications, rapports, rapports d'experts, analyses, etc.) peuvent être fournies dans la section 5 ci-dessous.	Cette question mondiale est particulièrement cruciale pour le continent africain mais elle se pose également en Asie (cf. RuralStruc). En effet, au regard de la croissance de la population rurale active il est nécessaire d'analyser les conditions pour que la croissance économique des territoires ruraux soit fortement créatrice d'emplois.		

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<p>Principale action proposée pour résoudre le problème (ou saisir l'opportunité).</p>	<p>Même si le constat est partagé par de nombreuses institutions (cf. bibliographie), il est loin de se traduire en actions, en dehors de discussions sur la protection sociale. Il est nécessaire d'analyser les conditions pour que la croissance économique des territoires ruraux soit fortement créatrice d'emplois afin d'aider les acteurs à prendre conscience de l'ampleur et l'urgence du problème et de l'existence de pistes de solutions. Au delà de la production agricole et des modèles d'organisation de l'agriculture qui permettent de créer le plus d'emplois, il sera nécessaire d'adopter une approche qui inclue les autres activités rurales directement liées aux filières agricoles (des intrants à la transformation des aliments, des fibres et des matériaux), et aux activités de prestation de biens et de services aux consommateurs ruraux.</p>
<p>Principal(aux) acteur(s) concerné(s) ou participant à l'action proposée.</p>	<p>Les acteurs des filières agro-alimentaires Les décideurs politiques Les acteurs en milieu rural chercheurs : économistes, démographes ...</p>

Les champs suivants sont facultatifs pour l'enquête publique

2. Typologie élargie de la question/du phénomène

(*)	Facteur déterminant externe	Interne aux systèmes alimentaires	Les deux
<p>Le phénomène est-t-il l'un, l'autre ou les deux?</p>		<p>La majeure partie des jeunes dont il est question naissent en milieu rural dans des familles tirant une partie de leur revenu des activités agricoles ou directement liées aux filières agricoles. De plus, ce sont les activités économiques des systèmes alimentaires qui sont considérées comme des pistes d'emploi pour une grande partie d'entre eux.</p>	<p>Expliquez brièvement</p>

(*)	Économique (et productive)	Sociale et culturelle	Gouvernance (institutions, droits, etc.)	Environnemental (ressources, etc.)	Autre PRÉCISER
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Nature du phénomène	X	X		X	
Nature de l'impact du phénomène sur la sécurité alimentaire et la nutrition	X	X	X	X	

(*) Veuillez cocher les cases. Des informations complémentaires ou descriptives (publications, rapports, rapports d'experts, analyses, etc.) peuvent être fournies dans la section 6 ci-dessous.

3. Attributs du phénomène

	Classification (**)		
1. Étendue: Est-il pertinent pour les systèmes alimentaires et nutritionnels dans leur ensemble ou pour des parties spécifiques de ces systèmes?	Point critique	Question systémique	
2. Portée: Combien de personnes touche-t-il?	Peu	<u>Beaucoup</u>	
3. Échelle: locale/régionale/mondiale?		<u>Régionale</u>	<u>Mondiale</u>
		<i>Continent Africain</i>	
Pour les points 4 à 11 ci-dessous, veuillez utiliser l'échelle [— — , —, 0, +, ++]: Impact très négatif (— —) / négatif (—) / faible (0) / positif (+) / très positif (++)			
4. Impact sur la disponibilité			
5. Impact sur l'accès	--		
6. Impact sur l'utilisation/la nutrition	—		
7. Impact sur la stabilité	—		
8. Impact sur les personnes les plus vulnérables	— tensions sur le marché de l'emploi, l'accès aux ressources, pour l'ensemble des actifs ruraux en particulier les jeunes		
9. Impact sur les femmes	—		
10. Impact sur les enfants	0		
11. Impact sur les populations marginalisées	Le cas échéant précisez		
12. Coût de la résolution du problème (ou pour saisir l'opportunité)	Faible	<u>Moyen</u>	Élevé

(**) Veuillez cocher les cases ou classer les impacts et fournir des données synthétiques si besoin est. Des informations complémentaires ou descriptives peuvent être fournies dans la section 6 ci-dessous.

4. Période

Horizon (*)	Actuellement/ À court terme (1-5 ans)	À moyen terme (5-10 ans)	À long terme (10-20 ans ou plus)
Moment où le phénomène aura un impact		X	X
Moment où il faudra	X		

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

intervenir pour traiter la question			
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(*) Veuillez cocher les cases. Des informations complémentaires ou descriptives (publications, rapports, rapports d'experts, analyses, etc.) peuvent être fournies dans la section 6 ci-dessous.

5. Degré de confiance

Solidité de la base de connaissances actuellement disponible	Faible	Moyenne	<u>Élevée</u>
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6. Informations complémentaires

<i>Informations complémentaires</i>
<i>Éléments probants</i> RuralStruc de la Banque Mondiale a démontré que 330 millions de jeunes arriveront sur le marché du travail dans les 15 prochaines années en Afrique Sub Saharienne. Les deux tiers ne trouveront pas d'emploi en ville. Or les gouvernements africains sont engagés dans un processus de modernisation de leurs agricultures et de leurs filières de transformation et distribution alimentaires dans l'objectif d'augmenter l'approvisionnement alimentaire à bas coût de leur population, sans considération pour les questions d'emplois.
<i>Lacunes en matière de connaissances</i> Comment construire des systèmes alimentaires économiquement efficaces mais également fortement créateurs d'emplois ? Quels modèles agricoles et alimentaires à construire ?
<i>Bibliographie</i> AFD et Banque Mondiale 2014 L'emploi des jeunes en Afrique sub-saharienne. Forum pour le développement de l'Afrique. <i>Beaujeu R., Kolie R., Sempere J-F., Uhder C., 2011. Transition démographique et emploi en Afrique subsaharienne : comment remettre l'emploi au coeur des politiques de développement. Paris : AFD.</i> <i>Headey D., Bezemer D. and P. Hazell, 2010. Agricultural Employment Trends in Asia and Africa: Too Fast or Too Slow?" The World Bank Research Observer, 25(1): 57-89.</i> ILO 2013 <i>World of Work 2013: Repairing the economic and social fabric.</i> Losch B., Fréguin-Gresh S. et E. Thomas White. Structural transformation and rural change revisited. AFD et Banque Mondiale. OCDE, 2012. Perspectives économiques en Afrique 2012. Promouvoir l'emploi des jeunes. Centre de développement. Paris : OCDE. Proctor F.J., Lucchesi V., 2012. Small-scale farming and youth in an era of rapid rural change. London/The Hague : IIED/HIVOS. UNRISD (United Nations Research Institute for Social Development), 2010. <i>Combating Poverty and Inequality. Structural Change, Social Policy and Politics.</i> Geneva: UNRISD. Van der Geest K., 2010. <i>Rural Youth Employment in Developing Countries: A Global View.</i> FAO Gender, Equity and Rural Employment Division. Rome: FAO.

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.



**Enquête du Groupe d'experts de haut niveau (HLPE)
Questions cruciales et émergentes pour la sécurité
alimentaire et la nutrition**

Questionnaire

Renseignements concernant le contributeur

Nom, prénom et institution		
Répondez-vous au nom de votre institution ou à titre privé?	GISA	
Acceptez-vous que cette contribution soit mise à la disposition du public dans le cadre des actes de la consultation?	Oui	
Pays de la personne ou de l'institution qui répond. Veuillez mentionner, le cas échéant, «international» ou «régional».	France	

1. Aperçu de la question/du phénomène

Énoncé <i>en 2 lignes</i> .	Gouvernance de la sécurité alimentaire et nutritionnelle par les collectivités locales et régions urbaines	
Description <i>en moins de 5 lignes</i> .	Un nouveau type d'acteur émerge depuis quelques années dans le champ de la gouvernance de la sécurité alimentaire et nutritionnelle : les collectivités locales des villes et des régions urbaines. Elles construisent des politiques alimentaires locales, souvent alternatives, s'appuyant sur leurs ressources foncières, leur maîtrise de la restauration scolaire, les formes d'urbanisme qu'elles orientent.	
La question/le phénomène est-il un <i>défi</i> et/ou une <i>opportunité</i> pour la sécurité alimentaire et la nutrition? <i>Veuillez cocher la case appropriée.</i>		Opportunité
Méthode et approche utilisées pour déterminer la question/le phénomène et évaluer son importance pour la sécurité et la nutrition. <i>En moins de 10 lignes.</i> Des informations complémentaires ou descriptives (publications, rapports, rapports d'experts, analyses, etc.) peuvent être fournies dans la section 5 ci-dessous.	Les organisations internationales « Cités et Gouvernements Locaux Unis » (CGLU) et l'Organisation des Régions Unies (ORU-Fogar) fédèrent les initiatives de ces collectivités, notamment sur la sécurité alimentaire et nutritionnelle.	
Principale action proposée pour résoudre le problème (ou saisir l'opportunité).	Mieux tenir compte du rôle de ces collectivités locales dans les débats internationaux sur la SAN, recenser les expériences intéressantes et les moyens de les intégrer dans les politiques publiques.	

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

Principal(aux) acteur(s) concerné(s) ou participant à l'action proposée.	Municipalités, régions fédérées au sein de CGLU et de l'ORU-Fogar
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Les champs suivants sont facultatifs pour l'enquête publique

2. Typologie élargie de la question/du phénomène

(*)	<i>Facteur déterminant externe</i>	<i>Interne aux systèmes alimentaires</i>	<i>Les deux</i>
Le phénomène est-t-il l'un, l'autre ou les deux?	Ces acteurs n'ont pas pour origine le système alimentaire, mais en deviennent un acteur important		Expliquez brièvement

(*)	<i>Économique (et productive)</i>	<i>Sociale et culturelle</i>	<i>Gouvernance (institutions, droits, etc.)</i>	<i>Environnemental (ressources, etc.)</i>	<i>Autre PRÉCISER</i>
Nature du phénomène			Emergence de nouveaux acteurs		
Nature de l'impact du phénomène sur la sécurité alimentaire et la nutrition			Nouvelles formes de gouvernance, plus participatives et plus intersectorielles qu'à l'échelle nationale		

(*) Veuillez cocher les cases. Des informations complémentaires ou descriptives (publications, rapports, rapports d'experts, analyses, etc.) peuvent être fournies dans la section 6 ci-dessous.

3. Attributs du phénomène

	<i>Classification (**)</i>		
1. Étendue: Est-il pertinent pour les systèmes alimentaires et nutritionnels dans leur ensemble ou pour des parties spécifiques de ces systèmes?	Point critique		Question systémique
2. Portée: Combien de personnes touche-t-il?	Peu		Beaucoup
3. Échelle: locale/régionale/mondiale?	Locale	Régionale	Phénomène mondial
	Nombreuses villes du Monde	Nombreuses régions du Monde	

Pour les points 4 à 11 ci-dessous, veuillez utiliser l'échelle [— — , — , 0 , + , ++]:
Impact très négatif (— —) / négatif (—) / faible (0) / positif (+) / très positif (++)

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

4. Impact sur la disponibilité				
5. Impact sur l'accès	Filets de sécurité des collectivités locales			
6. Impact sur l'utilisation/la nutrition	Via les cantines scolaires			
7. Impact sur la stabilité				
8. Impact sur les personnes les plus vulnérables	Via les filets de sécurité			
9. Impact sur les femmes				
10. Impact sur les enfants	Via les cantines scolaires			
11. Impact sur les populations marginalisées	Le cas échéant précisez			
12. Coût de la résolution du problème (ou pour saisir l'opportunité)	<table border="1"> <tr> <td>Faible</td> <td>Moyen</td> <td>Élevé</td> </tr> </table>	Faible	Moyen	Élevé
Faible	Moyen	Élevé		

(**) Veuillez cocher les cases ou classer les impacts et fournir des données synthétiques si besoin est. Des informations complémentaires ou descriptives peuvent être fournies dans la section 6 ci-dessous.

4. Période

<i>Horizon (*)</i>	<i>Actuellement/ À court terme (1-5 ans)</i>	<i>À moyen terme (5-10 ans)</i>	<i>À long terme (10-20 ans ou plus)</i>
Moment où le phénomène aura un impact			
Moment où il faudra intervenir pour traiter la question			

(*) Veuillez cocher les cases. Des informations complémentaires ou descriptives (publications, rapports, rapports d'experts, analyses, etc.) peuvent être fournies dans la section 6 ci-dessous.

5. Degré de confiance

Solidité de la base de connaissances actuellement disponible	Faible	Moyenne	Élevée
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6. Informations complémentaires

Informations complémentaires

<http://www.regionsunies-fogar.org/index.php?act=14>

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

Éléments probants

Lacunes en matière de connaissances

Bibliographie



**Enquête du Groupe d'experts de haut niveau (HLPE)
Questions cruciales et émergentes pour la sécurité
alimentaire et la nutrition**

Questionnaire

Renseignements concernant le contributeur

Nom, prénom et institution		
Répondez-vous au nom de votre institution ou à titre privé?	GISA	
Acceptez-vous que cette contribution soit mise à la disposition du public dans le cadre des actes de la consultation?	Oui	
Pays de la personne ou de l'institution qui répond. Veuillez mentionner, le cas échéant, «international» ou «régional».	France	

1. Aperçu de la question/du phénomène

Énoncé <i>en 2 lignes</i> .	Rôle du secteur agro-alimentaire dans la sécurité alimentaire et nutritionnelle (SAN)		
Description <i>en moins de 5 lignes</i> .	Le secteur de la transformation, du stockage, de la commercialisation, de la logistique, de la distribution, de la restauration joue, par plusieurs leviers, un rôle important sur la SAN. Or ce secteur est en pleine mutation sans que l'on mesure bien les conséquences de ces changements sur la SAN.		
La question/le phénomène est-il un <i>défi</i> et/ou une <i>opportunité</i> pour la sécurité alimentaire et la nutrition? <i>Veuillez cocher la case appropriée.</i>	Défi	Opportunité	La mutation du SAA constitue à la fois un risque et une opportunité pour la SAN.
Méthode et approche utilisées pour déterminer la question/le phénomène et évaluer son importance pour la sécurité et la nutrition. <i>En moins de 10 lignes.</i> Des informations complémentaires ou descriptives (publications, rapports, rapports d'experts, analyses, etc.) peuvent être fournies dans la section 5 ci-dessous.	Il existe une littérature fragmentée sur les enjeux du secteur agro-alimentaire (SAA) sur différents déterminants de la SAN mais pas de synthèse sur la question.		
Principale action proposée pour résoudre le problème (ou saisir l'opportunité).	Réaliser une synthèse sur les différents rôles du SAA sur la SAN et sur les enjeux de sa mutation.		

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Principal(aux) acteur(s) concerné(s) ou participant à l'action proposée.	Opérateurs et entreprises de la transformation, du stockage, de la commercialisation, de la logistique, de la distribution, de la restauration. Pouvoirs publics nationaux et collectivités locales concernés par ce secteur
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Les champs suivants sont facultatifs pour l'enquête publique

2. Typologie élargie de la question/du phénomène

(*)	Facteur déterminant externe	Interne aux systèmes alimentaires	Les deux
Le phénomène est-t-il l'un, l'autre ou les deux?		Le SAA et un des composant essentiels des systèmes alimentaires, nettement moins étudié que le secteur de la production agricole.	Expliquez brièvement

(*)	Économique (et productive)	Sociale et culturelle	Gouvernance (institutions, droits, etc.)	Environnemental (ressources, etc.)	Autre PRÉCISER
Nature du phénomène	Industrialisation rapide	Standardisation	Rôle moteur du secteur privé	Industrialisation	
Nature de l'impact du phénomène sur la sécurité alimentaire et la nutrition	Risque/opportunité sur les emplois Effets mal connus sur les pertes post-récolte	Pertes de diversité culturelle ?	Risque de marginalisation des petits opérateurs dans les politiques alimentaires	Effets mal connus sur consommation énergie fossile. Effets sur biodiversité	

(*) Veuillez cocher les cases. Des informations complémentaires ou descriptives (publications, rapports, rapports d'experts, analyses, etc.) peuvent être fournies dans la section 6 ci-dessous.

3. Attributs du phénomène

	Classification (**)	
1. Étendue: Est-il pertinent pour les systèmes alimentaires et nutritionnels dans leur ensemble ou pour des parties spécifiques de ces systèmes?	Aval des filières	Mais rôle d'entraînement sur l'ensemble du système alimentaire
2. Portée: Combien de personnes touche-t-il?		Beaucoup d'emplois directs et indirects
3. Échelle: locale/régionale/mondiale?	Locale	Mondiale
	Lié à l'urbanisation	
Pour les points 4 à 11 ci-dessous, veuillez utiliser l'échelle [— — , — , 0, +, ++]: Impact très négatif (— —) / négatif (—) / faible (0) / positif (+) / très positif (++)		
4. Impact sur la disponibilité	Oui via pertes post-récolte	

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5. Impact sur l'accès	Oui via les prix des aliments		
6. Impact sur l'utilisation/la nutrition	Oui via qualité nutritionnelle et sanitaire des aliments		
7. Impact sur la stabilité	Oui via la conservation des aliments que la transfo permet		
8. Impact sur les personnes les plus vulnérables	Oui, les femmes, principales actrices du SAA à petites échelles		
9. Impact sur les femmes	Oui		
10. Impact sur les enfants	Pas directement		
11. Impact sur les populations marginalisées	Risques de marginalisation d'activités sous l'effet d'une industrialisation rapide		
12. Coût de la résolution du problème (ou pour saisir l'opportunité)	Faible	Moyen	Élevé

(**) Veuillez cocher les cases ou classer les impacts et fournir des données synthétiques si besoin est. Des informations complémentaires ou descriptives peuvent être fournies dans la section 6 ci-dessous.

4. Période

<i>Horizon (*)</i>	<i>Actuellement/ À court terme (1-5 ans)</i>	<i>À moyen terme (5-10 ans)</i>	<i>À long terme (10-20 ans ou plus)</i>
Moment où le phénomène aura un impact	Dans les pays où l'industrialisation est déjà avancée	Dans les pays où elle commence	
Moment où il faudra intervenir pour traiter la question			

(*) Veuillez cocher les cases. Des informations complémentaires ou descriptives (publications, rapports, rapports d'experts, analyses, etc.) peuvent être fournies dans la section 6 ci-dessous.

5. Degré de confiance

Solidité de la base de connaissances actuellement disponible	Faible	Moyenne	Élevée
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6. Informations complémentaires

<i>Informations complémentaires</i>

Replies to the questionnaire are expected by **15 March 2014** by e-mail at **cfs-hlpe@fao.org**.

Éléments probants

Lacunes en matière de connaissances

Bibliographie

ESNOUF C., RUSSEL M. et BRICAS N. (Eds) 2011. **Pour une alimentation durable. Réflexion stratégique duALIne**. Paris, Editions Quae, 288 p. [Ouvrage en pdf]

ESNOUF C., RUSSEL M. & BRICAS N. (Eds), 2013. **Food System Sustainability. Insight from DuALIne**. Cambridge University Press. 312 p.

BRICAS N. et BROUTIN C., 2008. Les micro-activités agro-alimentaires et commerciales et la réduction de la pauvreté en Afrique sub-saharienne. *In*: 1st Conference of the Geneva Trade & Development Forum (GTDF), Crans-Montana, Switzerland, 17-20 septembre, 21 p. [Texte intégral]

BRICAS N. and BROUTIN C., 2008. Food processing and retail micro-activities and poverty reduction in sub-Saharan Africa . *In*: 1st Conference of the Geneva Trade & Development Forum (GTDF), Crans-Montana, Switzerland, 17-20 september, 18 p. [Full text]

BROUTIN C. et BRICAS N., 2006. **Agroalimentaire et lutte contre la pauvreté en Afrique subsaharienne; le rôle des micro et petites entreprises**. Paris, Ed. du Gret, 128 p.



**Enquête du Groupe d'experts de haut niveau (HLPE)
Questions cruciales et émergentes pour la sécurité
alimentaire et la nutrition**

Questionnaire

Renseignements concernant le contributeur

Nom, prénom et institution		
Répondez-vous au nom de votre institution ou à titre privé?	GISA	
Acceptez-vous que cette contribution soit mise à la disposition du public dans le cadre des actes de la consultation?	Oui	
Pays de la personne ou de l'institution qui répond. Veuillez mentionner, le cas échéant, «international» ou «régional».	France	

1. Aperçu de la question/du phénomène

Énoncé <i>en 2 lignes</i> .	Quels outils de politiques publiques pour augmenter la résilience des ménages sujets à l'insécurité alimentaire ? (analyse des stocks de sécurité alimentaire notamment)	
Description <i>en moins de 5 lignes</i> .	Dans le nouveau contexte de marchés alimentaires internationaux plus tendus et d'accroissement du risque climatique, la question des outils permettant de réduire le risque d'insécurité alimentaire tels que les stocks de sécurité alimentaire ré-émerge.	
La question/le phénomène est-il un <i>défi</i> et/ou une <i>opportunité</i> pour la sécurité alimentaire et la nutrition? <i>Veuillez cocher la case appropriée.</i>	Défi	Opportunité
Méthode et approche utilisées pour déterminer la question/le phénomène et évaluer son importance pour la sécurité et la nutrition. <i>En moins de 10 lignes.</i> Des informations complémentaires ou descriptives (publications, rapports, rapports d'experts, analyses, etc.) peuvent être fournies dans la section 5 ci-dessous.	L'analyse des différents outils devra permettre d'éclairer les décideurs politiques sur l'état du débat et des expériences.	

Principales actions proposées pour résoudre le problème (ou saisir l'opportunité).	<ul style="list-style-type: none"> - Faire une synthèse sur les avantages et risques pour la sécurité alimentaire et nutritionnelle de différents outils de gestion des risques (stockage de sécurité...) en s'intéressant en particulier aux coûts et aux bénéfices de l'outil de stockage alimentaire, aux externalités négatives potentielles sur des pays voisins. - Faire une analyse des conditions économiques et d'infrastructures nécessaires pour mener à bien une action de stockage publique efficace
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	pour la sécurité alimentaire (capacités de stockage, réseaux, moyens logistiques, gestion des pertes, etc.)
Principal(aux) acteur(s) concerné(s) ou participant à l'action proposée.	Experts en politiques agricoles et gestion du risque. Décideurs politiques

Les champs suivants sont facultatifs pour l'enquête publique

2. Typologie élargie de la question/du phénomène

(*)	Facteur déterminant externe	Interne aux systèmes alimentaires	Les deux
Le phénomène est-t-il l'un, l'autre ou les deux?			Expliquez brièvement

(*)	Économique (et productive)	Sociale et culturelle	Gouvernance (institutions, droits, etc.)	Environnemental (ressources, etc.)	Autre PRÉCISER
Nature du phénomène	x		x		
Nature de l'impact du phénomène sur la sécurité alimentaire et la nutrition	Organisation et coût des différents outils		Gouvernance et régulation des outils		

(*) Veuillez cocher les cases. Des informations complémentaires ou descriptives (publications, rapports, rapports d'experts, analyses, etc.) peuvent être fournies dans la section 6 ci-dessous.

3. Attributs du phénomène

	Classification (**)		
1. Étendue: Est-il pertinent pour les systèmes alimentaires et nutritionnels dans leur ensemble ou pour des parties spécifiques de ces systèmes?	Point critique	Question systémique	
2. Portée: Combien de personnes touche-t-il?	Peu	Beaucoup	
3. Échelle: locale/régionale/mondiale?	Locale	Régionale	Besoin de régulation globale
	Existe à l'échelle locale	Existe à l'échelle régionale	
Pour les points 4 à 11 ci-dessous, veuillez utiliser l'échelle [— — , — , 0 , + , ++]: Impact très négatif (— —) / négatif (—) / faible (0) / positif (+) / très positif (++)			

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4. Impact sur la disponibilité	++		
5. Impact sur l'accès			
6. Impact sur l'utilisation/la nutrition			
7. Impact sur la stabilité	++		
8. Impact sur les personnes les plus vulnérables	+		
9. Impact sur les femmes			
10. Impact sur les enfants			
11. Impact sur les populations marginalisées	Le cas échéant précisez		
12. Coût de la résolution du problème (ou pour saisir l'opportunité)	Faible	Moyen	Élevé

(**) Veuillez cocher les cases ou classer les impacts et fournir des données synthétiques si besoin est. Des informations complémentaires ou descriptives peuvent être fournies dans la section 6 ci-dessous.

4. Période

<i>Horizon (*)</i>	<i>Actuellement/ À court terme (1-5 ans)</i>	<i>À moyen terme (5-10 ans)</i>	<i>À long terme (10-20 ans ou plus)</i>
Moment où le phénomène aura un impact			
Moment où il faudra intervenir pour traiter la question			

(*) Veuillez cocher les cases. Des informations complémentaires ou descriptives (publications, rapports, rapports d'experts, analyses, etc.) peuvent être fournies dans la section 6 ci-dessous.

5. Degré de confiance

Solidité de la base de connaissances actuellement disponible	Faible	Moyenne	Élevée
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6. Informations complémentaires

<i>Informations complémentaires</i>
<i>Éléments probants</i>
<i>Lacunes en matière de connaissances</i>
<i>Bibliographie</i> « les stocks alimentaires et la régulation de la volatilité des prix », AFD, collection « à savoir »

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Enquête du Groupe d'experts de haut niveau (HLPE) Questions cruciales et émergentes pour la sécurité alimentaire et la nutrition

Questionnaire

Renseignements concernant le contributeur

Nom, prénom et institution		
Répondez-vous au nom de votre institution ou à titre privé?	GISA	
Acceptez-vous que cette contribution soit mise à la disposition du public dans le cadre des actes de la consultation?	Oui	
Pays de la personne ou de l'institution qui répond. Veuillez mentionner, le cas échéant, «international» ou «régional».	France	

1. Aperçu de la question/du phénomène

Énoncé <i>en 2 lignes</i> .	Analyse des impacts positifs et négatifs sur la sécurité alimentaire et nutritionnelle (prix alimentaire, sécurisation et diversification des revenus ...) du développement de l'élevage, en étudiant la diversité des contextes et des systèmes de production, dans le but d'identifier les pistes d'amélioration.		
Description <i>en moins de 5 lignes</i> .	Le développement de l'élevage et des produits animaux font l'objet de nombreuses questions quant à leurs impacts sur la sécurité alimentaire et nutritionnelle. Le CSA éclairé par le HLPE, pourrait donner des recommandations pour optimiser les impacts positifs et maîtriser les impacts négatifs. Quels effets a, sur la sécurité alimentaire et nutritionnelle, le développement des différents systèmes d'élevage ? Quels sont leurs effets sur les prix des produits animaux? Sur le prix des céréales ? Sur l'accès aux ressources naturelles ? Sur le statut nutritionnel des consommateurs ? Sur les revenus des éleveurs? Sur la résilience des systèmes d'élevage du point de vue économique et du point de vue environnemental?		
La question/le phénomène est-il un <i>défi</i> et/ou une <i>opportunité</i> pour la sécurité alimentaire et la nutrition? <i>Veuillez cocher la case appropriée.</i>	Défi	Opportunité	<u>Les deux</u>
Méthode et approche utilisées pour déterminer la question/le phénomène et évaluer son importance pour la sécurité et la nutrition. <i>En moins de 10 lignes.</i> Des informations complémentaires ou descriptives (publications, rapports, rapports d'experts, analyses, etc.) peuvent être fournies dans la section 5 ci-dessous.	Analyse des : <ul style="list-style-type: none"> • Conséquences/effets sur les volumes de production animale disponibles sur le marché, sur la qualité des produits • Effets sur les revenus des éleveurs, impacts socioéconomiques • Effets sur la résilience des systèmes 		

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	<p>d'élevage vis-à-vis des aléas économiques</p> <ul style="list-style-type: none"> • Effets sur la résilience des systèmes d'élevage vis-à-vis des aléas climatiques et de leur stabilité/durabilité vis-à-vis de l'environnement • Effet sur les modes de production et la préservation du patrimoine social et culturel • Conséquences/effets sur le statut nutritionnel, en particulier des plus vulnérables • Conséquences/effets sur les prix internationaux des céréales et des protéines végétales
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Principale action proposée pour résoudre le problème (ou saisir l'opportunité).	Analyses visant à étudier de manière plus approfondie les effets positifs et négatifs du développement de l'élevage sur la sécurité alimentaire et nutritionnelle, en vue d'éclairer un débat au CSA.
Principal(aux) acteur(s) concerné(s) ou participant à l'action proposée.	Economistes, agroéconomistes, économistes du développement Spécialistes de l'élevage. Nutritionnistes.

Les champs suivants sont facultatifs pour l'enquête publique

2. Typologie élargie de la question/du phénomène

(*)	Facteur déterminant externe	Interne aux systèmes alimentaires	Les deux
Le phénomène est-t-il l'un, l'autre ou les deux?			Expliquez brièvement

(*)	Économique (et productive)	Sociale et culturelle	Gouvernance (institutions, droits, etc.)	Environnemental (ressources, etc.)	Autre PRÉCISER
Nature du phénomène	Economique				
Nature de l'impact du phénomène sur la sécurité alimentaire et la nutrition	Effets sur la disponibilité et sur les prix des produits animaux et des céréales et	L'élevage a un rôle culturel central dans de nombreux		effet sur la résilience des systèmes d'élevage (vis-à-vis des aléas économiques,	Effet sur le statut nutritionne l

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	protéines végétales. Effets sur le revenu (niveau de revenu et sécurisation du revenu)	pays		climatiques, de l'environnement)	
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(*) Veuillez cocher les cases. Des informations complémentaires ou descriptives (publications, rapports, rapports d'experts, analyses, etc.) peuvent être fournies dans la section 6 ci-dessous.

3. Attributs du phénomène

		Classification (**)		
1. Étendue: Est-il pertinent pour les systèmes alimentaires et nutritionnels dans leur ensemble ou pour des parties spécifiques de ces systèmes?	Point critique	Question systémique		
2. Portée: Combien de personnes touche-t-il?		Beaucoup		
3. Échelle: locale/régionale/mondiale?	Locale	Régionale	Mondiale	
		Indiquez ici la région exacte		
Pour les points 4 à 11 ci-dessous, veuillez utiliser l'échelle [— — , —, 0, +, ++]: Impact très négatif (— —) / négatif (—) / faible (0) / positif (+) / très positif (++)				
4. Impact sur la disponibilité	++			
5. Impact sur l'accès	++			
6. Impact sur l'utilisation/la nutrition	+ (apports en protéines, fer, calcium)			
7. Impact sur la stabilité	+ (tensions sur les marchés = + d'instabilité)			
8. Impact sur les personnes les plus vulnérables	Sur les populations à consommation de produits animaux très faibles			
9. Impact sur les femmes	0			
10. Impact sur les enfants				
11. Impact sur les populations marginalisées	Zone sahéenne, steppes ...Le cas échéant précisez			
12. Coût de la résolution du problème (ou pour saisir l'opportunité)	Faible	Moyen	Élevé	

(**) Veuillez cocher les cases ou classer les impacts et fournir des données synthétiques si besoin est. Des informations complémentaires ou descriptives peuvent être fournies dans la section 6 ci-dessous.

4. Période

Horizon (*)	Actuellement/ À court terme (1-5 ans)	À moyen terme (5-10 ans)	À long terme (10-20 ans ou plus)
Moment où le phénomène aura un impact	X	X	
Moment où il faudra intervenir pour traiter la question	X	X	

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(*) Veuillez cocher les cases. Des informations complémentaires ou descriptives (publications, rapports, rapports d'experts, analyses, etc.) peuvent être fournies dans la section 6 ci-dessous.

5. Degré de confiance

Solidité de la base de connaissances actuellement disponible	Faible	Moyenne	Élevée
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6. Informations complémentaires

Informations complémentaires

Éléments probants

Lacunes en matière de connaissances

Bibliographie

De nombreux travaux sont menés sur cette question, notamment au sein d'initiatives et plateformes internationales (Global agenda for action, LEAP....)



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alimentaire et la nutrition**

Questionnaire

Renseignements concernant le contributeur

Nom, prénom et institution		
Répondez-vous au nom de votre institution ou à titre privé?	GISA	À titre privé:
Acceptez-vous que cette contribution soit mise à la disposition du public dans le cadre des actes de la consultation?	Oui	Non
Pays de la personne ou de l'institution qui répond. Veuillez mentionner, le cas échéant, «international» ou «régional».	France	

1. Aperçu de la question/du phénomène

Énoncé <i>en 2 lignes</i> .	Quels modèles agricoles permettent de répondre au double défi de la sécurité alimentaire et du changement climatique ?		
Description <i>en moins de 5 lignes</i> .	Le rapport du HLPE de 2012 mettait en évidence les menaces que fait peser le changement climatique sur la sécurité alimentaire et la nécessité de travailler sur l'interdépendance des deux problématiques. Il recommandait notamment d'élaborer des stratégies agricoles à faible émission de GES, qui permettent d'accroître la résilience au CC, et qui ne compromettent pas la sécurité alimentaire. Le rapport soulignait la nécessité de recueillir des informations au niveau local, partager les connaissances au niveau mondial et de réorienter la recherche pour viser un ensemble d'objectifs plus complexe.		
La question/le phénomène est-il un <i>défi</i> et/ou une <i>opportunité</i> pour la sécurité alimentaire et la nutrition? <i>Veuillez cocher la case appropriée.</i>	<u>Défi</u> X	Opportunité	Autre (veuillez préciser)
Méthode et approche utilisées pour déterminer la question/le phénomène et évaluer son importance pour la sécurité et la nutrition. <i>En moins de 10 lignes.</i> Des informations complémentaires ou descriptives (publications, rapports, rapports d'experts, analyses, etc.) peuvent être fournies dans la section 5 ci-dessous.	Approfondir les recommandations du précédent rapport HLPE en se focalisant sur la question des modèles agricoles. Montrer les marges de manœuvre existant dans différents systèmes de production pour réduire les émissions de GES, et les impacts potentiels sur la production. Une première analyse des cobénéfices (atténuation et adaptation) et/ou antagonismes de ces modèles devra être réalisée, que ce soit au niveau environnemental, ou au niveau socio-économique. Importance à recueillir et traiter dans la durée des données pédoclimatiques fiables pour pouvoir fournir des indicateurs agroclimatiques appropriées comme aide à la décision pour les		

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	acteurs locaux et également améliorer les modèles de projection climatique et prévision météorologique. Mieux évaluer localement les types de vulnérabilités (physiques, économiques, environnementales, sociales, sanitaires, institutionnelles) en fonction des aléas auxquels ces agriculteurs et ces agricultures seront exposés.
Principale action proposée pour résoudre le problème (ou saisir l'opportunité).	Sur l'ensemble des recommandations des paragraphes 3 et 4 du rapport HLPE, recenser les avancées et expériences positives menées ces dernières années pour progresser sur la voie de systèmes de production à faible émissions de carbone et résilients au changement climatique.
Principal(aux) acteur(s) concerné(s) ou participant à l'action proposée.	États, collectivités locales, organisations de producteurs, instituts de recherche, ONG, sociétés civiles, secteurs privés (entreprises notamment agro industrielles), systèmes d'informations, agences onusiennes, bailleurs de fonds...

Les champs suivants sont facultatifs pour l'enquête publique

2. Typologie élargie de la question/du phénomène

(*)	Facteur déterminant externe	Interne aux systèmes alimentaires	Les deux
Le phénomène est-t-il l'un, l'autre ou les deux?	X	X	Interne en ce qui concerne les pratiques résilientes et sobres en carbone, externe pour les impacts du CC

(*)	Économique (et productive)	Sociale et culturelle	Gouvernance (institutions, droits, etc.)	Environnemental (ressources, etc.)	Autre PRÉCISER
Nature du phénomène	X	X		X	
Nature de l'impact du phénomène sur la sécurité alimentaire et la nutrition	Changement de pratiques	Changement de pratiques		Impacts du CC sur la production (récoltes, GMQ, maladies...)	

(*) Veuillez cocher les cases. Des informations complémentaires ou descriptives (publications, rapports, rapports d'experts, analyses, etc.) peuvent être fournies dans la section 6 ci-dessous.

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3. Attributs du phénomène

		Classification (**)		
1. Étendue: Est-il pertinent pour les systèmes alimentaires et nutritionnels dans leur ensemble ou pour des parties spécifiques de ces systèmes?	Point critique	<u>Question systémique</u> X		
2. Portée: Combien de personnes touche-t-il?	Peu	<u>Beaucoup</u> X		
3. Échelle: locale/régionale/mondiale?	Locale	Régionale	<u>Mondiale</u> X	
	<i>Indiquez ici le lieu exact</i>	<i>Indiquez ici la région exacte</i>		
Pour les points 4 à 11 ci-dessous, veuillez utiliser l'échelle [— — , — , 0, +, ++]: Impact très négatif (— —) / négatif (—) / faible (0) / positif (+) / très positif (++)				
4. Impact sur la disponibilité	++			
5. Impact sur l'accès	+			
6. Impact sur l'utilisation/la nutrition	+			
7. Impact sur la stabilité	++			
8. Impact sur les personnes les plus vulnérables	++			
9. Impact sur les femmes	++			
10. Impact sur les enfants	++			
11. Impact sur les populations marginalisées	++			
12. Coût de la résolution du problème (ou pour saisir l'opportunité)	Faible	Moyen	<u>Élevé</u> X	

(**) Veuillez cocher les cases ou classer les impacts et fournir des données synthétiques si besoin est. Des informations complémentaires ou descriptives peuvent être fournies dans la section 6 ci-dessous.

4. Période

Horizon (*)	Actuellement/ À court terme (1-5 ans)	À moyen terme (5-10 ans)	À long terme (10-20 ans ou plus)
Moment où le phénomène aura un impact	X	X	X
Moment où il faudra intervenir pour traiter la question	X	X	X

(*) Veuillez cocher les cases. Des informations complémentaires ou descriptives (publications, rapports, rapports d'experts, analyses, etc.) peuvent être fournies dans la section 6 ci-dessous.

5. Degré de confiance

Solidité de la base de connaissances actuellement disponible	Faible	Moyenne	ÉlevéeX (cf. rapport 5 du GIEC)
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6. Informations complémentaires

Informations complémentaires

Éléments probants

Lacunes en matière de connaissances

- Synergies et antagonismes entre atténuation, adaptation et sécurité alimentaire.
- Accès à des données statistiques fiables, s'inscrivant dans la durée.
- Définition de facteurs d'émissions spécifiques des pays en développement.

Bibliographie

Étude INRA, « Quelle contribution de l'agriculture française à la réduction des émissions de gaz à effet de serre ? Potentiel d'atténuation et coût de dix actions techniques » (Pellerin, Bamière et al, 2013).

Rapport 5 du GIEC (volumes 1 en 2013 et 2 en 2014)