UNCSTD Inter-Sessional Panel Meeting on "The role of science, technology and innovation (STI) in ensuring food security by 2030", 23-25 January 2017, Geneva, Switzerland.

Science, Technology and Innovation for Sustainable Food Systems to meet the SDGs
The 2030 Agenda for Sustainable Development

- 17 Sustainable Development Goals,
- 169 targets,
- 231 indicators.
The SDG Challenge: Dealing with complexity

- The development community is challenged with complex development needs;

- Multiple objectives under SDGs are requiring:
  - a mix of instruments in several “packages”;
  - transdisciplinary approaches in research and innovation;
  - effective collaboration among diverse actors and improved governance;

- Improved research-practice and research-policy interfaces require cross-sectoral coordination;

- To address the complexity of the SDGs, understanding both technological and organizational innovations is required.
“is the process whereby individuals or organizations bring existing or new products, processes and forms of organization into social and/or economic use to increase effectiveness, competitiveness, resilience to shocks or environmental sustainability, thereby contributing to food and nutritional security, economic development and sustainable natural resource management.”

- Innovation ≠ Invention → Innovation implies application
- Innovation refers to technologies and practices:
  - Improved varieties, agro-ecological practices, biotechnologies, etc.
- BUT also to processes and organizational forms:
  - Public-private partnerships; farmers’ cooperatives; performance contracts, etc.
Agricultural Innovation System (AIS)

**Science and Technology Policy**

**Political System**

**Agricultural Innovation System**

- **Research and education**
  - Agricultural Research (public, private, civil society)
  - Education (primary, secondary, tertiary, and vocational)

- **Enabling environment**
  - Innovation policies & investments, agricultural policies
  - Informal Institutions, practices, behaviours, mindsets, and attitudes

- **Bridging institutions**
  - Stakeholder Platforms
  - Agricultural Extension (public, private, civil society)
  - Contractual Arrangements

- **Business and Enterprise**
  - Agricultural Value Chain Actors & Organizations (agribusiness, consumers, agricultural producers)

**Science Actors**

**Technology from other sectors**
Main drivers of change

- Agroecological innovations
- Agricultural biotechnologies
- Technology dissemination
- Climate-Smart Agriculture
- Capacity Development
- Resourcing
- Gender considerations
- Green job creation
Decline in international investments in agricultural innovation

Investments in agricultural research and development are **declining** and mostly **concentrated** in high-income as well as in a few large middle-income countries.

From 2002 to 2012 the share of **Official Development Assistance (ODA)** allocated to research and extension has **decreased** or remained **steady**.

Volatile aid flows are causing challenges in planning and implementation.

What countries need?

- Increased investments in agricultural R&D, extension and advisory services;

- Capacity development to improve their national agricultural innovation systems:
  - Enabling environment and institutional capacities;
  - Organizational capacities;
  - Individual capacities.
Institutional innovation: Capacities for effective partnerships

- Innovation Partnerships between Public, Private Sectors and NGOs (Innovation platforms, networks) coupled with innovation brokers;

- New finance mechanism for research, extension and innovation (e.g. innovation funds);

- Farmer-led initiatives (certification for GAP, other certification labels);

- South-South, North-South and triangular collaboration arrangements.
Food and Agriculture Organization of the United Nations

FAO has embarked on a series of strategic activities and key areas of work covering multiple sectors along the research to development continuum, by:

- Strengthening linkages between research, advisory services and other key innovation actors;
- Promoting Agroecology;
- Promoting Agricultural biotechnologies;
- Advocating for rural financing;
- Promoting green job creation;
- Supporting the Tropical Agriculture Platform (TAP).
Achieving global coherence of CD approaches for AIS

Advocacy and policy dialogue

Common Framework on CD for AIS

TAPipedia knowledge hub
Capacity development for agricultural innovation
FAO’s focus as recommended by COAG, 25th Session, 2016:

Promoting an enabling environment

Strengthening capacity to innovate at country level

Promoting public-private partnership

Advocating and monitoring investments

Policy, Coordination, Knowledge sharing, etc.

Three-dimensional: individuals, organizations and the enabling environment

A framework - that while engaging the private sector - acknowledge and structure the role for governments.

Mapping the investments needed to achieve national development targets over a defined time frame.
Thank you

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