



System of Environmental-Economic Accounting for Agriculture, Forestry and Fisheries

Development and implementation activities

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10th Meeting of the UNCEEA, New York, 24-26 June 2016



Food and Agriculture Organization
of the United Nations

Background

- The development of a System of Environmental-Economic Accounting for Agriculture, Forestry and Fisheries (“SEEA-Agriculture”) was first proposed by the FAO in 2010 and endorsed by UNCEEA
- Substantive work on the construction of the SEEA-Agriculture commenced at FAO, in close coordination with UNSD, in Jun 2013, by designing relevant accounting tables and by assessing data availability within FAO databases, including FAOSTAT



Background

- The feasibility of compiling the accounts and the relevance of the information was tested and further refined via specific engagement with four pilot countries: Australia, Canada, Guatemala, Indonesia
- A draft SEEA Agriculture was elaborated and discussed
 - within FAO,
 - at an Expert Group Meeting (EGM), held in Rome on October 7-8, 2014, involving representatives from SEEA pilot countries, as well as relevant experts from Eurostat, OECD, UNSD, and FAO



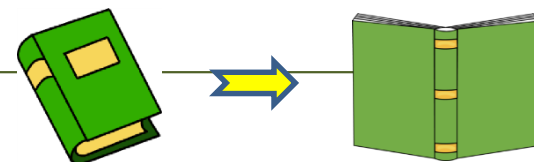
Background



- An updated draft was submitted to UNSD for a first global consultation process, Dec 2014-Jan 2015
- Feedback was received from experts in more than 34 NSOs and international agencies, on scope, coverage and content.
- Detailed technical responses were generally favourable, consistent on suggesting possible extensions, missing topics and components (e.g.: soil resources, water quality)



SEEA-Agriculture: finalization activities



- A revised draft of the SEEA-Agriculture that incorporates comments received will be ready by the end of September 2015. Revised version to be published by GS in Jul 2015
- Future version to include a new, higher-level Global Combined presentation and a proposal for a tiered approach for implementation, especially in developing countries
- A second global consultation Oct-Nov 2015 is planned, with a final version completed early 2016 for submission as a background document to the UNSC Mar 2016 meeting.



SEEA-Agriculture: timeline Jul 2015-Mar 2016

Date	Milestone
31 July 2015	SEEA-Agriculture Draft for Global Consultation Improved and published by Global Strategy
31 July 2015	Materials for country case studies finalized
30 Sept. 2015	SEEA-Agriculture for Global Consultation Final Version completed with additional material
1 Oct-Nov. 2015	Global Consultation for SEEA-Agriculture
1 Oct. 2015	SEEA-Agriculture Implementation guidelines including Tier Approach draft presented for the GS SAC
March 2016	SEEA-Agriculture submitted as background document to UNSC meeting.



SEEA-Agriculture: Accounting Tables

- Two main types of SEEA-Agriculture Accounting Tables:
- **Physical Supply and Use Tables** that describe the supply and use of agricultural production, forest product using the identity:
 - Total Use = Total Supply
- **Asset Accounts Tables** that record the opening and closing stock of environmental assets and the different types of changes in the stock over an accounting period



SEEA-Agriculture: Physical Supply and Use Table

- As example of **Physical Supply and Use Table**, the **Crop Physical Supply and Use Table (PSUT)** records the flows in physical terms of selected crop commodities.
- Distinction between agricultural activity (including forestry and fishing) and other economic activities (particularly manufacturing) and therefore among raw and processed commodities

Crop and Crop product physical flows (MU = 000 tonnes) Ver 1.3 4 Feb 2014

Product	Output				TOTAL OUTPUT	Imports	Total Supply	Intermediate consumption					HH consumption		Waste	Stockt Variation	Expor	Total Use
	Gross production	Harvest losses	Ag. Industry	Manu. Industry				Agricul. Ind. (Feed)	Agricul. Ind.(Seed)	Energy Use	Food Processing	Non-food processing	Food	Other uses				
	Maize			376				N.A.	376	1	377	293	1					
Maize (processed)			N.A.	132	132	23	155						112	9	11	13.08	9.92	155



SEEA-Agriculture: Asset Accounts Table

- As example the asset account for forest and timber resources (MU = 000 ha) records both the stock and the changes in stock of the area covered by forest

Australia, 2005-2010	Opening stock	Additions to stock		Reductions in stock		Net changes in stock	Closing stock
		Managed expansion	Natural expansion	Managed regressions	Natural regression		
Primary forest	5233					-194	5039
Other naturally regenerated forest	147059					-4700	142359
Naturally generated forest	152292					-4894	147398
Planted forest	1628					275	1903
Forest land	153920					-4620	149300
Other wooded land	118					1	119



SEEA-Agriculture: Accounting Tables Domains

- SEEA Accounting tables refer to 10 main Domains, namely:

N	SEEA-Agriculture Domain
1	Crops and Livestock
2	Forestry
3	Fisheries
4	Water resources
5	Energy
6	Greenhouse Gas (GHG) emissions
7	Fertilizers and pesticides
8	Land use and land cover
9	Soil resources
10	Economics

- SEEA Combined presentation is a selection of key economic and environmental variables, properly recorded and analyzed in a number of SEEA-Agriculture Accounting Tables.

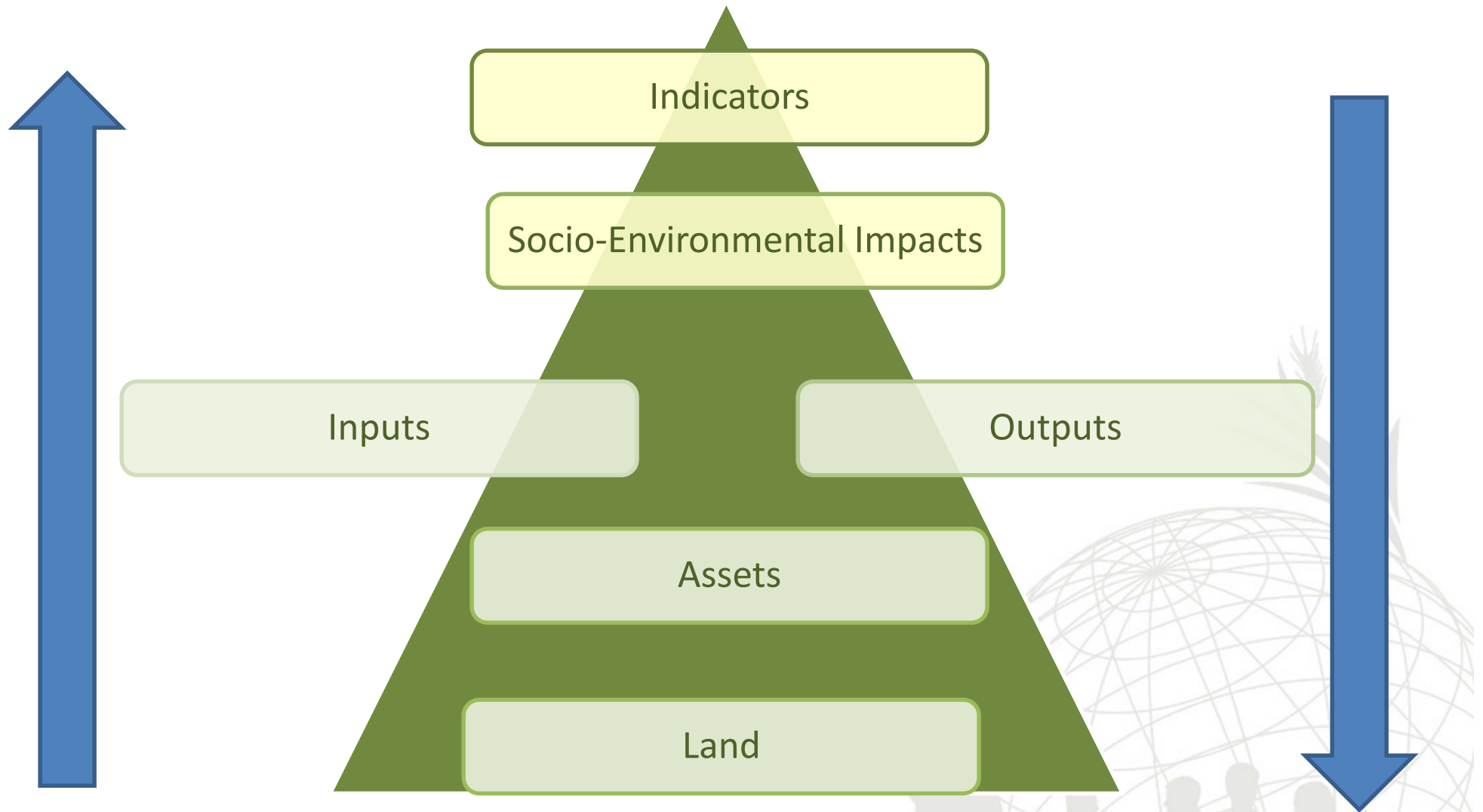


SEEA-Agriculture: Global Combined Presentation

- It is a cross-cutting perspective of a set of environmental and economic variables at global (regional, country) level based on FAOSTAT.
- Based on FAO land area categories (UNFCCC complaint):
 - Arable Land and Permanent Crop
 - Permanent meadows and pastures
 - Forest Area
 - Inland water
- Key groups of variables are the followings:
 - Assets
 - Inputs and Outputs
 - Environmental Impacts (example: GHG emissions)



SEEA-Agriculture: A Global Combined Presentation



SEEA-Agriculture: Global Combined Presentation

- **Assets Variables:** entities that provides environmental “functions” or services. Environmental assets cover both physical and socio-economic variables.

SEEA-AGRI COMBINED PRESENTATION Global Level	Assets							
	Land Area (000 ha)	Harvested Area (000 ha)	Biomass stock (million metric tonnes)			Number of Heads (000)	Producing Animals/Slaughtered (000)	Employment in Agriculture (1000)
			Above- ground biomass	Below- ground biomass	Dead wood			
Agriculture								
Arable Land and Permanent Crop								
Crops Primary								
Permanent Meadows and Pastures								
Live Animals and Livestock Primary								
Forest								
Fisheries								
Inland water								
Other Land								

SOURCE: FAOSTAT Database

Data available

Data not available

SEEA-Agriculture: Global Combined Presentation

- Inputs and Outputs:** In the SEEA-Agriculture Global Combined Presentation Inputs are environmental and economic resources and factors of production used to produce agricultural products, with economic values also reported. Outputs are finished goods expressed both in physical and economical terms.

SEEA-AGRI COMBINED PRESENTATION Global Level	Inputs						
	Irrigation Water	Energy Use	Synthetic Fertilizer			Manure (N content)	Pesticides
	(10 ⁹ m ³ /yr)	(Terajoule)	N (000 T)	P (000 T)	K (000 T)	(000 T)	(000 T)
Agriculture							
Arable Land and Permanent Crop							
Crops Primary							
Permanent Meadows and Pastures							
Live Animals and Livestock Primary							
Forest							
Fisheries							
Inland water							
Other Land							



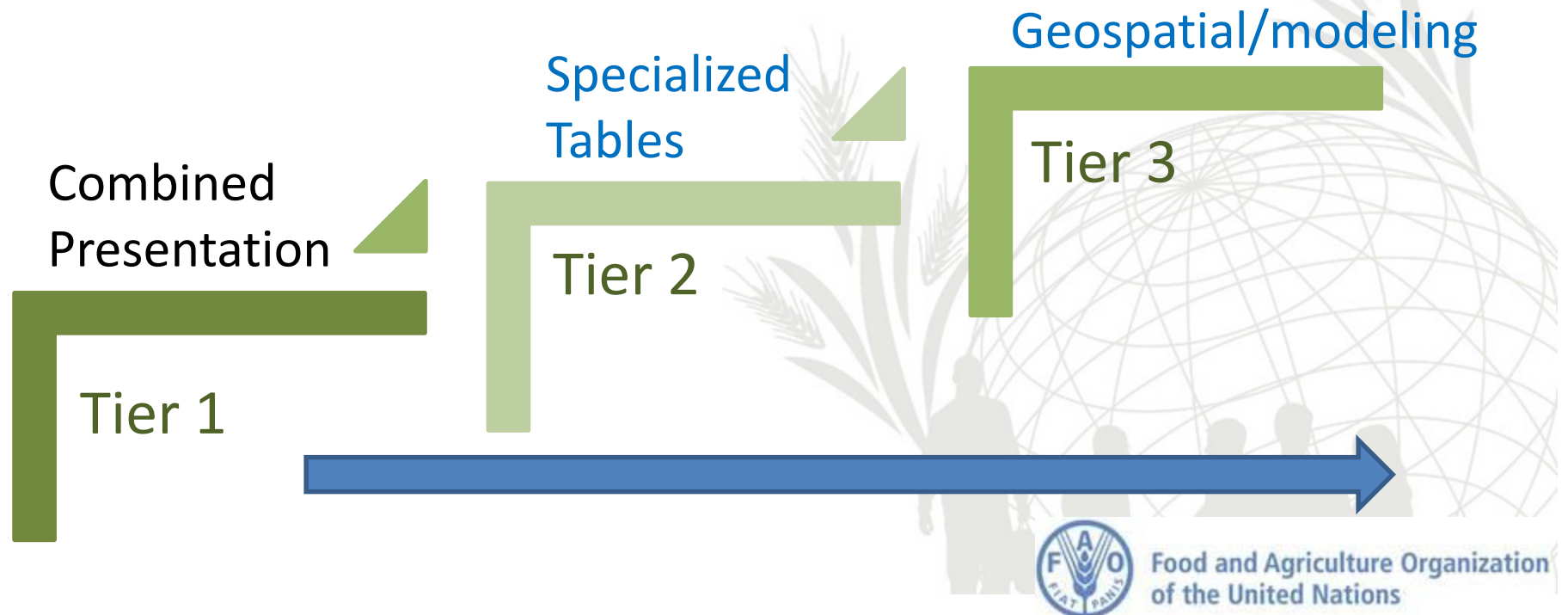
SEEA-Agriculture: Global Combined Presentation

- Environmental Impact:** The Global Combined presentation records environmental impacts from, e.g., use of synthetic and organic fertilizers, land use and land use change, water, etc. Examples of indicators already derived on GHG emissions per commodity, 1961-2013. FAOSTAT agri-environmental indicators to be derived through this table.

Outputs													Environmental Impacts		
Domestic production		Value added	GDP	Exports				Imports				Food Consumption/Nutrition		GHG Emission (CO2 eq) from Agriculture	
Production (000 T)		Gross Production Value (current million US\$)	Prices in constant 2005 million USD \$	USD million dollars (current)	M3	000 (Head)	(000 T)	Currency (1000 \$)	M3	000 (Head)	(000 T)	Currency (1000 \$)	Food (000 T)	Kcal/per capita/per day	(Gigagrams)
000T	M3														

SEEA-Agriculture: Combined Presentation and a Phased (Tiered) Approach

- Based on FAO capacity development experience, a global SEEA combined presentation can provide the starting point for working with countries in practical terms. Four dimensions of application: i) assessment of data gaps; ii) use as reference as starting point as well as QA/QC; iii) Provider of initial Indicators set



SEEA-Agriculture: implementation plans by FAO

- SEEA-Agriculture implementation activity to be complementary to the SEEA CF and relevant SEEA satellites (e.g., SEEA Water, SEEA Energy) activities
- Builds on FAO capacity development for agriculture statistics (including GS, regional statistical commissions, international climate processes), in support of the post-2015 Sustainable Development Goals (SDGs)
- The SEEA-Agriculture is a specific theme within FAO's Inter-Departmental Working Group on Statistics.



SEEA-Agriculture: Implementation by FAO

- Synthesis of lessons learned on existing pilots on feasibility of SEEA agriculture accounts.
- Additional piloting with practical implementations of SEEA-Agriculture activities are planned for 2016. Focus on specific tables (topics) based on country priorities
- Work on guidelines for country work in coordination with UNSD



SEEA-Agriculture, Forestry and Fisheries: Conclusions

- Ongoing progress on finalizing draft of SEEA Agriculture, with clear timelines and milestones towards submission to UNSC for adaption in Mar 2016
- Inclusion of additional global combined presentation facilitating a phased approach to development of SEEA tables and computation of initial indicators
- Planning of follow-up capacity development activities with countries building on FAO expertise in coordination with UNSD



Questions and discussion

- Does the UNCEEA agree with the proposed timeline and milestones towards submission to UNSC in 2016?
- Does the UNCEEA support new components on a global combined presentation and Tiers as relevant to the current draft?

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Thank You!



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