

# Chapter 7: Valuation methodologies: An overview & advances in modeling & measurement [for eco-agri-food systems]

Day One Panel: Understanding & agreement on  
Terms of Reference for Chapter

TEEB for Agric. & Food

Scientific and Economic Foundations Report

First Writer's Workshop

Cambridge 13 – 15, February 2017

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# Motivation and Objectives (1)

- Values of many:
    - a. Services of natural ecosystems (ESs) used in generation, processing, distribution, & “consumption” of agri-food products, particularly intangible services used as intermediate inputs (invisible regulating & supporting), &
    - b. Externalities (-ve & +ve impacts) of agri-food systems activities & policies on the environment & human wellbeing
  - ◆ Are missing from (or underrepresented/overlooked in) information used for making decisions on managing agri-food systems (AFSs) at private HHs, business firms, & government policy spheres
  - Leading to making ill-informed private & public choices & sub-optimal allocation of resources
- (A). Accounting for these missing values necessary for correcting practices & policies for sustainability

# Motivation and Objectives (2)

- Current AFSs evaluations also suffer from:
  1. Analyzing agri-food systems (AFSs) as a separate system independent of other natural & social systems
    - Missing important interconnections with & feedback dynamics from other socioeconomic & ecological systems
- (B). Need to adopt holistic systems' approach in which AFSs are evaluated as an integral part of an interdependent & dynamic ecological-human systems' interface (eco-agri-food complex)
  2. In-adequate inclusion of all phases of the agri-food value chain
- (C). Need for comprehensive accounting for all phases of the entire value chain from cradle to grave – life-cycle
- (D). Universal framework: adaptable to the diverse farming systems & food supply chain typologies
- (E). Traceability across time & space (spill-overs & tradeoffs beyond the present & national boundaries)
- (F). Value addition: Metric for measuring monetary values
- (G). Consideration of non-monetary social & ecosystems' health goals (equity, resilience, & other indicators)
- (H). Recognition of & validation under risks & uncertainties

# Clarifying the TOR: Issues I

- Purpose is to sharpen focus & scope
- Most issues here are overarching (cross-chapter), & particularly relate to the “what to value & why” questions of the framing chapter 6

Accounting for the visible & invisible values & impacts of AFSs  
[on the environment & human WB]

- Focus on AFSs: What AFSs’ practices/activities & policies have significant values & impacts along the value chain to include/evaluate?
- ❑ How about non-AFSs policies & practices influencing AFSs? Example: (a) human health policies providing incentives to promote certain foods & discourage others impacting relative prices; (b) water management strategies – Dams; (c) wildlife conservation in parks & disease transmission,..
- Are these relevant to include & their impacts to be valued?

# Clarifying the TOR: Issues II

- How far down the value chain? Particularly at the “consumption” end!
- Human health impacts of AFSs: How relevant are:
  - i. Lifestyle ailments (obesity & diabetes)?
    - A consequence of consumers’ choice of what to eat but not due to AFSs practices & policies?
  - ii. Disease resistance: Relevant for the case of pesticides in crops & antibiotics in livestock & aquaculture
  - iii. Disease transmission: FMD, etc.

BUT

- How significant compared to other sources/causes of resistance?
- How much to include & efforts to make?

# Clarifying the TOR: Issues III

- Valuation vs. evaluation (interchangeably used in many places in chapters description narrative)
  - Evaluation is the theme of the whole report & taken up in other chapters
  - Valuation is an essential input & critical instrument for evaluation
- BUT, valuation & evaluation methodologies differ
- Chapter narrative suggests some evaluation tasks, such as “governance factors influencing evaluations”, and mention of modelling & scenario analysis
- Should this chapter devote some space for evaluation methodologies and how much of that?
- Recommend adding a chapter for evaluation methodologies/criteria & scenario analysis

# Clarifying the TOR: Issues IV

- Additional metrics beyond monetary VAD measures
  - Use of social & resilience indicators
- Social indicators (equity, jobs, income, food security & access for vulnerable groups & regions, etc.) represent patterns of distribution of VAD generated in AFSs (slicing the cake) – i.e. not additional values
- These are influenced by & primarily the outcomes of broader economic development strategies & policies, institutional contexts (property rights & governance regimes, markets, etc.)
- How to address here? PLUS careful attention to avoiding double counting
- ◆ How about sequencing of delivery of chapters – time constraint does not allow but need to coordinate/share info from early stages
- ◆ Need for glossary of terms for consistency of use throughout all chapters of the report