

Challenges to Global Food & Nutrition Security:

The Critical role of Education, Science & Technology

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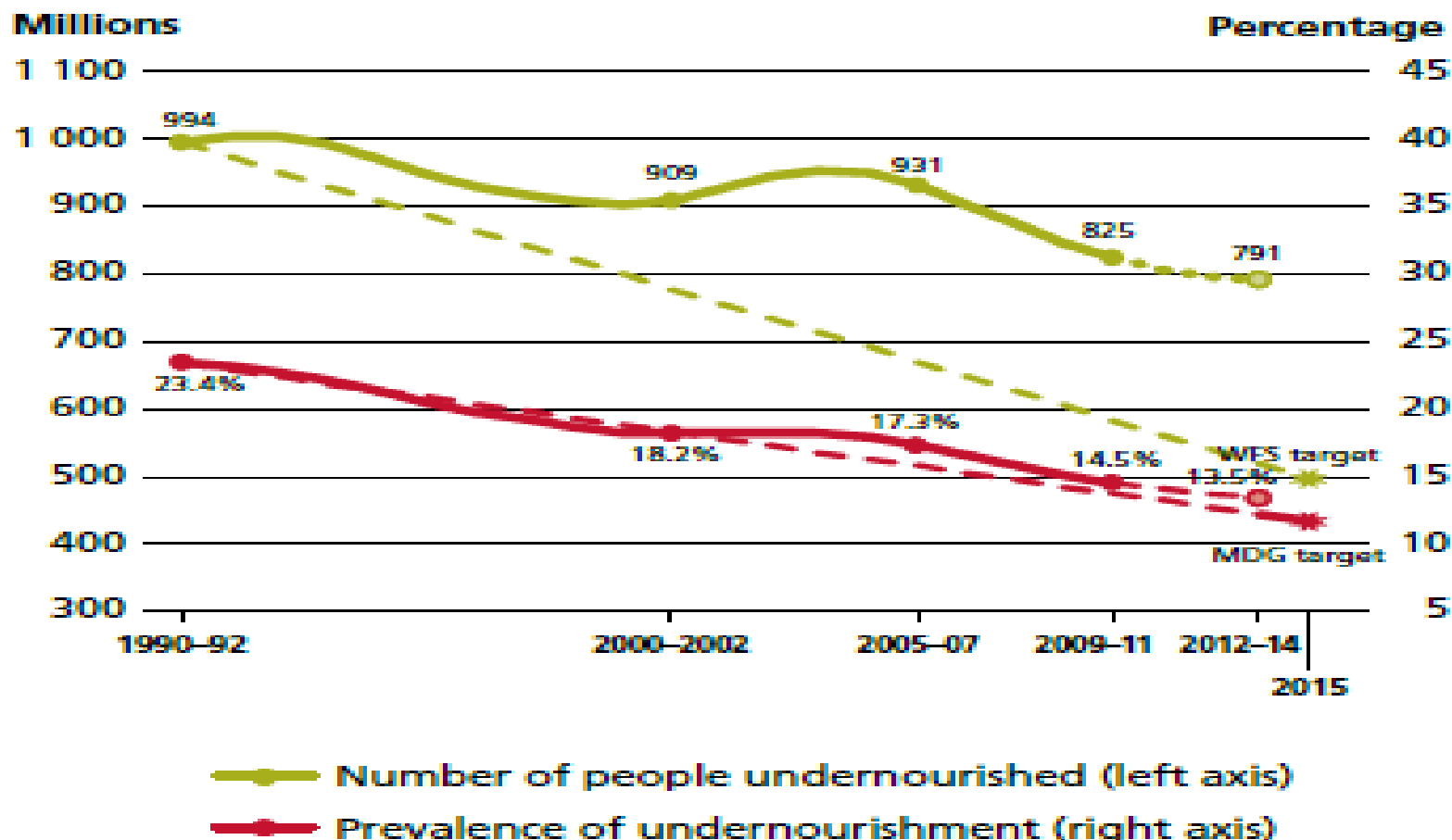
Liaison Office for North America

Food and Agriculture Organization of the United Nations

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FIGURE 1

The trajectory of undernourishment in developing regions: actual and projected progress towards the MDG and WFS targets



Note: Data for 2012-14 refer to provisional estimates.

Source: FAO.

But critical challenges will need to be met?

- Foresight report – 5 challenges:
 1. Balancing future demand & supply sustainably – to ensure that food supplies are affordable.
 2. Ensuring that there is adequate stability in food supplies – and protecting the most vulnerable
 3. Achieving global access to food and ending hunger. Producing enough food in the world so that everyone can potentially be fed is not the same thing as ensuring food security for all.
 4. Managing the contribution of the food system to the mitigation of climate change.
 5. Maintaining biodiversity and ecosystem services while feeding the world

Bringing Science & Innovation into Policy ?

New way of global thinking & interconnected policy making needed

Direct – volatility, sustainability, climate and hunger

Indirect – energy, water, land, seas, ecosystems, bio-diversity

Policy harmonization critical for food & overall global security

Education, Science & Technology

- Investment in education, science & technologies is essential
- Much can be done today with existing knowledge

Some principles: FSR-

- New technologies should not be excluded a priori on moral grounds,
- Human/environmental safety new technology needs to be rigorously established
- Acceptability of new technologies need to be made in the context of competing risks (rather than by simplistic versions of the precautionary principle)
- Research portfolios need to include all areas of science and technology that can make a valuable impact – any claims that a single or particular new technology is a panacea are foolish
- Appropriate new technology has the potential to be very valuable for the poorest people in low-income countries. It is important to incorporate possible beneficiaries in decision-making at all stages of the development process

Food and Agriculture Organization of United Nations

- Help eliminate hunger, food insecurity and malnutrition
- Make agriculture, forest and fisheries more productive and sustainable
- Reduce rural poverty
- Enable inclusive and efficient agricultural and food systems
- Increase the resilience of livelihoods to threats and crises

Food & Agriculture Organization of the United Nations



KNOWLEDGE/ADVOCACY

- Global Public Goods:
 - Global Statistical Databases
 - Early Warning Systems - Food Security, Animal Health and Disease, Climate
 - Climate, Nutrition, Health
- Publications
 - SOFA, SOFI
 - Save and Grow
 - Climate Change and Livestock

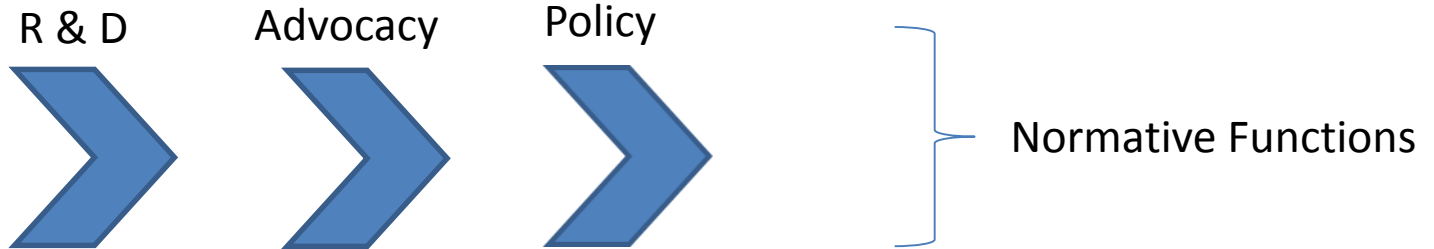
CONVENING NEUTRAL FORUM

- Agreements
 - CODEX - Food Safety
 - Voluntary Guidelines on Land Tenure
 - International Treaty on Plant Genetic Resources for Food and Agriculture
 - International Plant Protection Convention
- Global Plans of Action
- Committee on World Food Security

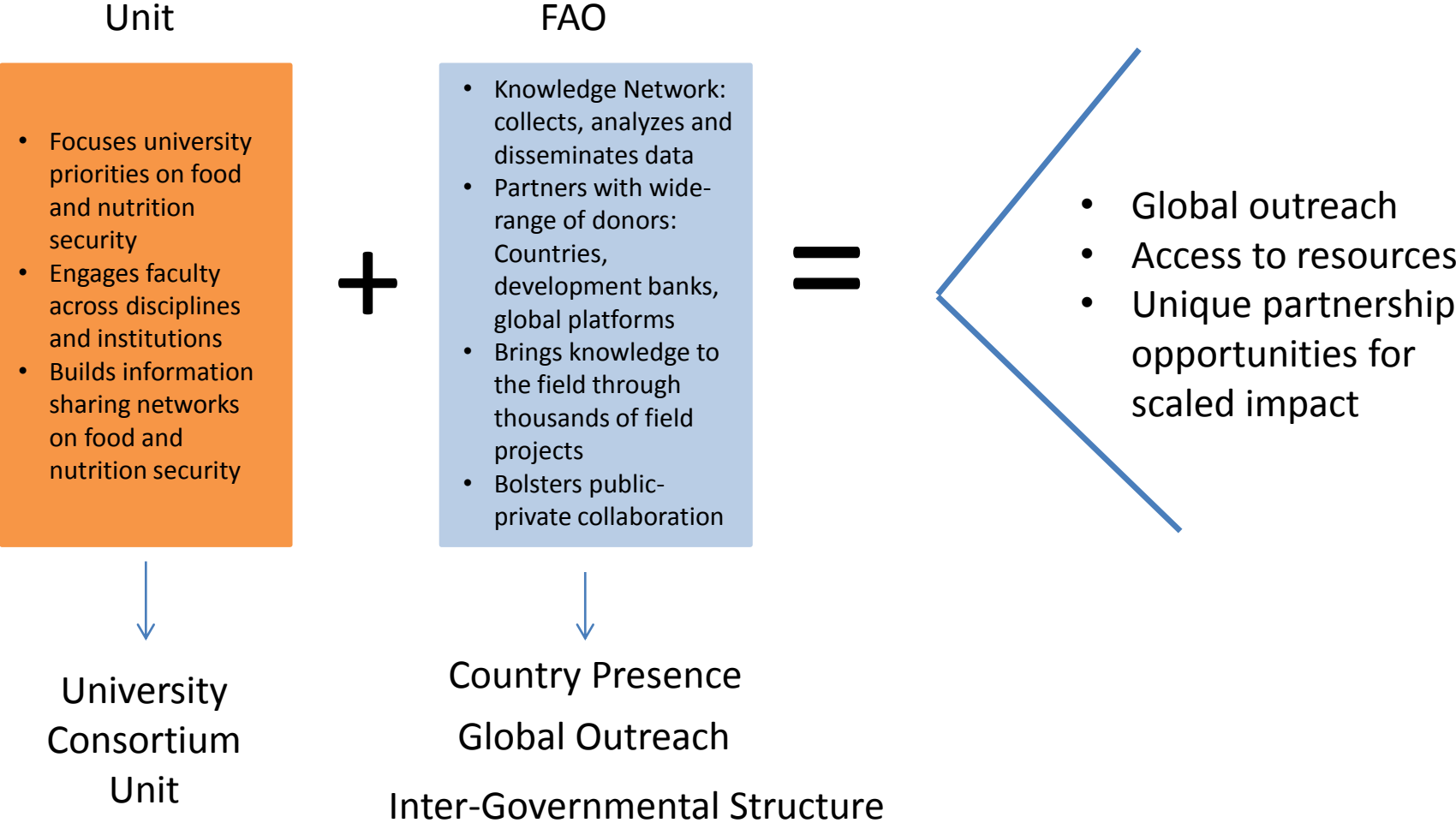
TECHNICAL EXPERTISE AND DELIVERY

- Advise policymakers to support food, agriculture and natural resource sectors, and to support producers.
- Emergency Response and Rehabilitation
- Projects and programs up and down the value chain in agriculture, fisheries, livestock, natural resource management, climate change adaptation and mitigation...

FAO Critical Pathways



FAO Partnership with Science & Innovation



Existing Science Partnership Platforms with FAO?

European Union Science and Innovation Fund – Horizon 20 20

- The biggest EU Research and Innovation programme ever with nearly 80 billion of funding for over 7 years (2014 - 2020)
- A financial instrument that aims at implementing Innovative Union, which is a strategy to create an innovative-friendly environment that makes it easier for great ideas to be turned into products and services that will bring the European economy growth and jobs.
- The main Horizon 2020 work program comprises 18 thematic sections and the general annexes describing general rules such as standard admissibility conditions and eligibility criteria, types of action, selection and award criteria, etc.
- Main Thematic Sections:
 - Future and Emerging Technologies
 - Information and Communication Technologies
 - Societal Challenge 2 (Food Security, Sustainable Agriculture and Forestry, Marine, Maritime and Inland Water Research and the Bio-economy)
 - Societal Challenge 4 (Smart, Green and Integrated Transport)
 - Societal Challenge 5 (Climate Action, Environment, Resource Efficiency and Raw Materials)
 - Innovation in SMEs
 - Access to Risk Finance
- **Estimated total budget for 2015 on Food Security related sections: 514, 701,600 euros**

Existing Science Partnership Platforms with FAO?

South-South Cooperation – Est 1978 in UN

- A mutual sharing and exchange of key development solutions, knowledge, experiences and good practices, policies, technology, know-how, and resources between and among countries in the global south
- SSC is helping developing countries to benefit from innovations, lessons learned and good practices, tried and tested elsewhere in the south
- **Four Pillars of the SSC Strategy:**
 - Facilitate the exchange and uptake of development solutions
 - Promote platforms for knowledge networking
 - Mobilize upstream policy support for SSC
 - Foster an enabling environment for effective SSC

UN-FAO/GWU Innovation Award



Questions

- Should/can a platform for Science Diplomacy be formally established in the US similar to H2020 and South-South Cooperation?
- Suggestions how this may be advanced