




Towards Food Security and Improved Nutrition

Dr. Florence Egal
florence.egal@gmail.com

Food Security in Mountain Areas: Extraordinary POtential
International Programme on Research and Training on Sustainable Management of Mountain Areas

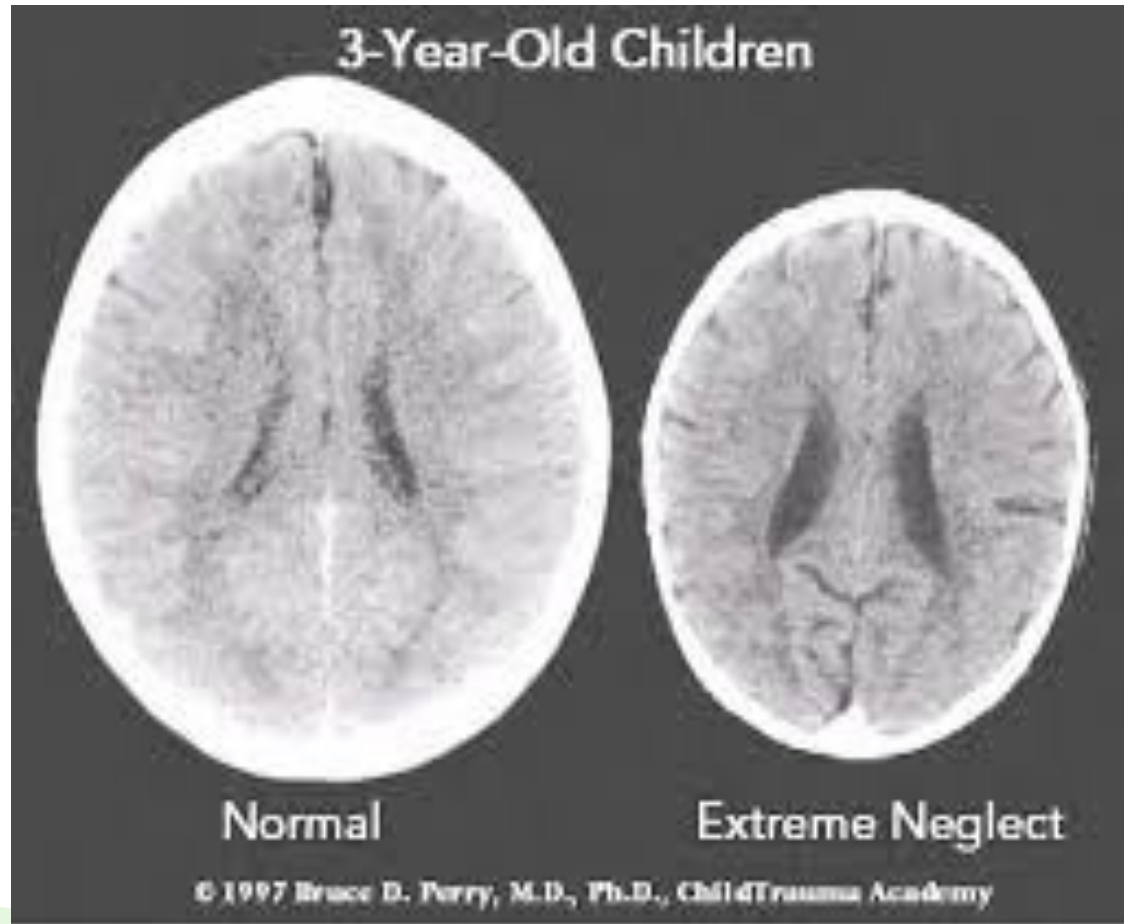
Contents

- ▶ What is the problem?
 - ▶ *Group work 1*
 - ▶ Towards sustainable diets
 - ▶ Revisiting food systems
 - ▶ *Group work 3*
 - ▶ Local governance
 - ▶ Global processes
 - ▶ Rounding up
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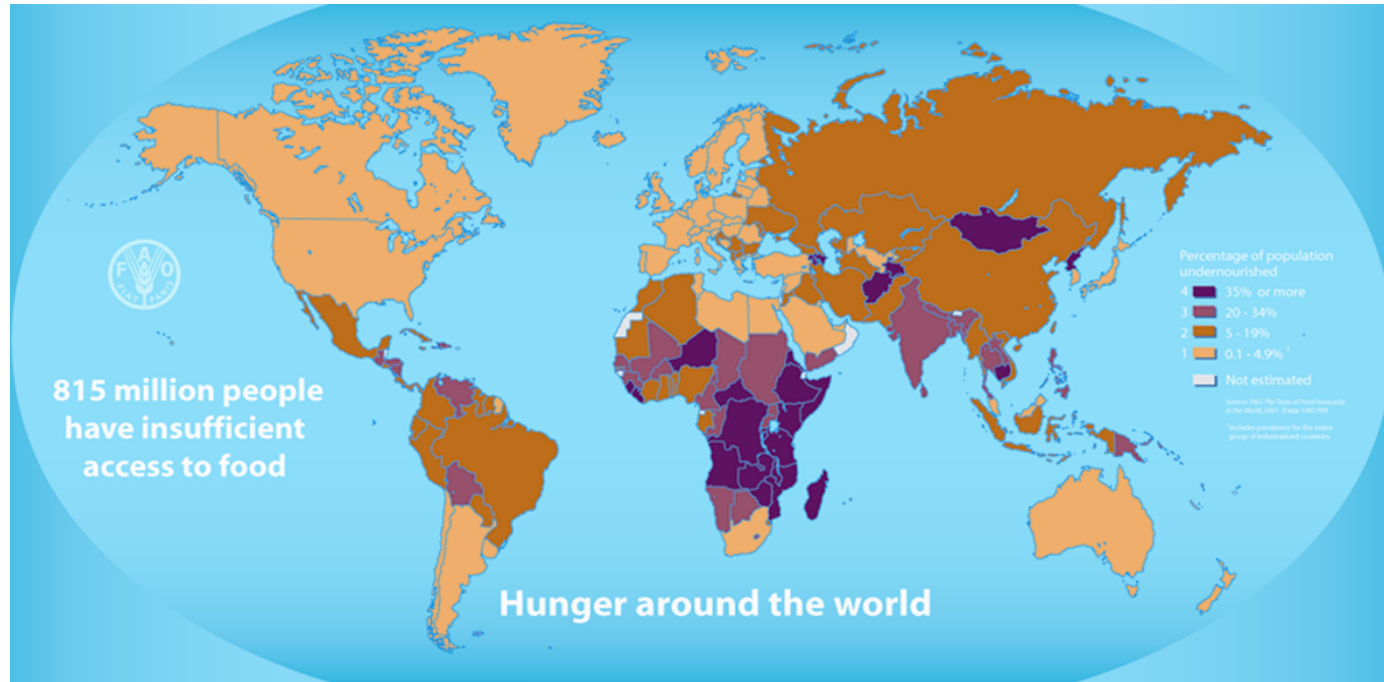
Nutrition – what are we talking about?

- ▶ Malnutrition: physiological condition resulting from inadequacy or imbalance in food intake (or from poor absorption of food consumed)
- ▶ Undernutrition:
 - Acute malnutrition (“wasting”, Weight for Height)
 - Chronic malnutrition (“stunting”, Height for Age)
 - Micro–nutrient deficiency: lack of essential vitamins and minerals
- ▶ Double/triple burden of malnutrition

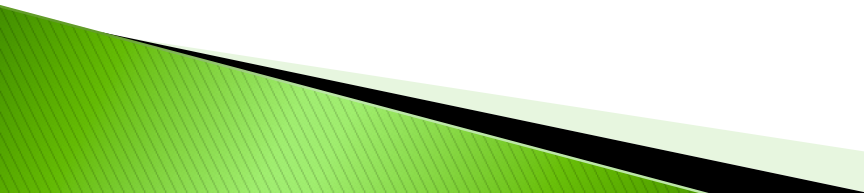
What you cannot see...



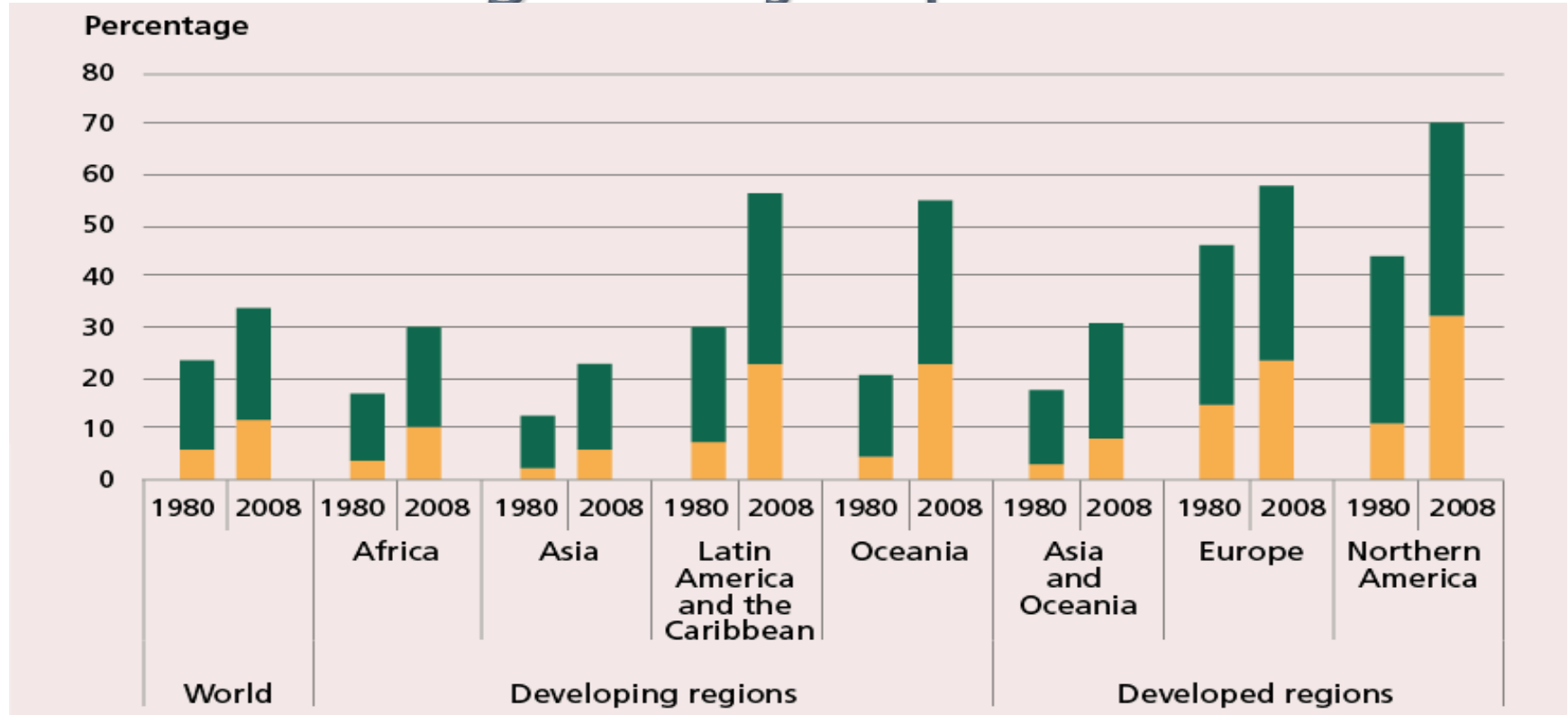
Geographic distribution of hunger and malnutrition



Nutrition in mountains


- ▶ No info (data aggregated at national level)
 - ▶ Stunting
 - ▶ Iodine deficiency
 - ▶ Changing diets
 - Change in economy
 - Change in lifestyles
- 

Prevalence of overweight and obesity is becoming a major problem



A major challenge to development

- ▶ Costs associated with Non Communicable Diseases (NCDs) will overwhelm health systems and slow down the economy



Health spending on diabetes ranges from 6% of all health costs in China to 15% in Mexico

Source: P. Zhang, et al, 2010

Each 10% increase in NCD burden is associated with a 0.5% reduction in annual economic growth.

Source: WHO

23 high burden countries are projected to lose \$84 billion in GDP between 2005-2015 from 3 NCDs

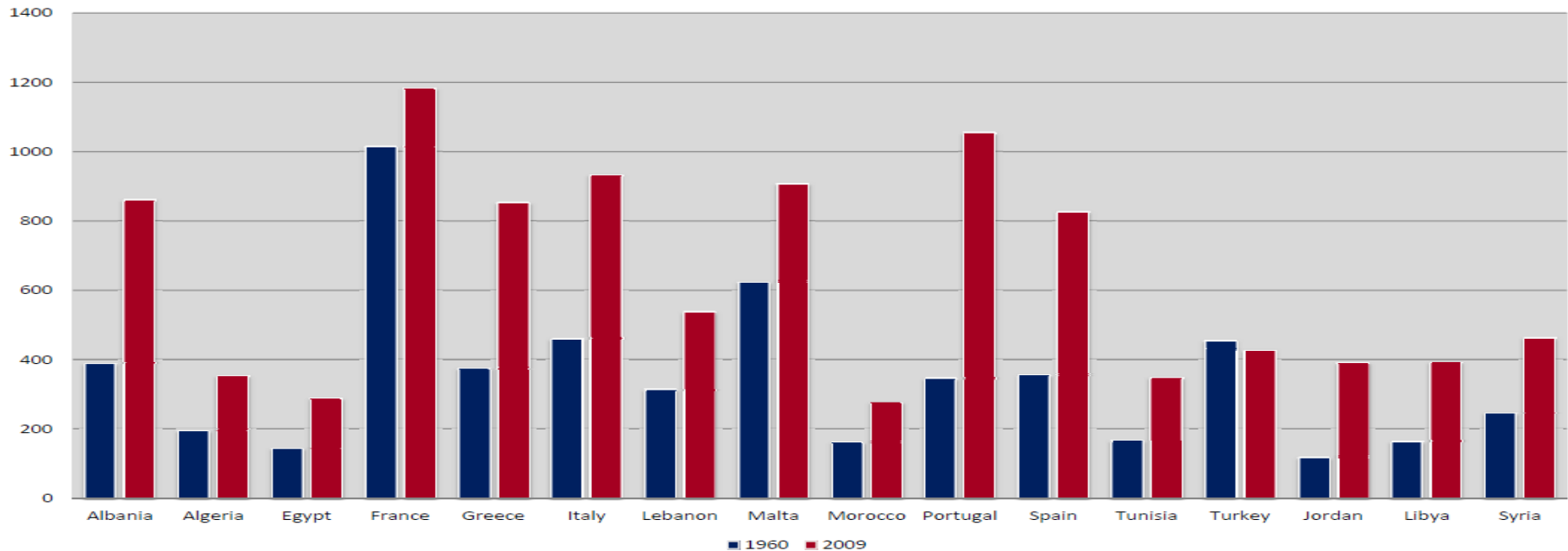
Source: Abegunde, et al, 2007

NCDs will cost more than \$47 trillion globally between now and 2030

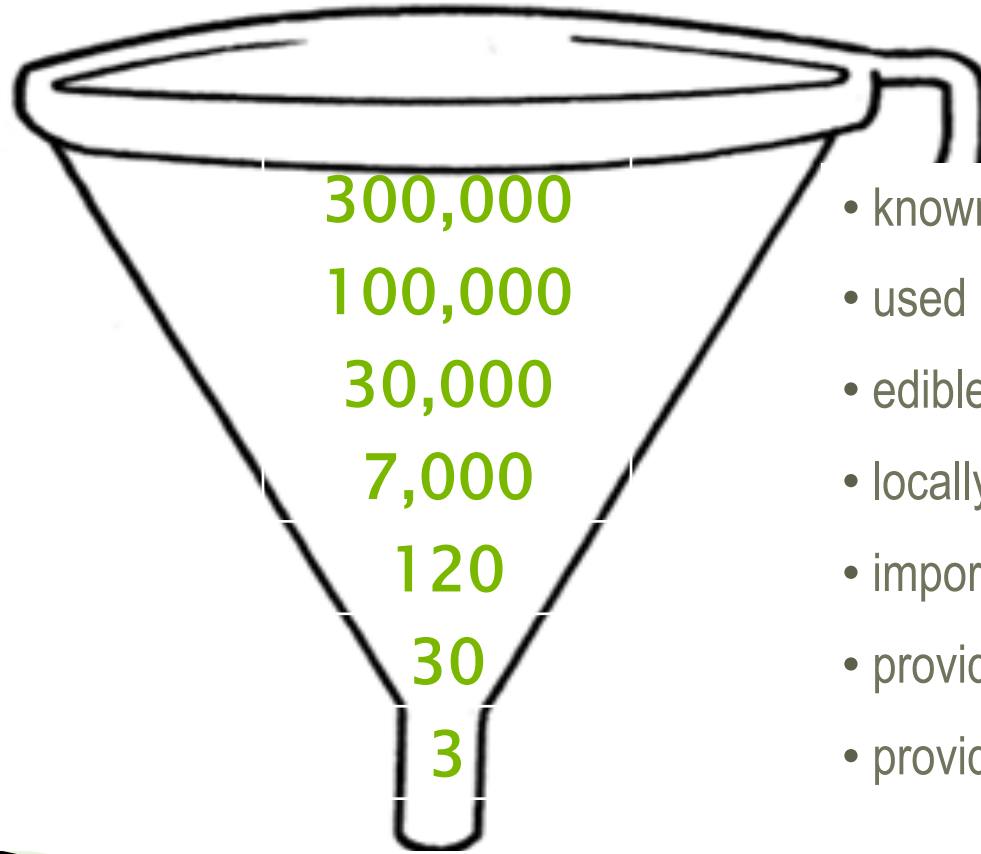
Source: D. Bloom, 2011

Changes in consumption of animal products

Food supply, animal product (kcal/capita/day)



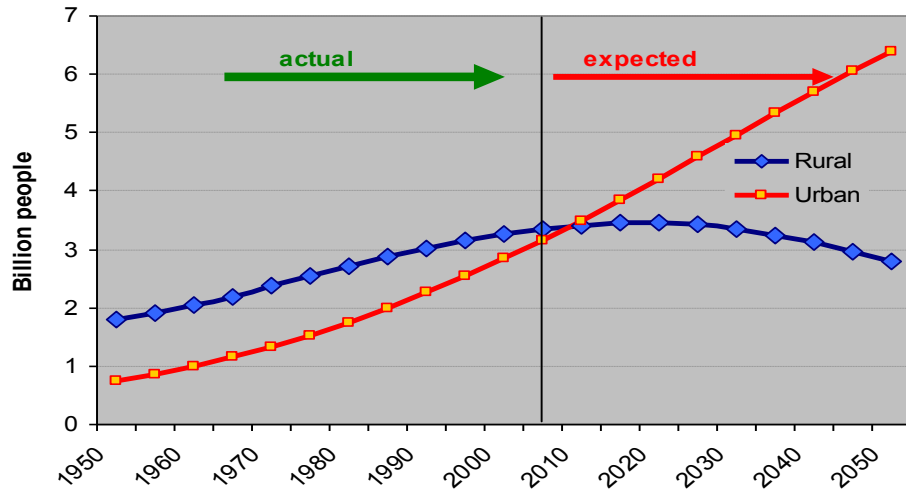
Increased food dependence



- known vegetal species
- used by man
- edible
- locally consumed
- important at national level
- provide 90% of vegetal calories
- provide 60% (rice, wheat, maize)

Urbanisation

Trends in Population Growth



- ◆ Almost 5 billion people expected to live in cities by 2030
- ◆ Urbanisation associated to nutrition transition
- ◆ How to provide what foods to tomorrow's cities?
- ◆ ... while ensuring urban-rural synergies?

Upland forest provides water harvesting, flood control, wildlife conservation, carbon sequestration, scenery & recreation, and timber & non-timber products.

Peri-urban & rural *green wedges* are biodiversity-friendly foodway corridors with multi-scale and mixed crop/livestock operations.

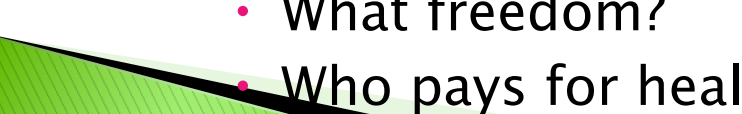


Farmers markets, retail & wholesale markets, food hubs, and community gardens in the urban core enable access to fresh, locally produced food resources.

Coastal resources are managed for biodiversity, scenery & recreation, storm surge protection, and aquaculture.

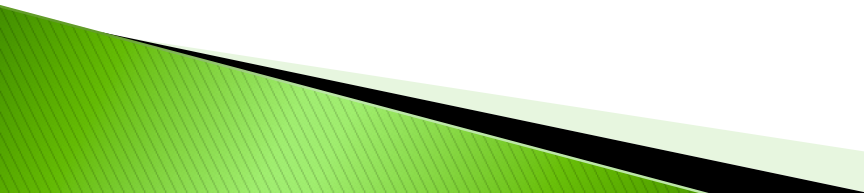
Riparian zones are managed for biodiversity, flood control, wildlife and pollinator movement, urban heat island control, and aesthetic & recreational benefits.

Actually...

- ▶ Food and Agriculture are the first responsible for environmental degradation & biodiversity erosion
 - ▶ Disconnect between health of people and health of the environment
 - ▶ Environmental management and social equity sacrificed to economic development
 - ▶ Contradiction between free circulation of goods and support to local food production
 - ▶ Consumerism and freedom to consume
 - What freedom?
 - Who pays for health, social and environment costs?
- 



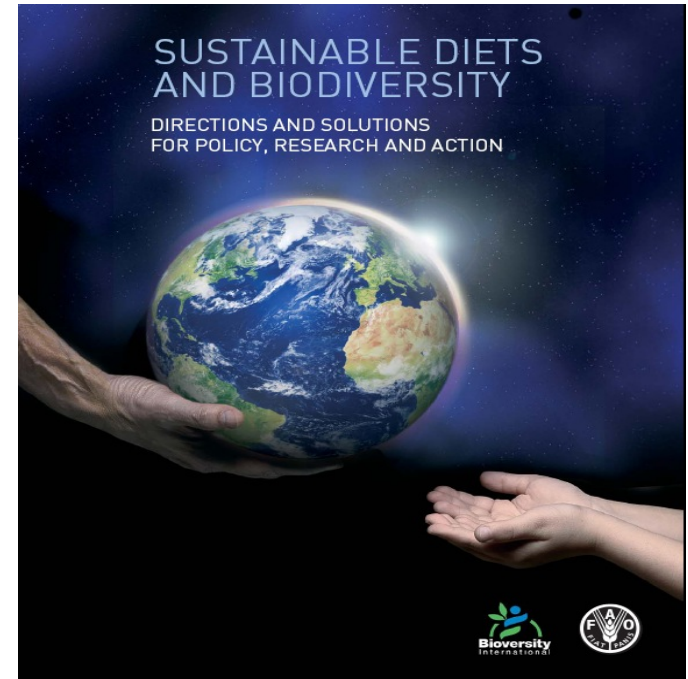
Group work 1

- ▶ Select one area
 - ▶ What do people eat now?
 - ▶ How do they get their food? Who?
 - ▶ How do they prepare it? Who?
 - ▶ How did this change in the last 50 years?
 - ▶ Why?
- 



Towards Sustainable Diets...

- ▶ Nutritionally adequate and safe
- ▶ Culturally acceptable, accessible, equitable and affordable
- ▶ With low environmental impact (respecting ecosystems and biodiversity)



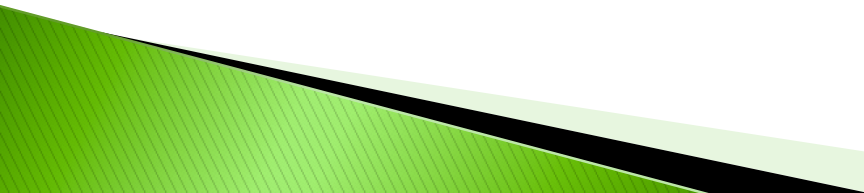
At the core of the post-2015 agenda

What foods for sustainable consumption?

- ▶ A healthy and balanced diet
 - Limited intake of meat and dairy products
 - More fruits and vegetables
 - Less processed foods
 - Less sugar
 - Less salt
- ▶ Takes into account specific needs (under2, elderly...)
- ▶ In season
- ▶ Compatible with people's culture
- ▶ Safe

Local specific

Diversified diets

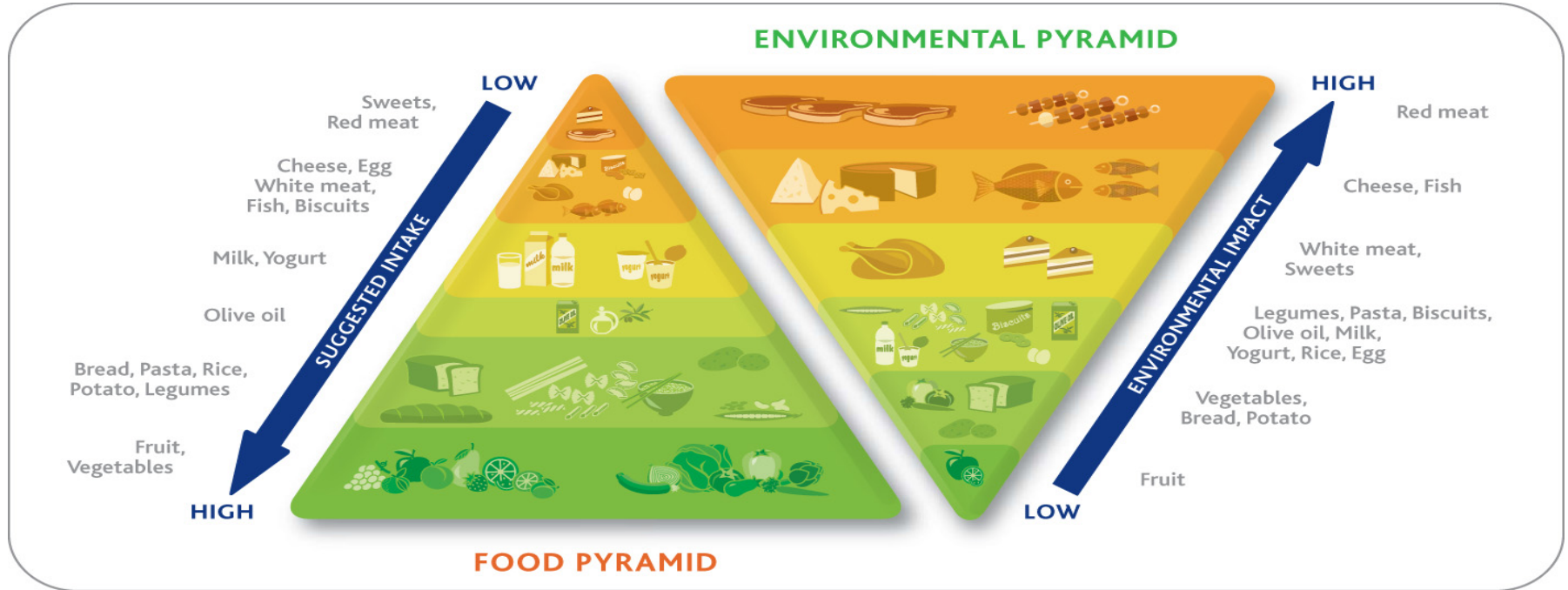
- ▶ Provide nutrients and non-nutrients needed to sustain healthy lives
 - ▶ Contribute to healthy growth, development and maintenance
 - ▶ Mountains offer a wealth of biodiversity potential for livelihoods, health and nutrition: need to use full diversity of locally available resources
 - ▶ Mainstream Biodiversity Conservation and Sustainable Use for Nutrition and Well-being
- 

Towards sustainable production

Local foods

- ▶ Revisit traditional foods (based on eco-systems – risk-adverse low-input – and central to culture)
- ▶ Short food chains
 - More equitable – can benefit both producers and consumers
 - More transparent
 - Less transport and storage costs
- ▶ Privilege local markets/farmers markets
 - Space for social inclusion
 - Promotion of traditional practices
 - Interaction consumers/producers

Mediterranean diet



Source: Barilla Center for Food & Nutrition

New Nordic Kitchen manifesto: 10 principles

- 1. Purity, freshness, simplicity and ethics*
- 2. Reflect the changes of the seasons*
- 3. Use ingredients & produce characteristic of the area*
- 4. Combine good taste with modern health knowledge*
- 5. Promote Nordic products, Nordic producers and their culture*
- 6. Promote animal welfare and sound production systems (seas, farmland and in the wild)*



newnordicfood

New Nordic Kitchen manifesto

(cont.)

- 7. Develop new applications of traditional Nordic food products*
- 8. Combine Nordic culinary traditions with impulses from abroad*
- 9. Combine local self sufficiency with regional sharing of high-quality products*
- 10. Join forces – with consumer associations, other cooking craftsmen, farmers, fishermen, retail and wholesale industries, researchers, teachers and politicians*



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Globally Important Agriculture Heritage Systems

“Remarkable land use systems and landscapes which are rich in globally significant biological diversity evolving from the co-adaptation of a community with its environment and its needs and aspirations for sustainable development”

<http://www.fao.org/giahs/en/>



GIAHS

- ▶ High levels of biodiversity
- ▶ Agroecosystems nurtured by traditional knowledge
- ▶ Ingenious systems and technologies
- ▶ Diversified agricultural systems for local food security
- ▶ Farming systems resilient and minimize risk
- ▶ Provide local, regional and global ecosystem services
- ▶ Reregulated by strong cultural values and social organisation

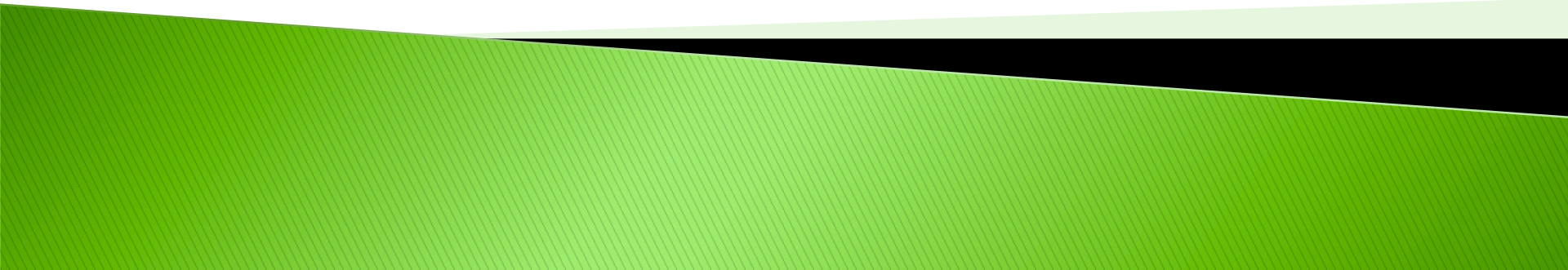


GIAHS – Examples

- ▶ Andean agriculture system
- ▶ Mountain rice–terrace agroecosystems
 - Ifugao rice terraces (Philippines)
 - Hani rice terraces (China)
- ▶ Integrated forests land and water systems



What about mountain diets?



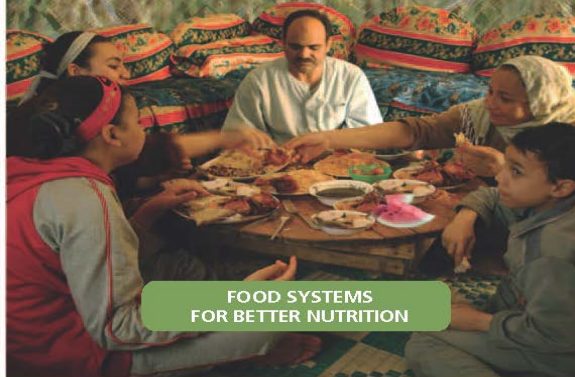


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THE STATE OF FOOD AND AGRICULTURE



FOOD SYSTEMS
FOR BETTER NUTRITION



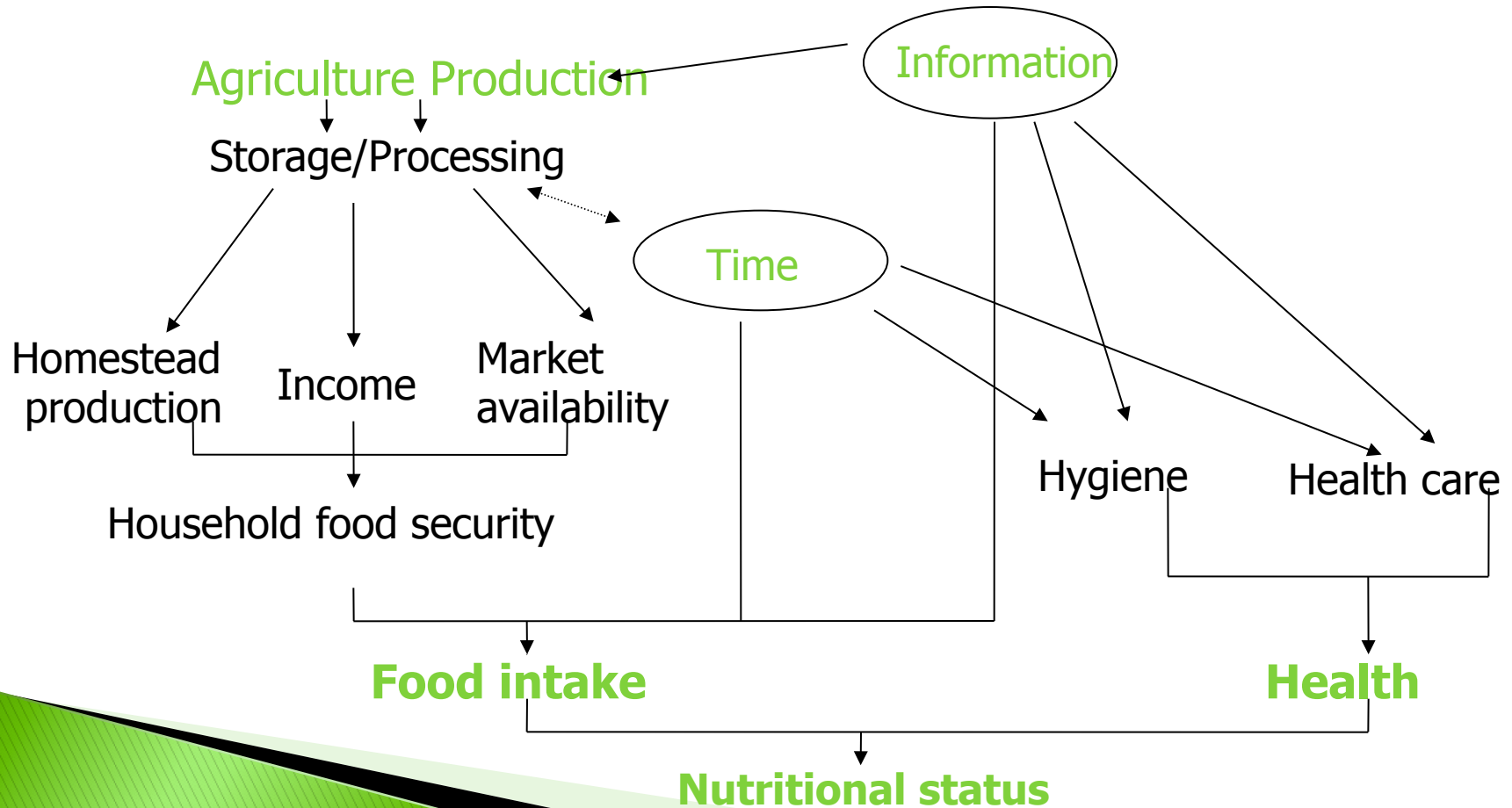
FOOD SYSTEMS FOR BETTER NUTRITION

“Food systems encompass all the people, and processes by which agricultural products are produced (including inputs and research), processed and brought to consumers.”

Reorient food systems

- ▶ Revisit value chains:
 - to maximise positive impacts
 - and minimise negative impacts (“Do No Harm”)
 - on health and nutrition (e.g. local diets, time for child care, environmental health)
 - on social equity/right to food (direct and indirect)
 - on natural resources and biodiversity
- ▶ Territorial food systems for increased resilience
 - know better local food sources
 - build upon local experience and knowledge
 - prioritize local foods
 - Appropriate nutrition education and communication

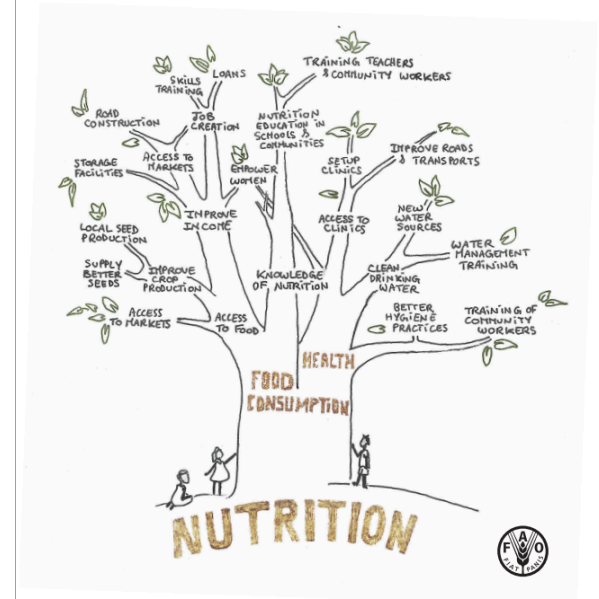
Understand local constraints ...



... for appropriate strategies


- Participatory planning
 - Intersectorial
 - Inter-institutional
- Strengthening of local capacities

Agreeing on causes of malnutrition for joint action




<http://www.fao.org/3/a-i3516e.pdf>

Ex: Participatory nutrition in Somalia


- ▶ In-service training on methodology
 - ▶ Local training-cum-planning workshops
 - ▶ Community identifies solutions
 - Donkey and cart per group of 5 destitute households
 - Increase honey production
 - Grinding mill
 - Tea-shops
 - ▶ Local facilitator reports to project team
 - ▶ Activities screened and supported
- 

Project impact

- ▶ Improved diets (in particular children)
 - ▶ Benefits reinvested in agriculture
 - ▶ Women pregnant
 - ▶ People don't go to WFP projects
 - ▶ Outmigration stopped, people return to village
- 




Group work 2

- ▶ What are the causes of malnutrition?
 - ▶ What are the solutions?
 - ▶ Who should be involved?
- 



Towards local food governance

- ▶ Sustainable diets for resilient territories
 - ▶ Inter-institutional food governance (local authorities, civil society and private sector)
 - ▶ Coherence across social (health, education, social affairs) and productive (agriculture, forestry, livestock, energy, mining...)
 - ▶ Engage with downstream areas
 - ▶ Vertical coherence with national and global levels
 - ▶ Horizontal networking (e.g. Mountain Partnership)
- 

Nutrition & Sustainable Mountain Development

- ▶ We must address complexity
 - People must be at the centre (human rights, gender, youth)
 - Analyse, understand and assess inter-connections
 - Learn from traditional food systems (*agri-culture*)
 - Reorient institutional set-up at all levels
- ▶ Policy dialogue, coherence & action-learning
- ▶ Evidence and Knowledge management are key



Seeking convergence and synergies

What's up?



Indigenous peoples, food security and nutrition

- ▶ “The involvement of indigenous and traditional mountain communities is a prerequisite to sustainable mountain development” (Mountain Partnership)
- ▶ Network for Mountain Indigenous Peoples
www.mountainpartnership.org/news/news-detail/en/c/238857/
- ▶ Why?
 - A substantial portion of the world’s food insecure
 - Have unique skills and knowledge that can contribute to equitable and sustainable development

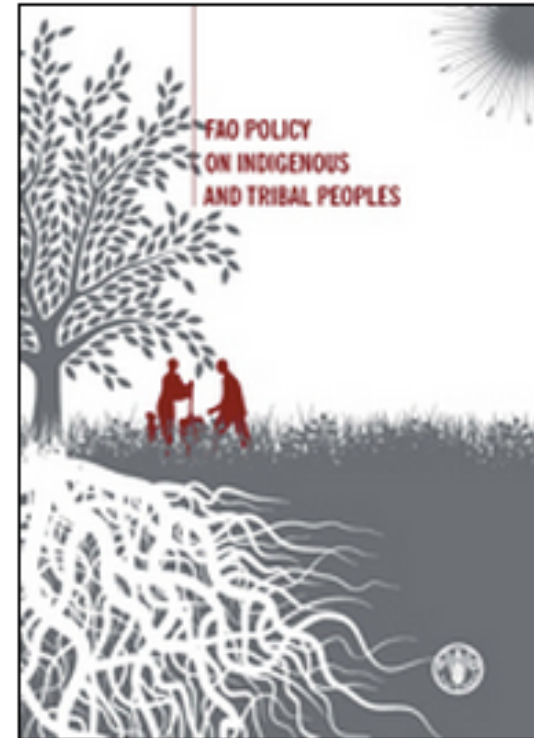
Indigenous peoples (cont.)

- ▶ UN Forum Permanent Forum on Indigenous issues
<http://undesadspd.org/indigenouspeoples.aspx>
 - ▶ Core principles:
 - Self-determination
 - Development with identity
 - Free, prior and informed consent
 - Participation and inclusion
 - Rights over land and other natural resources
 - Cultural rights
 - Collective rights
 - Gender equality
- 

Indigenous Peoples (cont.)

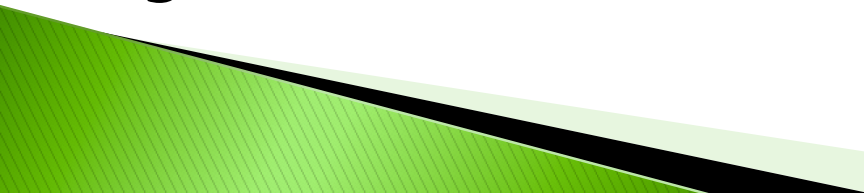
- Food security, nutrition & right to food
- *FAO Policy on Indigenous and Tribal People*
- *Indigenous People's Food Systems and well-being*

www.fao.org/documents/card/en/c/c0e066cd-a432-5b36-9000-73ae237d658b/



Right to Food

World Committee on Food Security –CFS)

- ▶ 2004 – *Voluntary Guidelines (VGs) to Support the Progressive Realization of the Right to Adequate Food in the context of national food security*
 - ▶ 2012 – *VGs on Responsible Governance of Tenure of Land, Fisheries, and Forests in the context of national food security*
 - ▶ 2014 – *Principles for responsible investment in Agriculture and Food Systems*
- 

International Conference May 2013

▶ 400 participants from 100 countries
(governments, CSOs, Indigenous Peoples, donors...)



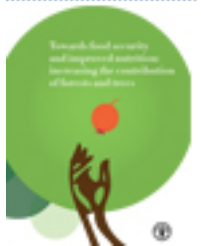
Forests for Food Security and Nutrition

<http://www.fao.org/forestry/food-security/83788/en/>

FAO in collaboration with Bioversity International, Center for International Forestry Research (CIFOR), the World AgroForestry Center (ICRAF) and the World Bank

Policy brief

- ▶ Provide secure access to land and forest tenure and equitable access to resources
- ▶ Develop coordination across sectors for coherence of FSN interventions & policy alignment
- ▶ Promote policies that increase smallholder access to services and to markets
- ▶ Achieve gender equality
- ▶ Data collection and timely dissemination for policy-making



2nd International Conference on Nutrition (November 2014)

- ▶ *Good nutrition will require more sustainable, equitable and resilient food systems*
- ▶ *Nutrition is a public challenge and a common responsibility*
- ▶ *Malnutrition is a global problem which will require global and local solutions*


ICN2 (cont)

- ▶ Promote diversification of crops including underutilised traditional crops
- ▶ More production of fruits and vegetables
- ▶ Appropriate production of animal–source products
- ▶ Apply sustainable food production and natural resource management practices


Disaster Risk Reduction

- ▶ Third UN World Conference on DRR Sendai, Japan, March 2015
- ▶ Adopted Sendai Framework for DRR 2015–2030
<http://www.unisdr.org/we/coordinate/sendai-framework>
 - Understand disaster risk
 - Strengthen disaster risk governance
 - Investing in DRR for resilience
 - Enhance disaster preparedness for effective response and “Build Back better”

Nutrition and resilience

- ▶ Both an input and an output of strengthened resilience
 - ▶ Food and agriculture sector is key
 - ▶ ...but must be nutrition sensitive
 - strengthening legislative and policy environment
 - integrating nutrition in information systems for resilience planning and monitoring
 - nutrition can help target, understand causes of malnutrition
- 

Nutrition–friendly resilience programming

- ▶ Strengthen HH livelihoods and dietary diversification (direct consumption and/or income generation)
 - ▶ Nutrition education to improve dietary practices (and reorient production systems)
 - ▶ Link food and agriculture interventions with social protection measures
 - ▶ Link production programmes to social programmes (health, education)
- 

Climate Change, Food security and Nutrition



- ▶ **Interlinked but institutions and financing disconnected**
- ▶ Consumers not aware of implications of diets on CC
- ▶ Need to move away from unsustainable production systems; revisit trade policies and subsidies; accountability of corporations
- ▶ Revisit traditional food systems and prioritize practice-based evidence (indigenous, agroecology, agroforestry)
- ▶ Food security and nutrition must remain on the agenda of CoP21

www.fao.org/fsnforum/forum/discussions/climate-change-and-fsn

1 / 5 – 31 / 10: ExpoMilano 2015

Feeding the planet, Energy for Life

- ▶ **Look for solutions to present contradictions**
 - persistence of hunger/excessive food consumption
 - 1,3 billion tons of wasted food
 - ▶ **Implement appropriate policies**
 - ▶ **Promote sustainable lifestyles**
- ➡ **Milan Charter** <http://carta.milano.it/preamble/>
- Responsibility of present generation on right to food
 - Commit to advocate political decisions



Post-2015

Development Programme of the United Nations

- ▶ **Special Summit on Sustainable Development**
(September 2015, New York)
- ▶ Objective 2030
- ▶ **SDG 2 *End Hunger, achieve Food Security and improved Nutrition & promote Sustainable Agriculture***
<https://sustainabledevelopment.un.org/?page=view&nr=164&type=230&menu=2059>
- ▶ **Universal approach** (no more differentiation North-South)

In a nutshell...

- ▶ What about relocalizing development?
- ▶ Joining forces?
- ▶ And getting donors to cofund us?

florence.egal@gmail.com

