Discussions on GEA and Stability of Food System

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Basic Concepts

Stability of Food Security

- To be food secure, a population, household or individual must have access to adequate food at all times

- Different sources of instability: Availability, Access, Utilization

  (Dimensions of food security: Availability, Access, Utilization, Stability)

- Stability as a second round effect measures the variability of other dimensions

- **Food security is achieved "when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food which meets their dietary needs and food preferences for an active and healthy life"(World Food Summit, 1996)**

I Introduction

Green Economy and Green Growth

- Green Economy

  - one that results in improved human well-being and social equity while significantly reducing environmental risks and ecological scarcities (UNEP, 2010)

- Green growth

  - maximising economic growth(well-being) and development while avoiding unsustainable pressure on the quality and quantity of natural assets (OECD, 2011)

  - providing enough food, feed, fibre and fuel from agricultural and fisheries resources for a growing and richer population

II Overview of Working Document 3

Overview of Working Document 3

- Comprehensive view of food system instability and its relationship with the green economy

- Approach to three separate bodies of relevant research
  - microeconomic household view: fluctuation in food production and prices and incomes
  - environmental context: role of environmental threats (land degradation, water scarcity and biodiversity loss, climate change)
  - world market: exceptional price volatility in world food market

Threats to Food Stability

- Extreme weather event
- Loss of ecosystem services
- Energy Scarcity
- Economic and social disruption
- Malfunctioning global market

Measures to Strengthen Resilience

- Investing in Agriculture and Rural Development
- Transitioning to Sustainable/Resilient Production Methods
- Managing Links between Energy and Food Markets
- Improving the Functioning of Food Markets
- Building Safety Nets for the Most Vulnerable

Main Questions for the Session 4

- How can we make more resilient food system coping with macro-economic and natural shocks?

- Is recent and future prospect of volatile prices a valid reason for developing countries to invest more resources into increasing domestic production?

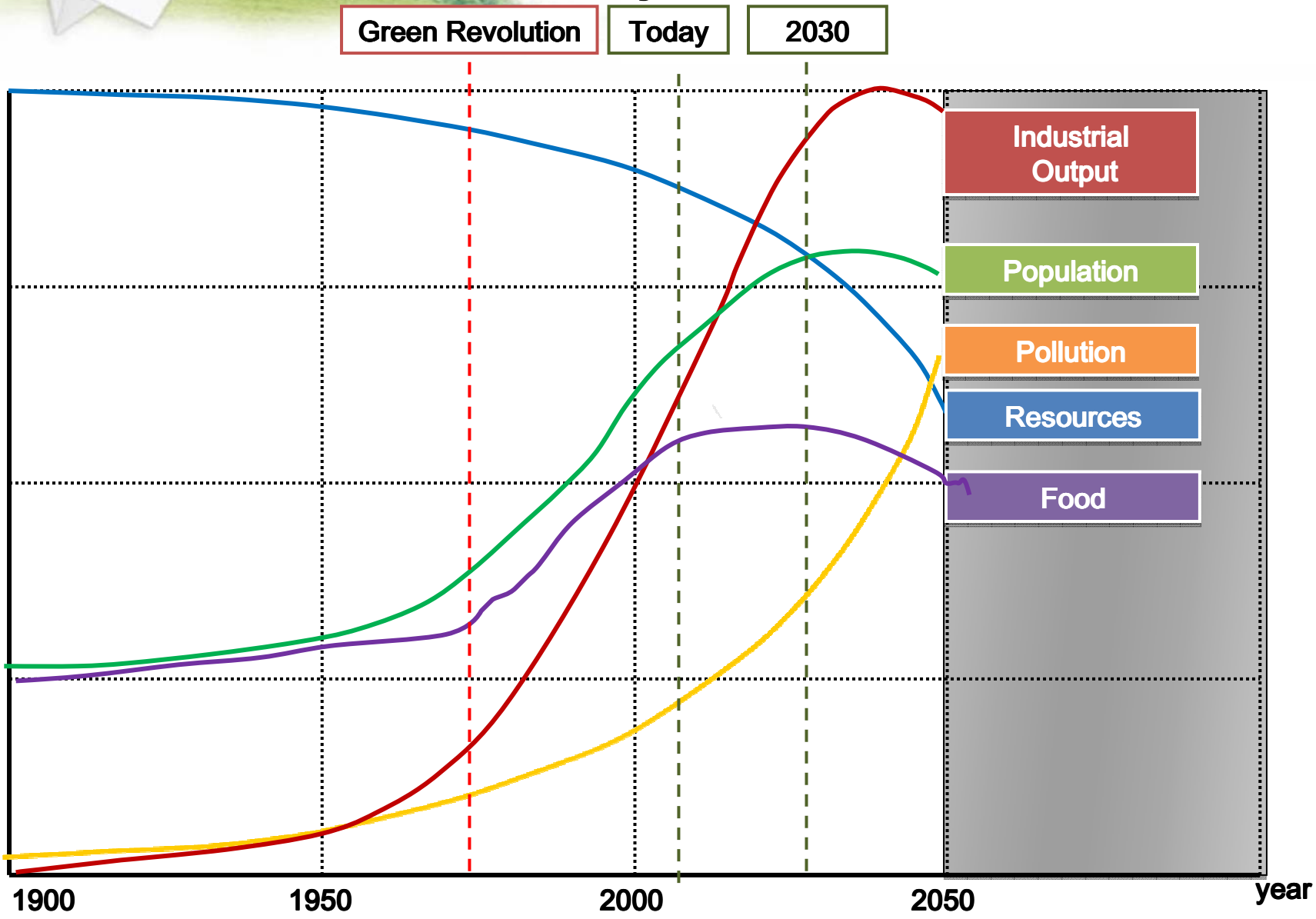
- How likely are we to see the emergence of global governance mechanisms that improve to functioning of global market? If collective action can produce greater overall welfare, why is not happening?

III Suggestion for the Document

❒ Food Stability with Green Growth

- Sources of instability of food security
  - ◗ environmental risk and ecological scarcities
  - ◗ unsustainable use of natural resources and negative externalities
- Green growth strategy: establishing productivity and environmental performance priorities for food and agriculture
- Green economy: many of the solutions to food instability to be founded within the green economy agenda
  - ◗ improving natural resource and environmental management → reducing risks related to climate change, land degradation, water depletion, energy scarcity
  - ◗ green economy: necessary but not sufficient condition for controlling food instability (complementary to be integrate)

2050 Projection



■ More Resilient Food System

- Suggest for Transitioning to Resilient Production Methods
  - *Ecosystem approach to ecological intensification (para#105)*
  - Developing an environment favoring Innovation for green growth in food and agriculture (OECD, 2011)
    - New science and generic technologies with green potential
    - Farming system innovation
    - Integrated national green regimes
    - Post farm innovation
    - Cross-cutting approaches

More Resilient Food System

- Suggest for Transitioning to Resilient Production Methods
  - *Ecosystem approach to ecological intensification (para#105)*
  - Technological advances promising win-win combination of enhancing productivity and sustainability
  - Climate-smart agriculture: seeking to increasing productivity and food security sustainably, strengthen farmers' resilience to climate change and reducing GHGs (FAO, 2010)
  - Application of convergence technology (IT, BT, ET, NT)
  - Molecular farming (algae) and cultured meat (in-vitro meat)

■ Suggestions for Policies, Institution and Finance

- Barriers to Implementing Suggested Measures
  - *losses and risks in the short-term*
  - *requiring some sort of upfront investment*
  - *high transaction cost*
  - *knowledge-intensive in agro-ecological farming system*

⇨ *new extension, financing and risk reduction mechanism for encouraging large-scale adoption of new practices*

- Barriers to Implementing Suggested Measures

  - *Collective actions by many countries for improving the functioning of global market*

    - improving global food governance through the UN system, WTO, and G20 process

  - Struggling to resolve issues (agricultural multifunctional role and protectionism) through the WTO regime

    - suggested the World Agricultural Organization (WAO) as a new global governance for agriculture, climate change, sustainability and food security(Moon, Koo, and Kim, 2011)

- Policies and Institution

  - *National Policies, International Policies*

  - Tool-kit for green growth policies (OECD, 2011)
    - Environmental regulations and standards
    - Support measures
    - Economic instruments
    - Trade measures
    - Research and development
    - Development assistance: Poverty Reduction Strategy
    - Information, education, training and advice

Finance and Investment

- *The most important measures for increasing food security stability is investment for developing smallholder agriculture in the LDCs.*
- *Need for more targeted support: encouraging farmers to use more sustainable, resilient and resource-efficient agricultural practices*
- *Creating incentives for farmers: payment for ecosystem services (PES)*

Sources of Financing

- Sustainable and green transformation of the agri-sector needs for large-scale investments to meet the projected costs

- Holistic, diversified and inclusive approach is needed, combining public, private, development and climate finance.

- Portfolio approach consists of utilizing a combination of financial resources (including monetary resources, knowledge resources, capacity development and public support) for effective action in food stability and GEA.

  - Public finance: a catalyst for action or to fund activities or areas neglected by the private sector
  - Exploring the use of public – private partnerships
  - Green ODA

IV Concluding Remarks

- What's the policy packages for improving stability of food security with green economy regime?
  - implementing a balanced set of market-based and regulatory policy tools
  - facilitating longer-term structural adjustment

- What is the priority for future directions for food stability with GEA?

- Future works of research and development for establishing sustainable/resilient stability system of food security with new paradigms of green economy (or green growth)?

Thanks for your attention!!

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