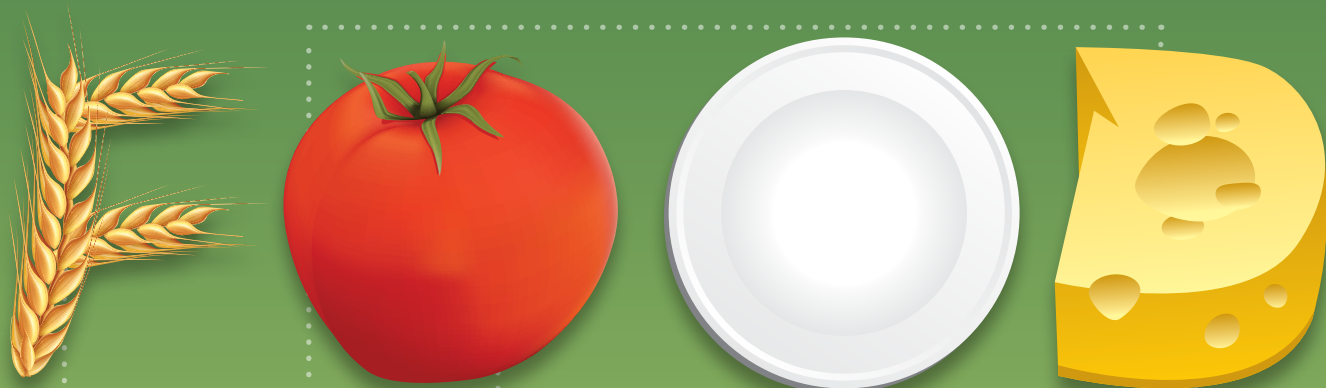
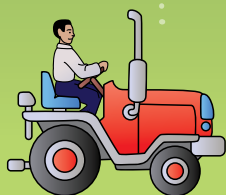


# TOWARDS SUSTAINABLE



# SYSTEMS

Multistakeholder Engagement for Action



## SUSTAINABLE FOOD SYSTEMS FOR FOOD SECURITY AND NUTRITION

Organised by:



In collaboration with:



With the support of :



Schweizerische Eidgenossenschaft  
Confédération suisse  
Confederazione Svizzera  
Confederaziun svizra

The conference *Towards Sustainable Food Systems: Multistakeholder Engagement for Action*, held on 18 October 2013 at FAO headquarters in Rome, was organized as a contribution to the 2013 World Food Day's theme "*Sustainable Food Systems for Food Security and Nutrition*". The conference was organized as part of the FAO/UNEP Sustainable Food Systems Programme (SFSP), supported by the Government of Switzerland, to promote a broader multistakeholders engagement for action, with a close involvement of the international community, civil society and the private sector, towards the achievement of more sustainable food systems.

This brochure encompasses a summary report of the conference, the opening and closing statements, as well as the presentations of the initiatives that participated.

## Summary Report

### OBJECTIVES

The purpose of the conference was to foster a broad multistakeholder, evidence-based dialogue for action, supported by presentations of multistakeholder initiatives aimed at more sustainable food systems.

The conference considered issues that need to be addressed and how to rethink possible actions to achieve sustainable food systems in order to ensure food security today and for future generations, considering the increase in populations, changes in diets, the loss of natural resources and climate change.

The overall objective of the conference was to help build a common understanding of the issues at stake, to show actions already engaged in by FAO and its partners, and to form the platform for creation of new and emerging partnerships.

The conference contributes to the Ten-year Framework of Programmes on Sustainable Consumption and Production (SCP), adopted during Rio+20, to the vision of the UN Secretary-Generals Zero Hunger Challenge and the development of the Post-2015 Development Framework, as well as to the preparation of the 2015 World Expo in Milan.

The Conference was opened by Maria Helena Semedo, FAO Deputy Director-General for Knowledge, Jacques Chavaz, Deputy Director General, from the Federal Office of Agriculture, Switzerland, and Alice Perlini, Manager of the Feeding Knowledge Programme from EXPO Milan 2015

### FIRST SESSION: FOOD CONSUMPTION AS A DRIVER

The first session gave an overview of programmes considering the role of consumption as a driver of food systems, including the insertion of the sustainable food systems programme in the Ten-year Framework of Programmes on SCP. Presentations were given on current work within FAO on the SAFA (sustainability assessment of food and agriculture) tool, which aims to identify hotspots and to improve sustainability, the role of voluntary standards and their impact on small farmer access to markets, and the importance of an ecosystems approach to maintain biodiversity, including the use of local/different varieties to maintain nutritional adequacy. The International Centre for Advanced Mediterranean Studies (CIHEAM) presented its work with FAO on sustainable diets, using the Mediterranean diet as a model. FAO presented a perspective on sustainable diets and biodiversity. Sustainable nutrition and consumer communication were presented from the point of view of a food company (Nestlé), highlighting the responsibility to communicate to consumers all information possible in order to allow them to make informed decisions.

### SECOND SESSION: SUSTAINABLE FOOD PRODUCTION

The second session was devoted to sustainable food production as a way to address current and

emerging challenges, such as declining yield growth rate of major crops, increasing competition for land and water, rising prices of fuel and fertilizer, impacts of climate change and reduced resilience of cropping systems. Presentations were given on: the concept of Save and Grow, which places farmers at the heart of the concept, and the use of the farmer field school approach; the Global Agenda for Action in support of sustainable livestock sector development, by creating conditions for change by informing, stimulating political dialogue and developing tools; and the Global Sustainable Seafood Initiative, which uses certification standards (for shelf-life, storage, food safety) in the seafood industry, and highlighted the importance of consumer involvement in the setting of guidelines to improve market access and consumer confidence.

### **THIRD SESSION: FOOD CHAIN EFFICIENCY**

The third session discussed various approaches to improve food chain efficiency. Presentations were given on the importance of logistics systems and their management in the development of the agri-food industry, covering the new concept of green logistics and how it can improve sustainability. Food loss and waste was considered from various angles, including the Save Food initiative and the “Think, eat, save, reduce your footprint” campaign as well as various field experiences in different sectors.

### **FOURTH SESSION: IDEAS FOR ACTION**

The fourth session was aimed at identifying priority areas for action. It was introduced by a presentation on the ongoing study undertaken by the High Level Panel of Experts on Food Security and Nutrition on food losses and waste in the context of sustainable food systems requested by the Committee on World Food Security to inform its discussions on the matter in 2014. It was followed by a roundtable with representatives of the main stakeholders, government, the private sector and civil society and discussion with the floor on main issues to be addressed and priority areas for action.

### **MAIN CONCLUSIONS**

In his conclusions, Jacques Chavaz made the following main important points:

- Collaboration between institutions is key to progress.
- There is no alternative to a multistakeholder engagement.
- Actors in countries suffering from food insecurity need concrete and efficient solutions to reduce food insecurity.
- The sustainable food systems approach needs to be included in the Ten-year Framework of Programmes on SCP decided in Rio.
- The sustainable food systems approach must be taken into account for the elaboration of a strong Sustainable Development Goal in food security and nutrition in the framework of the Post-2015 Agenda.

# Agenda

- 9.30-10.00 WELCOME AND OPENING REMARKS  
 Maria Helena M.Q. Semedo, Deputy Director-General for Knowledge, FAO  
 Jacques Chavaz, Deputy Director General, Federal Office of Agriculture, Switzerland
- 10.00-10.10 Alice Perlini, Manager of the Feeding Knowledge Programme, Expo Milano 2015
- 10.10-11.35 SESSION 1: FOOD CONSUMPTION AS A DRIVER  
 Chair: Christina Blank, Deputy Permanent Representative of Switzerland
- 10.15-10.25 Sustainable Food Systems and the Ten-year Framework of Programmes on SCP  
 James Lomax, Division of Technology, Industry and Economics, UNEP
- 10.25-10.35 Guidelines on Sustainability Assessment of Food and Agriculture (SAFA) Systems  
 Nadia Scialabba, Department of Natural Resources, FAO
- 10.35-10.45 Improving the Sustainability of Food Consumption Patterns in the Mediterranean Area  
 Cosimo Lacirignola, General Secretary, International Centre for Advanced Mediterranean Agronomic Studies
- 10.45-10.55 Sustainable Diets and Biodiversity  
 Barbara Burlingame, Deputy Director, Nutrition Division, FAO
- 10.55-11.05 Sustainable Nutrition and Consumer Communication  
 Pascal Greverath, Vice-President Environmental Sustainability, Nestlé, Representative in the Agri-Food Task Force
- 11.05-11.15 Voluntary Sustainability Standards  
 Pilar Santacoloma, Rural Infrastructure and Agro-industries Division, FAO
- 11.15-11.35 Questions and answers
- 11.35-12.30 SESSION 2: SUSTAINABLE FOOD PRODUCTION  
 Chair: Clayton Campanhola, Coordinator SO2, Director, Plant Production and Protection Division, FAO
- 11.40-11.50 Save and Grow  
 Manuela Allara Carlin, Plant Production and Protection Division, FAO
- 11.50-12.00 Global Agenda for Action in Support of Sustainable Livestock Sector Development  
 Anne Mottet, Animal Production and Health Division, FAO
- 12.00-12.10 Global Sustainable Seafood Initiative  
 Herman Wisse, Program Manager, Global Sustainable Seafood Initiative
- 12.10-12.30 Questions and answers
- 12.30-14.30 Lunch break
- 14.30-15.40 SESSION 3: IMPROVING FOOD CHAIN EFFICIENCY  
 Chair: Eugenia Serova, Coordinator SO4, Director, Rural Infrastructure and Agro-industries Division, FAO
- 14.35-14.45 Logistics Systems and Management: Platform for Sustainable Development in the Food Sector  
 Joseph Mpagalile and Jorge M. Fonseca, Rural Infrastructure and Agro-industries Division, FAO
- 14.45-14.55 Scaling-up Food Loss and Waste Reduction for Sustainable Food Systems  
 Robert van Otterdijk, FAO, on the SAVE FOOD initiative; James Lomax, UNEP, on sustainable management of resources.
- 14.55-15.25 Panel Discussion with Roberto Azofeifa, Ministry of Agriculture and Livestock, Costa Rica, Dharam Vir Malhan, All India Food Processors' Association, Kalilou Sylla, Executive Secretary, Réseau des organisations paysannes et de producteurs de l'Afrique de l'Ouest and Davide Signa, SmartFish programme, Mauritius.
- 15.25-15.40 Questions and answers
- 15.40-17.20 SESSION 4: SUSTAINABLE FOOD SYSTEMS: IDEAS FOR ACTION  
 Chair: Alexandre Meybeck, Agriculture and Consumer Protection Department, FAO
- 15.40-15.50 Food Losses and Waste in the context of Sustainable Food Systems: An Update on the HLPE Study for CFS  
 Vincent Gitz, Coordinator of the High Level Panel of Experts on Food Security and Nutrition (HLPE)
- 15.50-17.20 Round Table and Discussion with the Floor: What matters more? What priorities?  
 Dharam Vir Malhan, Executive Secretary, All India Food Processors' Association, Unati Speirs, National Director, Agro Processing Unit, Department of Trade & Industry, South Africa, Representative in the Agri-Food Task Force, Roberto Azofeifa, Sustainable Production Department, Ministry of Agriculture, Costa Rica, Representative in the Agri-Food Task Force, Kalilou Sylla, Executive Secretary, Réseau des organisations paysannes & de producteurs de l'Afrique de l'Ouest
- 17.20-17.30 WRAP UP AND CONCLUSIONS  
 Jacques Chavaz, Deputy Director-General, Federal Office of Agriculture, Switzerland

# Opening Remarks

*Maria Helena H.Q. Semedo, Deputy Director-General for Knowledge, FAO*

Excellencies,  
Ambassadors,  
Permanent Representatives,  
Mr Jacques Chavaz, Deputy Director General, Federal Office of Agriculture, Switzerland,  
Ms Alice Perlini, from EXPO 2015,  
Distinguished participants,  
Esteemed colleagues from FAO,  
Ladies and Gentlemen,

I am pleased to welcome you and thank all of you for honouring us with your presence at this World Food Week Conference, which I have the pleasure to open.

This conference is about what we can do towards sustainable food systems – what we already do, what we need to do and what we could do, looking through the lens of partnership.

As we heard during this year's official opening of the World Food Day, the world is producing enough food to feed its entire population. Yet paradoxically, almost more than half of the world's population is malnourished, from under- or overconsumption.

Some 842 million people, or roughly one in eight, suffered from chronic hunger in 2011 to 2013, not getting enough food to lead active and healthy lives.

Malnutrition in all its forms today imposes high costs on society, and hunger and malnutrition should be seen as tragic outcomes of unhealthy food systems.

Each year one-third of all food produced for human consumption in the world is lost or wasted. This represents a missed opportunity to improve global food and nutrition security, and also to mitigate environmental impacts and to increase the efficiency of resources in agricultural and food systems.

Food consumption and production patterns and trends are identified among the most important drivers of environmental pressures.

To satisfy the demand of a growing and richer world population, it is estimated that we will have to increase production by 60 percent towards 2050.

Today, the main challenge for the food and agriculture sector is to simultaneously provide enough food – in quantity and quality – to meet everyone's nutritional needs, and to conserve the natural resources for present and future generations.

Let me also highlight the important role of women. If left out, we will miss an opportunity to succeed.

Distinguished participants,

After my recent appointment, I was asked to summarize my vision of FAO's work in the field of natural resources in one word and I replied: "sustainability". When people are hungry, poor or unhealthy, this is not sustainable.

I see sustainability at the core of global food security and nutrition.

Let me also share with you the outcome of yesterday's FAO Informal Meeting with member countries on "Partnering for Results".

We concluded that: we have been doing a lot, but we could do more and we want to do more. But we cannot do it alone. Working in partnership and across disciplines, with harmonized approaches and avoiding overlap, is key to success.

Therefore, I fully support a multisectoral and cross-cutting approach towards the sustainability of food systems through multistakeholder dialogues for action.

We need to work together with all stakeholders to accomplish the changes needed, with a close involvement of civil society, the private sector, academia and research organizations, cooperatives and producer organizations.

Therefore, I believe the FAO-UNEP Sustainable Food Systems Programme is a unique opportunity for collaboration. The Programme already brings together a broad coalition of concerned stakeholders.

This conference has the objective of fostering a broad multistakeholder, evidence-based dialogue for action. It also aims to identify priorities for action, challenges and solutions to address them and to strengthen and foster partnerships towards sustainable food systems.

The conference should also contribute to the achievement of the UN Secretary-General's Zero Hunger Vision, on eradicating hunger in our lifetime. This Vision gives FAO and the Rome-based agencies a special role – to partner with civil society and partners on the ground. We must realize only that by working together we are part of the solution.

Dear participants, let me come back to today's conference.

Ongoing, multistakeholder initiatives that will be presented today show how the various dimensions of sustainability – environmental, social and economic – interact in often complex ways.

We need to ensure that these global initiatives have strong linkages with regional and national actors, especially women's organizations to ensure their engagement and development on the ground.

Let us share best practices and lessons learned so that we can expand and replicate them.

Lessons learned could also serve towards the preparation of contributions for the 2015 Expo of Milan on "Feeding the Planet – Energy for life".

Before concluding, I would like to thank the Government of Switzerland for its support.

I thank you for your kind attention and wish you a fruitful meeting and deliberations.

# Opening Remarks

*Jacques Chavaz, Deputy Director General, Federal Office for Agriculture, Switzerland*

Madam Deputy Director-General,  
Ladies and gentlemen,

I have the pleasure to deliver this welcome speech on behalf of the Government of Switzerland and more specifically of the Federal Office for Agriculture. I am happy to welcome such numerous delegations and experts attracted by the very appropriate and substantial programme of this conference.

“Sustainable food systems for food security and nutrition”, the theme of World Food Day, is very appropriate and I would like to thank FAO for having taken the initiative of organizing this conference as part of the programme of World Food Week.

This meeting is of particular importance for us as it is organized in the context of the FAO/UNEP programme on sustainable food systems, a joint programme financed by the Swiss Federal Office for Agriculture.

My country gives great importance to the establishment of sustainable food systems. I would like to briefly give you the reasons and explain our approach on this issue.

We all know it. The food and environmental context is evolving quickly. The constant population growth, change in food consumption linked to income increase, the increasing scarcities of natural resources and climate change have a direct impact on agriculture. They will lead us to rethink our way of acting if we want to really achieve our goal of a world where everyone, men and women, have access everyday to enough food, safe and nutritionally balanced, and where this access is also ensured for future generations.

We need agriculture and food systems that are more efficient, less greedy in resources, generating less post-harvest losses and waste and ensuring farmers and rural populations decent income and livelihoods.

In a nutshell: we need a new approach, putting at the centre the sustainability of food systems for food security, nutrition and poverty eradication.

To do so, the “Zero Hunger Challenge” launched in 2012 by the UN Secretary-General during the Rio+20 conference is an inspiration for us.

This initiative highlights the essential role of the sustainability of food systems as a key objective for hunger eradication. It must guide our action.

Closely related and of key importance in this regard is the United Nations Post-2015 Agenda on Sustainable Development. This theme has been the focus of the discussions in the Special Event on the Millennium Development Goals that was held under the auspices of the General Assembly of the United Nations, at the outset of its current session.

Switzerland took note with satisfaction of the consensus that arose on this occasion concerning the convergence of the process for the elaboration of a successor development framework for the MDGs and the Rio+20 follow-up process for the elaboration of Sustainable Development Goals. We are moving towards a unique United Nations Post-2015 Agenda with a set of universal goals.

My country, with others, is actively engaged in the post-2015 process, promoting a goal on food security and nutrition for all through sustainable food systems. For us, such an objective illustrates this necessary convergence by combining the achievements of Millennium Development Goal 1 with the need to move towards sustainable production and consumption all along the food chain.

FAO, in close collaboration with the other Rome-based agencies, UNEP and the Committee on World Food Security, has a key role to play. It should engage with determination in the post-2015 process.

But the task does not simply consist in designing goals and targets. It is our responsibility to promote concrete actions. Switzerland already collaborates closely with FAO for the implementation of the post-2015 agenda through global, innovative and multistakeholder initiatives. Let me mention two that are of particular importance for us. The first is the Global Agenda for Sustainable Livestock. This initiative will be presented at the end of the morning in the second session. The second concerns the FAO/UNEP Sustainable Food Systems Programme, which is the focus of today's conference.

The Sustainable Food Systems Programme pays particular attention to one of the specific objectives of the Zero Hunger Challenge: the fight against food losses and waste.

One of the first concrete elements has been the launch, in January 2013, of the campaign "Think, Eat, Save, Reduce your Foodprint", with which Switzerland was engaged. We have positioned this theme, in Switzerland, at the centre of World Food Day. We have organized a competition for ideas, open to students from developing countries and Switzerland. This competition was a real success.

More than 50 projects have been submitted and the best ones were awarded during an event organized on 15 October.

Ladies and Gentlemen,

There will be no sustainable food systems without a significant and responsible increase of investments in agriculture. This is why my country has accepted to lead, in the frame of the Committee on World Food Security, the consultation and negotiation process towards principles for responsible agricultural investments.

The Swiss Government intends to fulfill this task with determination, convinced of the necessity to increase, in a responsible way, agricultural investments and to ensure that they contribute effectively to the improvement of food security and to the realization of the right to food.

Ladies and Gentlemen,

The world to which we aspire - today more than ever - needs the establishment of sustainable food systems.

Today's conference will enable us to move forward on the understanding of future issues on the importance of a multistakeholder engagement, at the heart of the FAO/UNEP Sustainable Food Systems Programme.

I wish you fruitful discussions and exchanges.

I thank FAO for the organization of the conference and thank you for your attention.



# Conclusions

*Jacques Chavaz, Deputy Director General, Federal Office for Agriculture, Switzerland*

Ladies and Gentlemen,

Today's conference had several immediate benefits:

- It recalled the existence of the intergovernmental mandate for the United Nations 10 Year Framework of Programmes on Sustainable Consumption and Production;
- It demonstrated that a true collaboration between FAO and UNEP exists that concretizes such a programme in the area of agri-food systems.

The approach is innovative. It:

- considers the entirety of food chains from production to consumption;
- considers global, regional and local levels;
- involves all stakeholders: civil society, farmers, consumers, private companies working in transformation and distribution, the government sector and international organizations;
- uses all types of leverage to improve the sustainability of our food systems: awareness raising, research, monitoring, concrete actions by stakeholders in food chains, incentives and regulation by public authorities, international cooperation.

It is an extremely vast area of work involving many actors.

Very useful information has been provided today on the numerous facets of this approach. The discussions have also highlighted important and legitimate questions. I will mention some of them:

- Is it not time to put some order in what is perceived as a multiplication of concepts and initiatives?
- How to translate concepts into concrete actions that address pressing difficulties of those populations that are most affected by instability and lack of sustainable food systems?
- Is there a contradiction or at least an unsolved question of prioritization between the need to reduce food insecurity in a number of countries and the need to improve the sustainability of all food systems?
- Can the notion of sustainable food systems be reduced to the diminution of food losses and waste?

Discussions have brought some very important clarifications on these issues, and, at least, some ways have been highlighted to go forward.

It is impossible to summarize all the proposals and specific priorities mentioned today for the future of these work areas. Therefore, I will very subjectively select five main points:

1. Collaboration inside FAO and between institutions is a key for progress.
2. There is no alternative to multistakeholder engagement.
3. Stakeholders in countries affected by food insecurity legitimately expect a concrete, effective and quick contribution to the reduction of this food insecurity.
4. The sustainable food systems approach needs to be included in the coming months in the 10 Year Framework of Programmes on Sustainable Consumption and Production decided in Rio.
5. The sustainable food systems approach should substantiate the elaboration of a strong Sustainable Development Goals on food security and nutrition in the framework of the Post-2015 Agenda.

To conclude, I would like to thank FAO for having organized this conference, UNEP for its collaboration, as well as all speakers and participants and, last but not least, Alexandre Meybeck, coordinator of the Programme and "spiritus rector" of today's event.



# FAO-UNEP Sustainable Food Systems Programme

## Sustainable food consumption and production

Food consumption and production trends and patterns are among the main causes of pressure on the environment. Fundamental changes in the ways food is produced, processed, transported and consumed are indispensable for achieving sustainable development.

Sustainable consumption and production in food and agriculture is a consumer-driven, holistic concept that refers to the integrated implementation of sustainable patterns of food consumption and production, respecting the carrying capacities of natural ecosystems. It requires consideration of all the aspects and phases in the life of a product, from production to consumption, and includes such issues as sustainable lifestyles, sustainable diets, food losses and food waste management and recycling, voluntary sustainability standards, and environmentally friendly behaviours and methods that minimize adverse impacts on the environment and do not jeopardize the needs of present and future generations. Sustainability, climate change, biodiversity, water, food and nutrition security, right to food, and diets are all closely connected.

Agrifood systems develop within a finite and sometimes shrinking resource base. They therefore need to make use of natural resources in ways that are environmentally, economically, socially and culturally sustainable, to conserve the ecosystem. Growth of agrifood systems must be inclusive; must target objectives beyond production, including efficiencies along the food chains; and must promote sustainable practices and diets.

Consumer choice plays a leading role in orienting production, as consumers select certain types of product according to place of origin, production processes, or producer.



A customer at the Shoprite supermarket in Manzini, 20km south of Mbabane

Consumers also exert strong influences through the ways they buy, transport, conserve, cook and consume their food. Food consumption is affected by a wide range of factors, including food availability, food accessibility and food choice, which may in turn be influenced by geography, demography, disposable income, socio-economic status, urbanization, globalization, religion, culture, marketing and consumer attitudes.

## FAO-UNEP Sustainable Food Systems Programme

FAO and the United Nations Environment Programme (UNEP) established the joint Sustainable Food Systems Programme to improve resource use efficiency and reduce the pollution intensity of food systems, from production to consumption, while addressing issues of food and nutrition security.

This FAO/UNEP joint programme is catalysing partnerships among United Nations (UN) agencies, other international agencies, governments, and industry and



Fresh fish, shell fish and other seafood on sale

civil society organizations whose activities can promote the essential transition to sustainability. It is a unique collaborative effort between the leading intergovernmental agencies in the areas of food, agriculture and the environment.

The programme promotes international cooperation in promoting policies, investments, production and consumption patterns that enhance food security while meeting economic and environmental needs.

An Agrifood Task Force (ATF) has been established with representatives of Member States, United Nations agencies, the private sector and civil society. Activities are being designed in response to stakeholders' needs, and individual stakeholders and development partners can select which activities they wish to engage in.

At its third meeting in April 2012 at FAO Headquarters in Rome, ATF defined a pluriannual programme of work and created four groups to implement clusters of activities: i) information platforms; ii) communications; iii) enabling conditions; and iv) market-based approaches.

### For more information:

[www.fao.org/ag/ags/sustainable-food-consumption-and-production/en/](http://www.fao.org/ag/ags/sustainable-food-consumption-and-production/en/)

[www.scpclearinghouse.org](http://www.scpclearinghouse.org)

### FAO

[alexandre.meybeck@fao.org](mailto:alexandre.meybeck@fao.org)  
[sandro.dernini@fao.org](mailto:sandro.dernini@fao.org)

### UNEP

[james.lomax@unep.org](mailto:james.lomax@unep.org)  
[mamati.tembe@unep.org](mailto:mamati.tembe@unep.org)



## EXPO MILANO 2015

From 1st May to 31st October 2015 Milan will host the Universal Exposition with the Theme "Feeding the Planet. Energy for Life". Expo Milano 2015 wants to face the pressing food problems: nowadays over one billion people in the world go hungry or suffer from obesity; and in 2050 the Earth will host more than 9 billion people. Experts from all over the world will work together to develop the theme from different points of view: economic, scientific, cultural and social ones.

137 Official Participants (Countries and International Organizations), 10 Civil Society Participants and one Corporate Participants have already confirmed their participation at the Universal Exhibition and will take part with concrete solutions to important challenges: how to give all people the right to food safe, secure and sufficient, how to guarantee environmental, economic and social sustainability of the food chain, how to preserve taste and food culture. The aim of the World Expo of Milan is to give the world the guidelines, both reasoned and shared, to win these challenges.

Expo Milano 2015 will leave a material inheritance: the Feeding Knowledge Program.

The Countries' pavilions will arise on an area of around one million square meters, along the axis of Rho-Fiera and Malpensa. The Expo site will be built in a strategic area, rich in infrastructures: it is near two highways, next to Linate and Malpensa airports, linked to Milan and the hinterland by the high-speed train and the underground.

During the six-months exhibition, more than 20 million visitors and over 130 Countries, corporates and international organizations will reach Milan and the hinterland to participate to the World Exposition and to the thousands events (cultural shows and concerts) on schedule. Up to now, the number of Official Participants to Expo Milano 2015 has risen to 137.

Many international companies have already bet on this project: Telecom Italia, Cisco, Accenture, Enel, Intesa SanPaolo, Finmeccanica, Came, Fiat-Chrysler, Coop, illycaffè, Eutelsat, Fiera Milano and Samsung Electronics Italia are the first ones having invested their expertise to make it possible, as Partners.

## IN THE WORLD...



**12%** of total world population is **MALNOURISHED**



(\*) Institution of Medical Engineers - UK, 2013

## WHAT IS FOOD SECURITY?

*"Food security exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life"*

Declaration of the World Summit on food security, 1996

## WHAT IS FEEDING KNOWLEDGE?



## WHAT CAN YOU DO?

share research results

work into research priorities groups

select sources collaboratively

disseminate and involve people

JOIN US!



# Sustainability Assessment of Food and Agriculture Systems (SAFA)

**Nadia El-Hage Scialabba**  
**Natural Resources Management and Environment Department, FAO**

As of today, 106 countries have established national sustainable development strategies and related sustainability reporting, as evidenced by national reports to the Commission on Sustainable Development. Furthermore, over 120 voluntary sustainability standards, ecolabels, codes of conduct and audit protocols are referenced on Standards Map of the International Trade Centre. Worldwide, there is an increasing user demand for practical tools to support decision-making processes regarding the use of voluntary sustainability standards in business operations. However, there is no single framework that integrates all aspects of sustainability and, sadly, sustainability is deteriorating in all spheres of development, as witnessed by multiple environmental, social and economic crisis.

The Sustainability Assessment of Food and Agriculture system (SAFA) was developed as an international reference tool, a benchmark that defines the elements of sustainability and a framework for assessing trade-offs and synergies among all dimensions of sustainability. It offers a fair playing field, adaptable to all contexts and sizes of agriculture, livestock, forestry and fisheries operations. The SAFA framework begins with the high-level, overarching dimensions of sustainability: good governance, environmental integrity, economic resilience and social well-being. These are translated into a universally agreed definition of sustainability, through 21 themes and 58 subthemes for each of the sustainability pillars. These are measurable and verifiable through a set of indicators applicable to food and agriculture supply chains.

Since 2009, FAO Natural Resources Management and Environment Department has been working in partnership with several associations and enterprises working on sustainability tools. SAFA

is the result of a process that engaged hundreds of stakeholders from academia, civil society and the private sector in order to ensure scientific rigour and grassroots involvement from supply chain actors. This was ensured through targeted stakeholder surveys, expert meetings, electronic public consultations and pilot studies in all continents and for all supply chain types and sizes. The consultation and active involvement of experts from the food and agriculture industry, public administrations, non-governmental organizations, multistakeholder roundtables and multilateral institutions shaped the purpose and contents of the SAFA initiative in a way that adds value to existing efforts. The added value of SAFA is the provision of a common language for assessing enterprises' performance from production to retail. SAFA results are represented through a polygon over a traffic light colour code that highlights hotspots requiring consideration to improve delivery on specific sustainability themes.

SAFA is provided in two volumes and an IT tool. The SAFA Guidelines offer the “rules of the game”, including the framework and assessment methodology. The SAFA Indicators offer a set of indicators for self-assessment, including guidance on metrics and further information resources. The SAFA Tool is a freely available java script program that assists the implementation of the SAFA Guidelines by making use of the SAFA Indicators. The SAFA Secretariat is committed to developing SAFA through continued networking and cooperation with practitioners and partners.

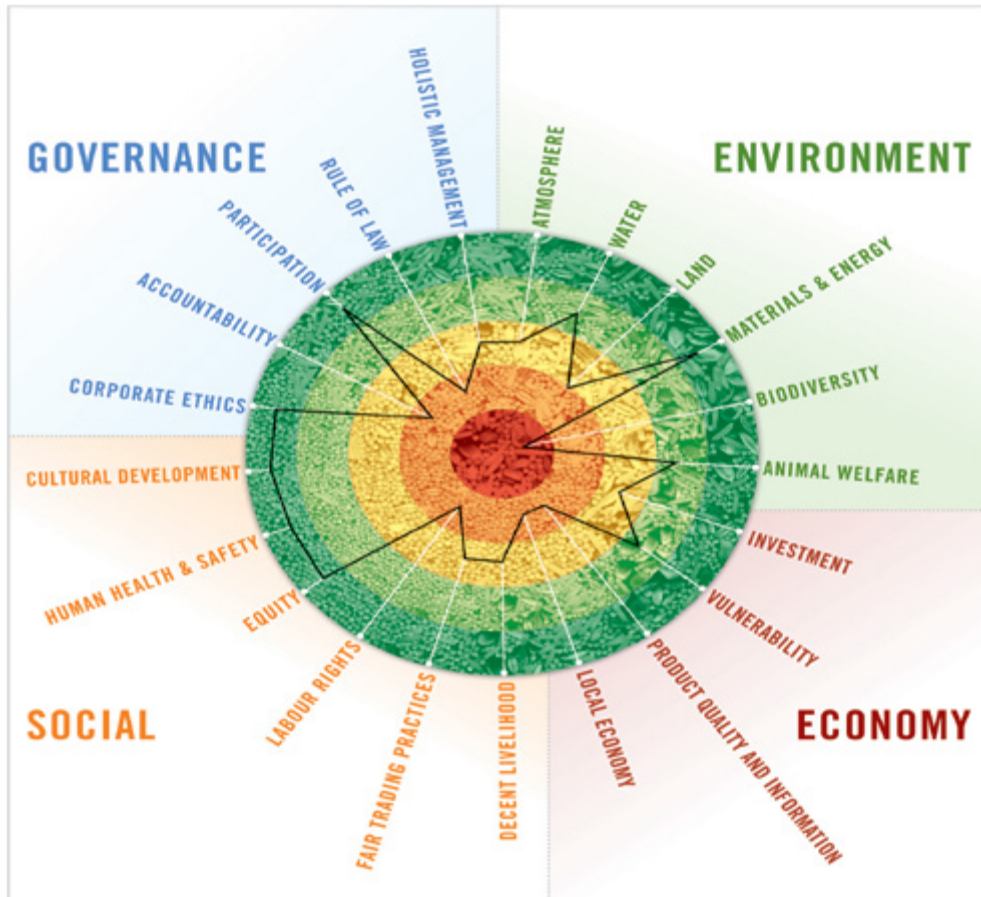
SAFA history and resources are available at <http://www.fao.org/nr/sustainability/sustainability-assessments-safa>



**SAFA sustainability dimensions, themes and subthemes**

Dimension G: GOOD GOVERNANCE	
Themes	Subthemes
G1 Corporate Ethics	Mission Statement; Due Diligence
G2 Accountability	Holistic Audits; Responsibility; Transparency
G3 Participation	Stakeholder Dialogue; Grievance Procedures; Conflict Resolution
G4 Rule of Law	Legitimacy; Remedy, Restoration and Prevention; Civic Responsibility; Resource Appropriation
G5 Holistic Management	Sustainability Management Plan; Full-cost Accounting
Dimension E: ENVIRONMENTAL INTEGRITY	
E1 Atmosphere	Greenhouse Gases; Air Quality
E2 Water	Water Withdrawal; Water Quality
E3 Land	Soil Quality; Land Degradation
E4 Biodiversity	Ecosystem Diversity; Species Diversity; Genetic Diversity
E5 Materials and Energy	Material Use, Energy Use, Waste Reduction and Disposal
E6 Animal Welfare	Health and Freedom from Stress
Dimension C: ECONOMIC RESILIENCE	
C1 Investment	Internal Investment; Community Investment; Long-ranging Investment, Profitability
C2 Vulnerability	Stability of Supply; Stability of Market; Liquidity; Risk Management; Stability of Production
C3 Product Quality and Information	Food Safety; Food Quality; Product Information
C4 Local Economy	Value Creation; Local Procurement
Dimension S: SOCIAL WELL-BEING	
S1 Decent Livelihood	Right to Quality of Life; Capacity Building; Rights of Fair Access to Land and Means of Production
S2 Fair Trading Practices	Responsible Buyers
S3 Labour Rights	Employment Relations; Forced Labour; Child Labour; Employees' Freedom of Association and Right to Bargaining
S4 Equity	Non-discrimination; Gender Equality; Support to Vulnerable People
S5 Human Health and Safety	Workplace Safety and Health Provisions for Employees; Public Health
S6 Cultural Development	Indigenous Knowledge; Food Sovereignty

**EXAMPLE VISUALIZATION OF THE SAFA CATEGORY SCORES OF A COMPANY**



## Action towards sustainable food systems

### International Centre for Advanced Mediterranean Agronomic Studies

The International Centre for Advanced Mediterranean Agronomic Studies (CIHEAM) was founded at the joint initiative of the Organisation for Economic Co-operation and Development and the Council of Europe on 21 May 1962. CIHEAM is an intergovernmental organization including 13 Mediterranean member countries: Albania, Algeria, Egypt, Spain, France, Greece, Italy, Lebanon, Malta, Morocco, Portugal, Tunisia and Turkey. CIHEAM is made up of four Mediterranean Agronomic Institutes (MAIs), located in Bari (Italy), Chania (Greece), Montpellier (France) and Zaragoza (Spain), and a General Secretariat based in Paris. CIHEAM has established itself as an authority in its fields of activity: Mediterranean agriculture, food and rural development. To achieve its objectives, CIHEAM uses different complementary instruments, namely post-graduate specialized education, applied research, networking, cooperation and facilitation of the regional debate through the meetings of the Mediterranean Ministers of Agriculture.

Among its numerous activities, CIHEAM has also focused on improving the sustainability of the Mediterranean agro-food system through the promotion of the Mediterranean dietary pattern. Indeed, that was highlighted in the final declarations of the meetings of the Ministers of Agriculture of CIHEAM's member countries in Athens (2001), Zaragoza (2008), Istanbul (2010) and Malta (2012). CIHEAM-Bari has been devoting particular attention to the sustainability of the Mediterranean food system mainly through the study of Mediterranean diets as an example of sustainable food consumption patterns and diets. The ultimate aim is to assess the overall (nutrition and health, environmental, economic, socio-cultural) sustainability of diets and food consumption patterns in each Mediterranean country - using specific and adequate indicators - and to develop a framework for country-based guidelines and policy interventions for improving the sustainability of the Mediterranean diets.

The international workshop, organized in collaboration with FAO, in November 2011 at CIHEAM-Bari, represented the starting point of the activities on the sustainability of the Mediterranean food consumption patterns that have been developed through seminars and research activities conducted jointly with national and international organizations.

An important milestone of this process was the development - **jointly with FAO** - of the session on *Food systems and sustainable diets: the Mediterranean diet as a pilot study, within the international seminar on The sustainability of food systems in the Mediterranean area*, together with the publication of the discussion paper *Towards the development of guidelines for improving the sustainability of diets and food consumption patterns in the Mediterranean area*, as a joint effort with the FAO Sustainable Food Systems Programme. The findings of the international seminar were annexed to the Final Declaration of the 9th meeting of CIHEAM Ministers of Agriculture, held in September 2012 in Malta.

Moreover, a scientific cooperation network on the sustainable Mediterranean diet has been created by CIHEAM-Bari in particular through:

• **FEEDING KNOWLEDGE Network Project Expo 2015 of Milan**, developed through five research and innovation priorities for food security, including Food consumption patterns: diet, environment, society, economy and health.

• **MED-SPRING Project** (Mediterranean Science, Policy, Research & INnovation Gateway): with a particular focus on three societal challenges: energy, high quality affordable food, scarcity of resources.

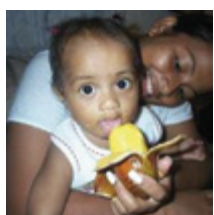


# SUSTAINABLE DIETS

## Box 1:

*Definition: Sustainable diets are those diets with low environmental impacts which contribute to food and nutrition security and to healthy life for present and future generations. Sustainable diets are protective and respectful of biodiversity and ecosystems, culturally acceptable, accessible, economically fair and affordable; nutritionally adequate, safe and healthy; while optimizing natural and human resources. (FAO 2010)<sup>1</sup>.*

On planet Earth, sustainability is the catch-phrase on everyone's agenda, whether referring to agriculture, the environment or health. The concept of sustainable diets brings these sectors together to simultaneously address major global priorities.



Agricultural production is theoretically able to feed the world's population, yet more than 800 million people are undernourished. At the opposite end of the nutrition spectrum, about 1.2 billion adults and children are overweight and 475 million are obese. And regardless of body mass, an estimated 2 billion people are affected by micronutrient deficiencies. While modern agriculture is increasing production to meet dietary energy demands, biodiversity loss and environmental degradation are the collateral damage, along with malnutrition in all its forms.

In spite of many efforts, the nutrition problems of the world are escalating. And regardless of the many successes of agriculture during the last three decades, it is clear that current methods and levels food production and consumption are not sustainable, resulting in more than half of humanity suffering from nutritional and related health problems and exceeding the planetary limits of natural resources.

In the early 1980s, the notion of "sustainable diets" was proposed, with dietary recommendations which would result in healthier environments as well as healthier consumers. But with the over-riding goal of feeding a hungry world, little attention was paid to the sustainability of ecosystems and, the sustainable diets' concept was neglected for many years.

With growing academic recognition of environmental degradation and loss of biodiversity, as well as a dramatically increasing body of evidence of the unsustainable nature of agriculture as it is currently practiced in many parts of the world, renewed attention has been directed to sustainability in all its forms, including diets. Therefore, the international community acknowledged that a definition, and a set of guiding principles for sustainable diets was urgently needed to address food and nutrition security as well as sustainability along the whole food chain.

<sup>1</sup> International Scientific Symposium on Biodiversity and Sustainable Diets, FAO, Rome, 2010. The Symposium was organized jointly by FAO and Bioversity International, on 3-5 November 2010, within the World Food Day/Week programme. As a final outcome of the Symposium, it was reached a consensus position on the definition of "sustainable diets" taking into consideration the recommendations of a Technical Workshop held in May 2010 and an online survey.

A consensus position on a definition of "sustainable diets" was finally reached in 2010 at the International Symposium "Biodiversity and Sustainable Diets: United Against Hunger", organized by FAO and Bioversity International, in Rome, at the FAO Headquarters (see Box 1). This definition acknowledged the interdependencies of food production and consumption with food requirements and nutrient recommendations, and at the same time, reaffirmed the notion that the health of humans cannot be isolated from the health of ecosystems.



Improving food systems for sustainable diets requires an intersectoral effort to reverse the simplification of diets, the degradation of ecosystems, and the erosion of biodiversity. As we face many challenges, ensuring sustainable diets needs the development of programme activities and policies towards sustainable food production and food consumption.

The need to feed a growing population leads to continuous pressure on crop production, exacerbated by degraded natural resources and difficulties arising from climate change. To address the food and nutrition needs of a richer and more urbanized growing world population, while preserving natural and productive resources, food systems have to undergo radical transformations towards more efficiency in the use of resources, and more efficiency and equity in the consumption of food.

Currently, FAO activities on sustainable diets explore linkages and synergies among food biodiversity, nutrition, food consumption, food production, agriculture and sustainability to improve food and nutrition security. These activities aim to provide more eco-friendly food recommendations to consumers and policy-makers and help clarify what is required for an environmentally-sustainable food system. Their purpose is to promote broader assessments for the characterization of different agro-ecological zones and different related sustainable diet models.

## Characterization of different agro-ecological zones in relation to biodiversity and nutrition

Agricultural programmes and policies often aim to increase the production of a few staple crops to eliminate hunger, and measure their success in terms of the quantity of available food or dietary energy supply. While some successes in reducing hunger have been achieved in some places, micronutrient malnutrition remains a persistent problem, with high prevalence in both developed and developing countries because staple crops do not provide sufficient micronutrients to meet human requirements.

Reducing malnutrition through sustainable production and consumption of selected varieties and breeds requires increased effort in the characterization of food systems in relation to biodiversity and to their specific nutritional values. Better evidence in this area will support the integration of biodiversity and nutrition elements in agricultural programmes and policies, improving food systems in line with the concept of sustainable diets.





Food is defined in the Millennium Ecosystem Assessment as a provisioning ecosystem service. However, in the field of nutrition, food *per se*, is seldom dealt with independently of the nutrients it contains or the whole diet of which it is a part. The Commission on Genetic Resources for Food and Agriculture, at its 14th session in 2013, formally recognized nutrients and diets, as well as food, as ecosystem services, in order to further increase the awareness of nutrition as a concern for the environment sector, and vice versa, and to assist in efforts to improve understanding of the concept of sustainable diets.



As part of its work on sustainable diets, FAO has initiated studies in partnership with the Centre International de Hautes Études Agronomiques Méditerranéennes (CIHEAM), Biodiversity International and other partners, to develop methods and indicators for the characterization of different agro-ecological zones for sustainable diets, using the Mediterranean Diet as a testing model. These studies will serve to foster new ideas for building consensus on actions needed to link human nutrition with biodiversity, ecosystems and environmental impacts.

Sustainable diets rationale, with biodiversity at its core, along with education and policies, is fundamental to the achievement of the broader goals of sustainable development, connecting nutritional well-being of the individual and of the community to the sustainability of feeding the planet.

Sustainable diets can address the consumption of foods with lower water and carbon footprints, promote the use of food biodiversity, including traditional and local foods, with their many nutritionally rich species and varieties.

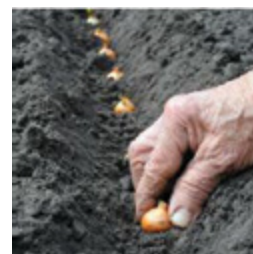
The natural resources of our planet are becoming more scarce as a consequence of continuous demand, with global population increase, urbanization, rising income and changing consumption patterns being major drivers. The natural resources are also becoming more degraded as consequences of their unsustainable management. The way we produce and consume food is among the most critical factors threatening natural resources.

The sustainable diets' approach will contribute in the capturing efficiencies through the ecosystem approach throughout the food chain. Sustainable diets can also contribute to the transition to nutrition-sensitive and climate smart agriculture and nutrition-driven food systems.

A close involvement of civil society and the private sector is needed to engage directly all stakeholders in the fields of agriculture, nutrition, health, environment, education, culture and trade, along with consumers. Everyone is involved in the food system and should act in a responsible and environmentally smart way to protect natural resources while achieving food security and nutrition.

Sustainable diets address the sustainability of the whole food system, and a move towards healthier sustainable diets will have multiple benefits for environmental sustainability

and public health, with synergies felt across a number of sectors.



Although the evidence base must be improved, existing knowledge warrants immediate action to promote sustainable diets and food biodiversity in nutrition-driven agriculture policies and programmes, as contributions to the achievement of food and nutrition security. As we move to the post-2015 development agenda, these issues emerge as mission-critical.



**Strategies for contributing to sustainable diets can include the following:**

- Transform and improve food systems towards sustainable diets as a main lever to orient food production and consumption towards more efficiency in the use of natural resources.
- Capture efficiencies in food chains through the ecosystem approach fostering sustainable food production and consumption to direct the choices and behaviour of consumers.
- Develop intersectoral programs to ensure the development of programme activities and policies for saving water through sustainable diets and nutrition-driven agriculture.
- Implement food and nutrition education and awareness programmes with sustainable diets' lessons, addressing consumers as active participants in saving water and mitigating the climate change while achieving optimal nutrition.
- Promote education and communication programmes addressing consumers' choice towards foods with low water and carbon footprints, and towards local food biodiversity, with its many nutritionally rich species and varieties.
- Develop local capacity to protect biodiversity and to use traditional knowledge for the conservation and sustainable use of indigenous species and varieties to support local food systems as well as enhance the development of sustainable diets.
- Help consumers know the origin of food and make responsible, educated choices that are both healthy and environmentally sustainable.



To download the book:  
<http://www.fao.org/docrep/016/i3004e/i3004e.pdf>

For further information, contact the FAO Nutrition Division.







## Nestlé in Society and Creating Shared Value

At Nestlé, the recognized world's leading Nutrition, Health and Wellness Company, we have always believed that in order to prosper we need the communities we serve and in which we operate to prosper as well; and that over the long term, healthy populations, healthy economies and healthy business performance are mutually reinforcing. We recognize that our position in society brings both opportunities and responsibilities: to do business in compliance with national laws, international standards and our own Nestlé Corporate Business Principles; and in ways that help protect the environment for future generations. Thus, our commitments to sustainability and compliance are based on common-sense values; and form the foundations upon which we build our actions in Creating Shared Value.

**Objectives:**<sup>1</sup> At Nestlé, our goal is that our products will not only be tastier and healthier but also better for the environment along their value chain. And in doing so, we give our consumers another reason to trust Nestlé and enjoy our products.

<b>2016:</b> 200 billion micronutrients-fortified servings worldwide	<b>2015:</b> More whole grain than any other ingredient in any serving of children's or teen's breakfast	<b>2015:</b> Reduce direct GHG emissions per tonne of product by 35% vs 2005 resulting in an absolute reduction of GHG emissions
<b>2015:</b> 10% of Nestlé factories with zero waste	<b>2015:</b> Reduce direct water withdrawal per tonne of product by 40% vs 2005	<b>2015:</b> Complete 10 000 responsible sourcing audits

### 2012 Activities and Results:

	<p>We have renovated 6 692 products for nutrition or health considerations.</p> <p>Our Healthy Kids Global Programme reached 5.4 million children in 2012.</p> <p>We sold 100 billion servings of iodine-enriched Maggi products worldwide in 2012.</p> <p>In just one year, the Nestlé Institute of Health Sciences has established several science and technology platforms and has set research projects under way, all broadly focused on how nutrition and genetics influence health and disease.</p>
	<p>89.5% of our suppliers complied with the Nestlé Supplier Code.</p> <p>Sustainable Agriculture Initiative Nestlé Projects run in 46 countries; 2 261 first-tier suppliers audited; more than 270 000 farmers trained and more than 8 000 farmers joined the Nespresso AAA Sustainable Quality™ Program; we follow the 4C voluntary code of conduct as part of the NESCAFÉ Plan.</p> <p>11% of our cocoa sourced through the Nestlé Cocoa Plan; 68% of Nespresso coffee sourced through the AAA Sustainable Quality™ Program; 80% certified sustainable palm oil purchased (13% traceable RSPO certified oil and 67% Green Palm certificates).</p>
	<p>We have halved our water use and direct GHG emissions per tonne of product since 2002.</p> <p>39 factories generating zero waste for disposal.</p> <p>418 factories, 130 distribution facilities and 24 R&amp;D centres are certified ISO 14001:2004.</p> <p>27% of recycled material used in our packaging.</p> <p>36 projects through our Energy Target Setting Initiative completed (investing a total of CHF 82 million) saving circa 173 000 tonnes CO<sub>2</sub>eq.</p> <p>More than 14 million tonnes of perishable raw material transformed into finished, shelf-stable products every year, thus contributing to avoiding food wastage. One of our most recognizable examples of this is NESCAFÉ, the soluble coffee we created in 1938 as a solution to Brazil's coffee bean surplus at the time.</p>
	<p>We have completed Life Cycle Assessments for all our product categories.</p> <p>We have started the roll-out of an eco-design tool called EcodEX, which we will use to assess and optimize environmental sustainability holistically across the entire value chain.</p> <p>We have launched our Beyond the Label initiative to delight consumers with more information on their products</p>

### Partners include:





# Voluntary sustainability standards

**Pilar Santacoloma**  
**Rural Infrastructure and Agro-Industries Division, FAO**

Voluntary standards are rules, guidelines or characteristics about a product or a process. They are not mandatory regulations but are used voluntarily by producers, processors, retailers and consumers. They have emerged as a response to environmental and social threats and also as governance mechanisms in global supply chains to reduce transaction costs and reputational risks. These voluntary standards are usually developed by the private sector, representatives of civil society, or public sector agencies.

Although voluntary standards are part of a growing trend in global economy, their emergence and proliferation raise concerns related to the very heart of the sustainability concept in at least two ways: (i) Do voluntary standards challenge the legitimacy of public governance of the global food safety and quality? and (ii) Do voluntary standards exclude smallholders and developing countries? To contribute to the discussion on these two questions, this presentation will explore first the nexus between public and private standards as

governance mechanisms at a global level. It will then examine some evidence of the impacts of voluntary food standards on the inclusiveness of certified supply chains and the alternatives that developing countries have put in place to overcome exclusionary practice. Finally, it will present some examples of governance interactions between private and public standards found at an international level that are relevant for FAO's work.

First, research has shown that the governance mechanisms that rule private and public voluntary standards are not independent but rather are mutually entrenched as a response to political, social and economic dynamics. The main driving forces are related: first, to the evolution of public policies in response to food safety scares particularly in industrialized countries that delegate increased self-control and responsibility of food quality and safety to private actors; second, to the greater internationalization and consolidation of retailer chains outsourcing globally, which has been translated into strengthening supply chain control by using standards as a tool for supply chain coordination; and third, to the rising consumer concerns about animal welfare, the environment, labour rights and a range of other social issues.

Second, FAO reviewed the evidence of the impact of voluntary standards on smallholders' ability to participate in markets and found that it is influenced by the farmer's existing capacity, the institutional context and the value chain structure for each commodity. As the evidence showed that those impacts are

extremely context- and standards-specific, the policy decision to promote or discourage voluntary standards for different sectors should be guided by national policy priorities and market signals communicated through value chains. If in agreement with national priorities and market opportunities, the public sector can support voluntary standards by encouraging equitable contract farming schemes and cooperative development, improving the national food quality and safety systems and partnering with the private sector and non-governmental organizations to support services to farmers.

Finally, several initiatives from private and public actors are proposed at the international level to manage the dynamic interactions between public and private standards, including benchmarking and/or harmonization of standards and global public-private dialogue. The recently launched UN Forum on Sustainability Standards (UNFSS)<sup>1</sup> can provide support to this endeavour. For the national level, UNFSS is field-testing a policy guide to facilitate dialogue between private and public stakeholders for decision-making related to adoption of voluntary standards in a given context based on market, institutional and standards scans.

<sup>1</sup> Participants are FAO, UNCTAD, UNEP, UNIDO and ITCE.

# SAVE AND GROW

## A POLICYMAKER'S GUIDE TO THE SUSTAINABLE INTENSIFICATION OF SMALLHOLDER CROP PRODUCTION

### The Challenge

**To feed a growing world population, we have no option but to intensify crop production. But farmers face unprecedented constraints. In order to grow, agriculture must learn to save.**

The Green Revolution led to a quantum leap in food production and bolstered world food security. In many countries, however, intensive crop production has depleted agriculture's natural resource base, jeopardizing future productivity. In order to meet projected demand over the next 40 years, farmers in the developing world must double food production, a challenge made even more daunting by the combined effects of climate change and growing competition for land, water and energy. This book presents a new paradigm: sustainable crop production intensification (SCPI), which produces more from the same area of land while conserving resources, reducing negative impacts on the environment and enhancing natural capital and the flow of ecosystem services. While none of the options presented is etched in stone, all are based on sound scientific principles and have helped farmers around the world to "save and grow".

### Crops and varieties

**Farmers will need a genetically diverse portfolio of improved crop varieties that are suited to a range of agro-ecosystems and farming practices, and resilient to climate change.**

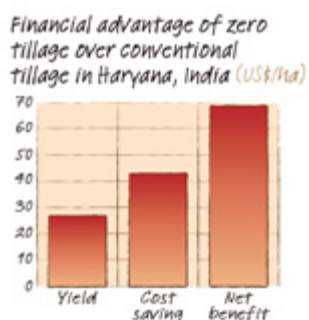


Genetically improved cereal varieties accounted for some 50 percent of the increase in yields over the past few decades. Plant breeders must achieve similar results in the future. However, timely delivery to farmers of high-yielding varieties requires big improvements in the system that connects plant germplasm collections, plant breeding and seed delivery. Over the past century, about 75 percent of plant genetic resources has been lost and a third of today's diversity could disappear by 2050. Increased support to germplasm collection, conservation and utilization is crucial. Funding is also needed to revitalize public plant breeding programmes. Policies should help to link formal and farmer-saved seed systems, and foster the emergence of local seed enterprises.

### Farming systems

**Crop production intensification will be built on farming systems that offer a range of productivity, socio-economic and environmental benefits to producers and to society at large.**

Farmers can grow more and save natural resources, time and



money with conservation agriculture (CA), which minimizes tillage, protects the soil surface, and sows crops in rotations that enrich the soil. It helps reduce water needs by 30 percent and energy costs by up to 60 percent. Trials in southern Africa saw a six-fold increase in maize yields. CA practices are a key component of sustainable intensification, which also requires using good seed of high-yielding adapted varieties, integrated pest management, plant nutrition based on healthy soils, efficient water management, and the integration of crops, pastures, trees and livestock. Such systems are knowledge-intensive. Policies for SCPI should build capacity through extension approaches such as farmer field schools, and facilitate local production of specialized farm tools.

### Water management

**Sustainable intensification requires smarter, precision technologies for irrigation and farming practices that use ecosystem approaches to conserve water.**

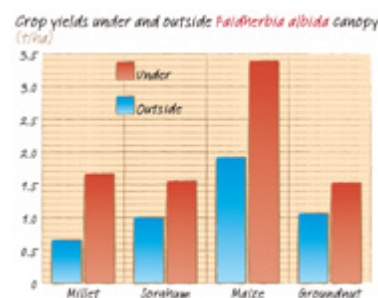
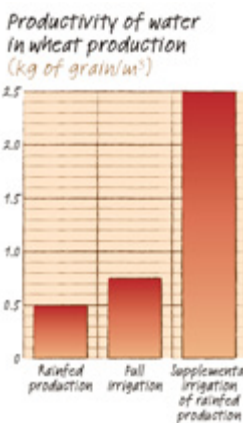
Cities and industries are competing intensely with agriculture for the use of water. Despite its high productivity, irrigation is under growing pressure to reduce its environmental impact, including soil salinization and nitrate contamination of aquifers.

Knowledge-based precision irrigation that provides reliable and flexible water application, along with deficit irrigation and wastewater-reuse, will be a major platform for sustainable intensification. Policies will need to eliminate perverse subsidies that encourage farmers to waste water. In rainfed areas, climate change threatens millions of small farms. Increasing rainfed productivity will depend on the use of improved, drought tolerant varieties and management practices that save water.

### Soil health

**Agriculture must, literally, return to its roots by rediscovering the importance of healthy soil, drawing on natural sources of plant nutrition, and using mineral fertilizer wisely.**

Soils rich in biota and organic matter are the foundation of increased crop productivity. The best yields are achieved when nutrients come from a mix of mineral fertilizers and natural sources, such as manure and nitrogen-fixing crops and trees. Judicious use of mineral fertilizers saves money and ensures that nutrients reach the plant and do not pollute air, soil and waterways. Policies to promote soil health should encourage conservation agriculture and mixed crop-livestock and agro-forestry systems that enhance soil fertility. They should remove incentives that encourage mechanical tillage and the wasteful use of fertilizers, and transfer to farmers precision approaches such as urea deep placement and site-specific nutrient management.



## Plant protection



***Pesticides kill pests, but also pests' natural enemies, and their overuse can harm farmers, consumers and the environment. The first line of defence is a healthy agro-ecosystem.***

In well managed farming systems, crop losses to insects can often be kept to an acceptable minimum by deploying resistant varieties, conserving predators and managing crop nutrient levels to reduce insect reproduction. Recommended measures against diseases include use of clean planting material, crop rotations to suppress pathogens, and eliminating infected host plants. Effective weed management entails timely manual weeding, minimized tillage and the use of surface residues. When necessary, lower risk synthetic pesticides should be used for targeted control, in the right quantity and at the right time. Integrated pest management can be promoted through farmer field schools, local production of biocontrol agents, strict pesticide regulations, and removal of pesticide subsidies.

## Policies and institutions

***To encourage smallholders to adopt sustainable crop production intensification, fundamental changes are needed in agricultural development policies and institutions.***

First, farming needs to be profitable: smallholders must be able to afford inputs and be sure of earning a reasonable price for their crops. Some countries protect income by fixing minimum prices for commodities; others are exploring “smart subsidies” on inputs, targeted to low-income producers. Policymakers also need to devise incentives for small-scale farmers to use natural resources wisely – for example, through payments for environmental services – and reduce the transaction costs of access to credit, which is urgently needed for investment. In many countries, regulations are needed to protect farmers from unscrupulous dealers selling bogus seed and other inputs. Major investment will be needed to rebuild research and technology transfer capacity in developing countries in order to provide farmers with appropriate technologies and to enhance their skills through farmer field schools.



“ Sustainable crop production intensification can be summed up in the words *save and grow*. Sustainable intensification means a productive agriculture that conserves and enhances natural resources. It uses an ecosystem approach that draws on nature’s contribution to crop growth and applies appropriate external inputs at the right time, in the right amount. Our aim over the next 15 years is to assist developing countries in adopting *save and grow* policies and approaches. ”

**Jacques Diouf**

Director-General

Food and Agriculture Organization  
of the United Nations

“ Unsustainable consumption of natural resources presents a grave threat to food security. This book shows how we can launch an ‘evergreen’ revolution, leading to increases in productivity in perpetuity, without ecological harm. I hope it will be widely read and used. ”

**M. S. Swaminathan**

Father of the Green Revolution in  
India





## GLOBAL AGENDA FOR SUSTAINABLE LIVESTOCK

### BACKGROUND AND CURRENT STATUS

*(as at 14 November 2013)*

The Agenda brings together actors committed to sustainable livestock sector development.

The purpose of this partnership is to catalyze and guide the continuous improvement of livestock sector practices towards more efficient use of natural resources.

#### BACKGROUND

The sector is facing unprecedented challenges. By 2050, the demand for livestock products will grow by 70 percent driven by rising world population, increasing affluence, and urbanization. This growth in demand is happening at a time when concerns about resource scarcity, climate change and the need for more equitable development are assuming ever greater importance.

Realizing that the complexity of the challenges facing the sector can be addressed only through concerted and collective action, stakeholders have formed a partnership to build a Global Agenda to support the sector's sustainable development.

The Agenda's focus on improvements in natural resource use efficiency holds great promise for global environmental, social, and economic benefits.

#### A COMPREHENSIVE PARTNERSHIP

The partnership includes public and private sector representatives, producers, research and academic institutions, social movements, community-based organizations and NGOs, to ensure broad sector representation.

Participation in the partnership is open, voluntary, and based on agreement to the Agenda Consensus.

#### BUILDING THE AGENDA

The partnership develops harmonized metrics and methodologies, conducts independent sector analyses and produces voluntary guidance and strategic recommendations to catalyze the continuous improvement of livestock sector resource use. Land, water, nutrients and greenhouse gas emissions are the initial focus.

These initial joint activities focus on areas where large environmental, social and economic gains can be made:

Focus area **Closing the efficiency gap** aims to stimulate the application of existing, but not widely used technologies, by the bulk of the world's producers whose use of natural resources is often greatly inefficient. Agenda partners will develop public-private and other forms of partnership to transfer and adapt resource use efficient technologies.

Focus area **Restoring value to grasslands** pursues better management of grazing land which contributes to carbon sequestration, protection of water resources and biodiversity, whilst enhancing productivity and livelihoods. Agenda partners will explore and promote the financial and institutional innovation required for the delivery of grassland-related services.

Focus area **Waste to worth** aims to recover and recycle nutrients and energy contained in animal manure from intensive and confined livestock production operations. Agenda partners will develop planning tools and regulatory and incentive frameworks to support viable manure management practices.

## OPERATIONAL MODALITIES

The initial set-up consists of: i) an open Multi-stakeholder Platform (MSP) for consensus building on priority issues and actions; ii) a Guiding Group for overall direction, guidance, and monitoring; iii) Focus area groups to implement the work programs; and iv) a Support Group, currently hosted by FAO.

Following the feedback of the 4th MSP, held in October 2013, the initial set-up is currently being revised and a new set-up will be proposed for discussion by February 2014. The initial set-up will remain in place up to the endorsement and establishment of a new set-up.

## CURRENT STATUS

The partnership's objectives, operational modalities, focus areas, and its initial work programme were defined at four multi-stakeholder and five focus area meetings, which have taken place since 2010.

Focus area and the Guiding groups were formalized in May 2013 as part of the initial set-up. The next MSP meeting is scheduled for October/November 2014.

## ONGOING ACTIVITIES

Partners have initiated the implementation of focus area work programmes, including, but not limited to, the following activities:

- quantification of efficiency gaps in target countries, regions, and production systems;
- analysis of non-market benefits of grassland restoration;
- grassland carbon sequestration potential;
- global inventory of current manure distribution, management practices, and associated nutrient balances.

Focusing on its comparative advantage, the partnership liaises with other relevant initiatives related to public and animal health, agricultural development and poverty reduction.

**SUSTAINABLE LIVESTOCK**  
*for people, for the planet*

[www.livestockdialogue.org](http://www.livestockdialogue.org)



## FACT SHEET

### GSSI Background

The Global Sustainable Seafood Initiative (GSSI) is a sector wide initiative, bringing together leading seafood companies, Non-Governmental Organizations (NGOs), as well as civil society and academic stakeholders, whose common vision is to build a shared, global and non-competitive approach to efficiently address sustainability issues in the global seafood supply chain on a long term basis.

Within the global seafood supply chain there is a lack of a commonly agreed tool to provide transparency on the performance and credibility of seafood certification and labeling programs. The proliferation of these seafood certification and labeling programs worldwide, has led to inefficient decision making and application of these programs. Secondly, conflicting messages on the performance of seafood certification programs reduces their credibility and undermines the confidence of (end-) users.

### GSSI Mission

The mission of GSSI is to deliver a common, consistent and global benchmarking tool for seafood certification and labelling programs to ensure confidence in the supply and promotion of sustainable seafood to consumers worldwide as well as promote improvement in the programs.

### GSSI Objectives

- Creating an internationally agreed set of criteria and indicators to measure and compare the performance of seafood certification and labeling programs, in order to facilitate their implementation and use;
- Provide an international Multi-Stakeholder Platform for collaboration, knowledge exchange in seafood sustainability; and
- Reduce cost by eliminating redundancy and improving operational efficiency of seafood certification and labeling programs thereby increasing affordability and flexibility within the supply chain.

### GSSI BENCHMARKING TOOL

Benchmarking is a structured comparison to measure the performance of standard systems by using a pre- defined set of criteria and indicators. This set of indicators makes different performances measurable and comparable. To this end the GSSI Benchmarking Tool will:

1. Measure conformity with a mutually recognized set of indicators considered critical for credible seafood certification and labeling programs, based on at a minimum the FAO Guidelines for Ecolabelling of Fish and Fishery Products from Marine Capture Fisheries, and FAO Guidelines for Aquaculture Certification; and
2. Provide transparency and comparability of the relative performance of seafood certification and labeling programs.

The GSSI Benchmarking Tool will be developed through an inclusive process by three Expert Working Groups (EWGs) followed by stakeholder consultations.

The tool will be based on existing international normative references (at a minimum the FAO Guidelines) to ensure an outcome commonly accepted and recognized by all relevant stakeholders. The GSSI EWGs are:

- GSSI Fishery EWG

Scope: develop a benchmark Framework to evaluate fisheries certification standards

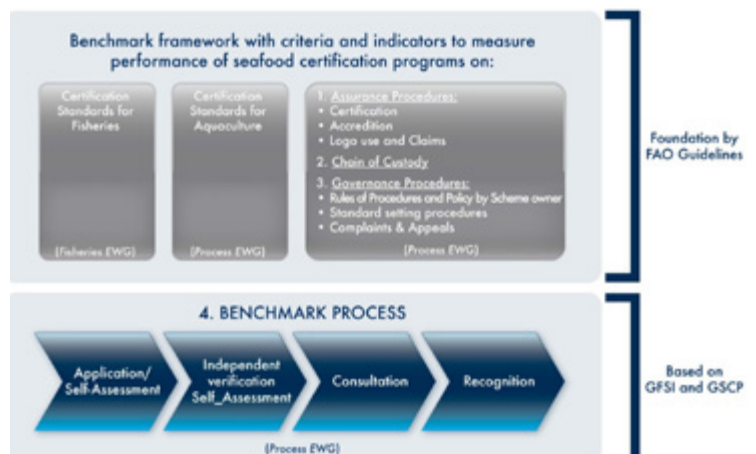
- GSSI Aquaculture EWG

Scope: develop a benchmark Framework to evaluate aquaculture certification standards

- GSSI Process EWG

Scope: Develop a benchmark Framework to evaluate all other aspects (e.g. Governance, Standard Setting Procedures, Certification, Accreditation, Chain of Custody) of a certification program as well as describe the benchmark process.

### MILESTONES



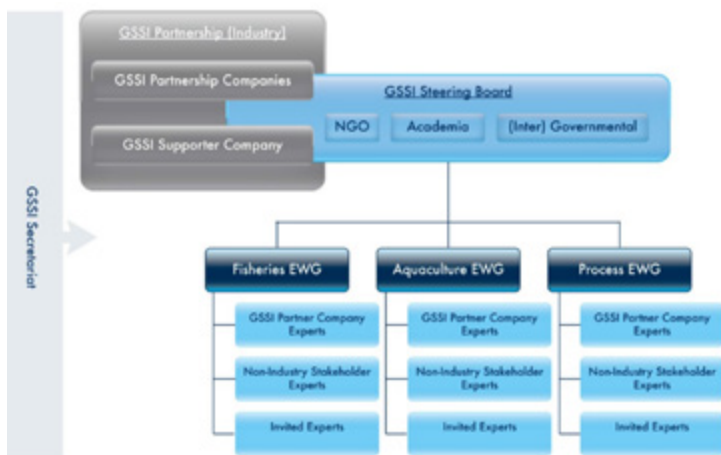




## GSSI GOVERNANCE

The GSSI partnership follows a multi-stakeholder approach involving private companies, NGOs, academia and intergovernmental agencies. Representatives of these parties form the Steering Board, which steers and monitors the project implementation and progress.

For specific tasks the Steering Board appoints Expert Working Groups with internal and external experts. A GSSI Secretariat will facilitate the project implementation and the work of the Steering Board, the Expert Working Groups and stakeholder consultation.



## PARTNERS, ROLES AND CONTRIBUTORS

The GSSI Initiative is founded on a Strategic Alliance between representatives of companies from the full seafood value chain and the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH.

The private project partners contribute their long-term expertise in the seafood sector to the development of the Benchmarking Tool as well as financial funds for expert working groups, stakeholder consultations and the institutional set up of the GSSI. The Benchmarking Tool will allow the GSSI to provide benchmarking services on a long term and financially self-sustained basis.

Both GIZ and private project partners support the Secretariat. GIZ contributes its know-how and expertise concerning certification programs and Benchmarking Tools and/or funds external experts for the development and implementation of the benchmarking framework.

The GSSI process is open to, and encourages other stakeholders to become engaged. These include, but are not limited to, NGO's, academia, (inter) governmental organizations, and certification programs. Other contributors during the GSSI initiation phase include the New England Aquarium (NEAq) and Marine Conservation Society.

## FOLLOWING PARTNERS HAVE BEEN COMMITTED TO THE INITIATIVE

A. Espersen A/S	National Fisheries Institute (NFI)
American Seafoods Group LLC	Pacific Seafood
ANOVA	Regal Springs
Bumble Bee Foods	Rubicon Resources
Darden Corporation	Sainsbury's
Delhaize	Sea-Delight
Gorton's Inc	Sea Fish Industry Authority
Grobst	Slade Gortons
High Liner Foods, LLC	Sodexo
Iglo Foods Group Ltd	Trans-Ocean
Koninklijke Ahold N.V	Trident Seafoods Corporation
Kroger	WM Morrisons Supermarkets PLC
Loblaw	New England Aquarium (NEAQ)
Lyons Seafood	Marine Conservation Society (MCS)
Marine Harvest USA	Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH
Marks & Spencer	Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH
Metro Group	

## STRATEGIC ALLIANCE/ develoPPP.de program

GSSI is founded as a Strategic Alliance between leading companies of the seafood industry and the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH.

GIZ forms Strategic Alliances with German, European and/ or international companies to initiate project with particularly broad impact. The projects are generally transnational in scope, their focus is relevant to an entire sector and they bring together global players from trade and industry, governments and NGOs, and other national and international organizations.

The projects are cofinanced by GIZ on behalf of the German Federal Ministry for Economic Cooperation and Development (BMZ) through its develoPPP.de program.

## GSSI SECRETARIAT CONTACTS

### Herman Wisse

GSSI Program Manger  
 seafood@hermanwisse.nl  
 +31 6 269 35 297

### Friederike Sorg, Kai Wiegler

Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH  
 friederike.sorg@giz.de

## The Global Initiative on Food Loss and Waste Reduction – SAVE FOOD

FAO and Messe Düsseldorf are collaborating with donors, bi- and multi-lateral agencies and financial institutions and private sector partners (the food packaging industry and others) to develop and implement the programme on food loss and waste reduction.



The programme is composed of four elements:

- **Awareness raising** on the impact of, and solutions for food loss and waste. This will be achieved by a global *communication and media campaign*, the *dissemination* of Save Food programme findings and results, and the organization of *Regional SAVE FOOD Congresses*. Important goals are increased knowledge and changed behaviour of actors and consumers in the food chains, and promotion of the SAVE FOOD initiative to attract partners.
- **Collaboration** and coordination of world-wide initiatives on food loss and waste reduction. SAVE FOOD is establishing a global *partnership* of public and private sector organizations and companies, that are active in the fight against food loss and waste. In order to develop, plan and implement interventions and use resources most efficiently, it is essential that all these initiatives are being coordinated well, so that everybody knows what is happening world-wide, that information, problems and solutions can be shared, and that methodologies, strategies and approaches will be harmonised.
- **Policy, strategy and programme development** for food loss and waste reduction. This includes a series of **field studies** on a national-regional basis, combining a food chain approach to loss assessments with cost-benefit analyses to determine which food loss reduction interventions provide the best returns on investment. Further, the Initiative undertakes studies to the socio-economic impacts of food loss and waste, and the political and regulatory framework that affects food loss and waste.
- Support to **investment programmes and projects**, implemented by private and public sectors. This includes technical and managerial support for, as well as capacity building (training) of food supply chain actors and organizations involved in food loss and waste reduction, either at the food subsector level or policy level.

FAO welcomes partners – private or public – to join the Save Food Initiative and support its programme.

To join the SAVE FOOD initiative, go to [fao.org/save-food/get-involved/en/](http://fao.org/save-food/get-involved/en/)





# Wasting Food. That's stupid!

*Worldwide about one-third of all food produced – equivalent to 1.3 billion tonnes – gets lost or wasted in the food production and consumption systems, according to data released by FAO. Considering the fact that 842 million people are still suffering from undernourishment and the environmental impacts of food production, this waste cannot be accepted.*

## Stakeholders dialogue

With the objective of greening the economy, the Swiss Government adopted an action plan on Green Economy in March 2013. The reduction of food waste is one of the measures of this action plan. The main pillar of the campaign against Food Waste in Switzerland is a stakeholders dialogue.

From December 2012 until March 2013, representatives of several Swiss federal offices held talks with key players of the food supply chain and non-governmental organizations. The dialogue partners were asked to assess the food waste situation in Switzerland and especially in their own sphere of influence, to estimate the potential for reduction and to express their view on the role the state has to play in this field.

The analysis of these talks has allowed to identify several fields of action such as quality standards, cooperation along the supply chain, expiry dates, awareness raising, innovation and marketing of by-products.

In the meantime organizations from the private sector have started working on some of those fields of action. For example, the quality standards for fruits and vegetables are currently being revised by the responsible private organization.

At a meeting with all stakeholders involved in the stakeholder dialogue and representatives of the Swiss federal administration it was decided to set up working groups on expiry dates, education, information and awareness-raising and cooperation with food banks. In these areas, collective action is the key for success. First results are expected in spring 2014.

The stakeholder dialogue shows that the actors of the food sector as well as the civil society are willing to contribute actively to the debate and to step up collective efforts with a view to reducing food waste.

## Awareness-raising

As in most developed countries most food, up to 40%, is wasted at the consumer level in Switzerland. Therefore the Swiss Government views awareness raising of the population as key for a reduction of food waste.

An exhibition on food waste and loss was prepared and shown for the first time on the occasion of World Food Day 2012 in Berne under the patronage of the Swiss national FAO Committee. In 2013 this exhibition was presented in different cities all over Switzerland.

The exhibition gives a global perspective on the issue of food waste by explaining the global





food situation and the environmental impacts of food waste. The most important features of the exhibition are specific advice and tips to consumers on how to prevent food waste and how much money they can save. Advice is given on the storage of food, the expiry dates and their meaning, recipes for leftovers and how to plan purchases. Banana cakes as a give-away made with brown bananas- demonstrated that fruit and vegetables don't need a perfect look to taste delicious.




In addition school classes were invited to guided tours in order to reach out to future consumers. Booklets handed out during the exhibition are also distributed to companies and teachers to achieve a multiplier effect.

The exhibition succeeded in attracting considerable public and media attention. Food waste is today a well-known and much debated topic in Switzerland.

For more information, please contact (content available in French/German/Italian):

<http://www.blw.admin.ch/themen/00010/01570/index.html?lang=fr>

 Schweizerische Eidgenossenschaft  
Confédération suisse  
Confederazione Svizzera  
Confederaziun svizra  
  
Swiss Confederation

Federal Department of Economic Affairs  
Education and Research EAER  
Federal Office for Agriculture FOAG



## VALUE CHAIN EFFICIENCY OF THE MUD CRAB INDUSTRY IN MADAGASCAR BOOSTED BY SMALL AND LOW COST INTERVENTIONS BY THE FAO SMARTFISH PROJECT

The SmartFish programme is a regional fisheries project managed by the Indian Ocean Commission, funded by the European Union and co-implemented by the Food and Agriculture Organization of the United Nations. SmartFish, which operates in twenty countries throughout the Indian Ocean Region, Southern and Eastern Africa, focuses on fisheries governance, management, monitoring control and surveillance, trade, and food security.

Under the Result 5 on Food Security, SmartFish has been, over the past year, supporting a series of interventions aimed at improving the value chain efficiency of the crab industry in Madagascar.

The initiative is based on the result of a Value Chain Analysis carried out in 2013 that highlighted the limited value chain efficiency due to the high mortality rate of crabs and identified the critical stages in the chain where this was happening, the storage points at village level and during transportation. A deeper post-harvest loss assessment carried out in June 2013 using the new mobile-phone based technology developed by SmartFish, confirmed that poor handling practices and inadequate equipment, are the main causes of the crab mortality. This results in high post-harvest losses of average 23% with peaks of over 50% during raining season. For information, because it is a food safety hazard, a dead crab of this specific species cannot be eaten; therefore it has to be discarded.

The findings of the analysis established baselines from which the stakeholders (fisheries officials and crab fishers) set an improved target for loss reduction, which was

“A reduction by 1/3 by end of 2015”. This commitment was the basis for the SmartFish programme’s interventions that targeted the west coast and northern coast of the Madagascar. The interventions consisted of a combination of awareness raising activities and direct and on-the-job capacity building of the mud crab collectors and trade operators through the design and use of improved, but simple, crab storage and transport facilities. The activities were conducted in 20 villages and included the construction of fixed tanks and storage sheds using local materials, the enhancement of carts, utilizing boxes rather than fragile baskets to prevent damage to the crabs and the construction of storage shelves for canoes.

The effectiveness of the interventions was thereafter measured through the level of loss occurred at different points in the chains, with a focus on the two critical points initially identified. The results are summarized in the table below.

The project is now introducing a low cost innovative type of trap for harvesting the crabs, which is a viable alternative to the traditional hooks that have, in the past, caused physical damage to the crabs.

This evidence-based success has been recognized by the Malagasci authorities. Multimedia and other loss prevention promotion tools have been designed with the help of the operators. These will be used during campaigns to be carried out in partnership with the Ministry of Fisheries and the World Wildlife Fund.

The longer term aim is to scale up these interventions into other coastal regions in the country and to establish a community fisheries-based competition on the theme of ‘Value-adding for Crabs’. It is also planned to translate the materials developed in Malagasci into French and English with the aim of making them widely available to other crab fishing countries where they have similar problems.

Stage of the value chain	Type of intervention (pre and post intervention)	PHL (%)	Additional revenue after the intervention (USD)	Amortization period (months)
1. Storage (fishermen)	Storage in nursery cage			
	a) before intervention (sacs) b) after Intervention (nursery cage)	5.5 1	3 / week	10 weeks (3 months)
2. Storage (small-collector)	Hangar storage (Menabe region)			
	a) before intervention (terraced) b) actual (hangar)	11.5 7	65 / shipment	6 shipments (2 months)
	a) storage in hangar pre-intervention b) actual (hangar)	14.9 10	17 / shipment	6 shipments (2 months)
3. Ground transportation (collector)	Transport: Improved carts			
	a) before (traditional cart) b) after (Improved cart)	15.5 5.2	15 / trip	11 trips (4 months)
4. Maritime transportation (collector)	Replacement of cloth bags by wooden boxes.			
	a) before intervention (cloth bag) b) after (boxes)	25 9.7	70 / trip	3 trips (1 month)

Operator manual



Lambahoany (traditional fabric)



Poster for schools and extension centres



Table mat



Crab trap (Balance a' crabe)



Storage pen for living crabs in the tidal area



Improved chart for transportation



Stackable hard wooden boxes to replace the soft bags for transportation



Nursery cage for temporary storage



Funded by the European Union and Co-implemented by the Food and Agriculture Organization of the United Nations



## **Logistics Systems and Management: Platform for Sustainable Development in the Food Sector**

**Joseph Mpagalile and Jorge M. Fonseca**  
**Rural Infrastructure and Agro-Industries**  
**Division, FAO**

The level of development of logistics systems and the efficiency of logistic management have recently been recognized as key areas to support sustainable growth of the agro-food industry sector. The premise is that optimization of logistic operations across the supply chain results in reduction of post-harvest losses, savings in energy, reduction of the environmental footprint and in a more competitive position in the market. Food logistics is a platform for development through mechanisms that can only be justified today if they are not only economically feasible but socially appropriate and environmentally friendly. However, inadequacy in logistics systems is acknowledged as a major bottleneck hindering agro-food industry development in developing countries. FAO has therefore identified logistics as an important area that needs to be addressed through providing guidance to member countries on the actions to be taken by the public and private sectors.

The “Logistics Project” has the objective of providing a holistic perspective of the state of development of logistics systems and how they are managed in the agro-food industry sector in developing countries. On the basis of identified opportunities and challenges, guidance will be formulated for member countries to design appropriate interventions.

Work was initiated in 2012 as part of the regular programme of the Rural Infrastructure and Agro-Industries Division. Appraisal studies on logistics management were conducted in sub-Saharan Africa (SAA) and Latin America and the Caribbean (LAC). The countries covered were Ghana, Cameroon, the United Republic of Tanzania and Uganda in SSA, and Colombia, Chile, Guatemala, Honduras and Panama in LAC. These were followed by three expert workshops held in Uganda, Panama and Trinidad and Tobago. Finalization of appraisal reports and guidance materials is under way.

In addition, materials are being developed for capacity building and awareness creation on the role of logistics systems in the development of the agro-food industry.

Overall, the findings showed that LAC has a great disparity in the level of development. However, there are common issues affecting the entire region, including: poor level of infrastructure to move and store products; complexity of administrative operations; lack of knowledge on post-harvest management; insufficient cold-chain capacity; and lack of indicators to assess the logistic performance in the food sector. In SSA, the results showed logistics challenges facing the agro-food industries include either inadequate and inefficient infrastructure or lack of effective logistics systems and management or both. The inadequate and insufficient infrastructure including inadequate and poor road networks was observed in all of the countries covered under the study. The policy insufficiencies, high cost and irregular supplies of utilities such as electricity and water were also identified as important challenges. The poor access to information and communications technology, high cost of packaging and labelling, lack of cold chain capacity, unfair tax burdens and non-tariff barriers were also identified as key factors affecting the logistic systems in SSA.

Continuing support to member countries to develop strategies to enable logistics systems’ development is planned for the next biennium as part of FAO’s Strategic Objective 4. Appraisals will be completed in other regions. Identifying innovative “green” logistics approaches for small and medium enterprises will be a major focus.



The HLPE works as a science-policy interface for food security and nutrition enlarged to all sources of knowledge and realizes demand driven thematic assessments in a short time frame to provide understanding and advice on urgent policy relevant questions. Reports serve as the common and shared starting point for intergovernmental and international multi-stakeholder policy discussions at CFS.

The High Level Panel of Experts on food security and nutrition (HLPE) has been created in 2009 as part of the reform of the Committee on World Food Security (CFS) to assess and analyze the current state of food security and nutrition and its underlying causes; provide scientific and knowledge-based analysis and advice on specific policy-relevant issues, utilizing existing high quality research, data and technical studies; identify emerging issues, and help members prioritize future actions and attentions on key focal areas.

Since the establishment in 2010, the HLPE has produced 6 reports, all followed by debates in CFS and adoption of policy recommendations:

**Price volatility  
and food security  
2011**



**Land tenure and international  
investments in agriculture  
2011**



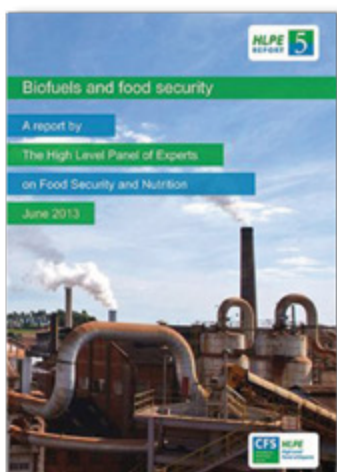
**Food security  
and climate change  
2012**



**Social protection  
for food security  
2012**



**Biofuels  
and food security  
2013**



**Investing in smallholder  
agriculture for food security  
2013**



**The role of sustainable fisheries  
and aquaculture for food  
security and nutrition  
2014**



**Food losses and waste in the  
context of sustainable food  
systems  
2014**



To download the reports, please visit the HLPE website at: [www.fao.org/cfs/cfs-hlpe](http://www.fao.org/cfs/cfs-hlpe)



## The Committee on World Food Security (CFS) and the High Level Panel of Experts for Food Security and Nutrition (HLPE)

The **Committee on World Food Security (CFS)** is the central international and intergovernmental platform for food security and nutrition, where policies can be designed, interventions can be coordinated, options can be shared and decisions at different levels can be prepared.

The new **CFS** is inclusive. In addition to member countries, the Committee includes a wider range of organizations working on food security and nutrition, from UN agencies like the International Fund for Agricultural Development (IFAD), the World Food Programme (WFP), the UN Secretary-General's High-Level Task Force on the Global Food Security Crisis and other UN bodies. It also includes civil society and non-governmental organizations, particularly organizations representing smallholder family farmers, fisherfolk, herders, landless, urban poor, agricultural and food workers, women, youth, consumers and indigenous people.

The **High Level Panel of Experts for Food Security and Nutrition (HLPE)** was created in October 2009 as an essential element of the reform of **CFS**: as the science-policy interface of the CFS, the HLPE reports, analysis and advice serve as a comprehensive, shared, multi-faceted evidence-based starting point for policy debates at CFS.

The **HLPE** aims to help **CFS** to better understand the diversity of issues and rationales when dealing with food and nutrition insecurity. It thrives to clarify contradictory information and knowledge, elicit the backgrounds and rationales of controversies, and identify emerging issues. The HLPE organizes a scientific dialogue, build upon the diversity of disciplines, backgrounds, knowledge systems, diversity of its Steering Committee and Project Teams, and open e-consultations.

The **HLPE** is not mandated to conduct new research. The **HLPE** draws its studies based on existing research and knowledge already conducted by various expertise-providing institutions (universities, research institutes, international organizations etc), and adding value by global, multi-sectoral and multidisciplinary analysis.

**HLPE** recommendations and studies combine scientific knowledge with experiences from the ground, in a same rigorous process. The **HLPE** translates the richness and variety of forms of expert knowledge from many actors (knowledge of local implementation, knowledge based on global research and knowledge of "best practice") that draw on both local and global sources, into policy-related forms of knowledge.

### Key functions of the HLPE, as stated in the CFS reform document (2009)

As directed by the CFS Plenary and Bureau, the HLPE will:

1. Assess and analyze the current state of food security and nutrition and its underlying causes.
2. Provide scientific and knowledge-based analysis and advice on specific policy-relevant issues, utilizing existing high quality research, data and technical studies.
3. Identify emerging issues, and help members prioritize future actions and attentions on key focal areas.

The **HLPE** is directly linked to the foremost international policy platform for food security and nutrition, the **CFS**. This ensures the legitimacy and relevance of the studies undertaken, and their insertion in a concrete political agenda at international level.

The **HLPE** produces its recommendations and advice independently from governmental positions, in order to enrich discussions and debates at **CFS**. The internal process is crafted to guarantee the scientific inclusiveness and the independence of the **HLPE**.

The **HLPE** has a two-tier structure:

- A **Steering Committee** composed of 15 internationally recognized experts in a variety of food security and nutrition related fields.
- **Project Teams** acting on a project specific basis, selected and managed by the StC to analyze/report on specific issues.

More information about the **HLPE** can be found on its website: [www.fao.org/cfs/cfs-hlpe](http://www.fao.org/cfs/cfs-hlpe)

FAO and the United Nations Environment Programme (UNEP) established the joint Sustainable Food Systems Programme to improve resource use efficiency and reduce the pollution intensity of food systems, from production to consumption, while addressing issues of food and nutrition security.

This FAO/UNEP joint programme is catalysing partnerships among United Nations (UN) agencies, other international agencies, governments, and industry and civil society organizations whose activities can promote the essential transition to sustainability. It is a unique collaborative effort between the leading intergovernmental agencies in the areas of food, agriculture and the environment.

**[www.fao.org/ag/ags/sustainable-food-consumption-and-production/en/](http://www.fao.org/ag/ags/sustainable-food-consumption-and-production/en/)**