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

Food Security Indicators

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Food and Agriculture Organization of the United Nations

Connecting SEEA and Food security Indicators

- ✓ FAO development of a set of Food Security Indicators for internal analysis
- ✓ Linkage to FAO Food Security Indicators for SDGs Goal 2: “End hunger, achieve food security and improved nutrition and promote sustainable agriculture”
- ✓ Connection of FAO Food Security Indicators directly from SEEA-Agriculture, providing a link with SDGs

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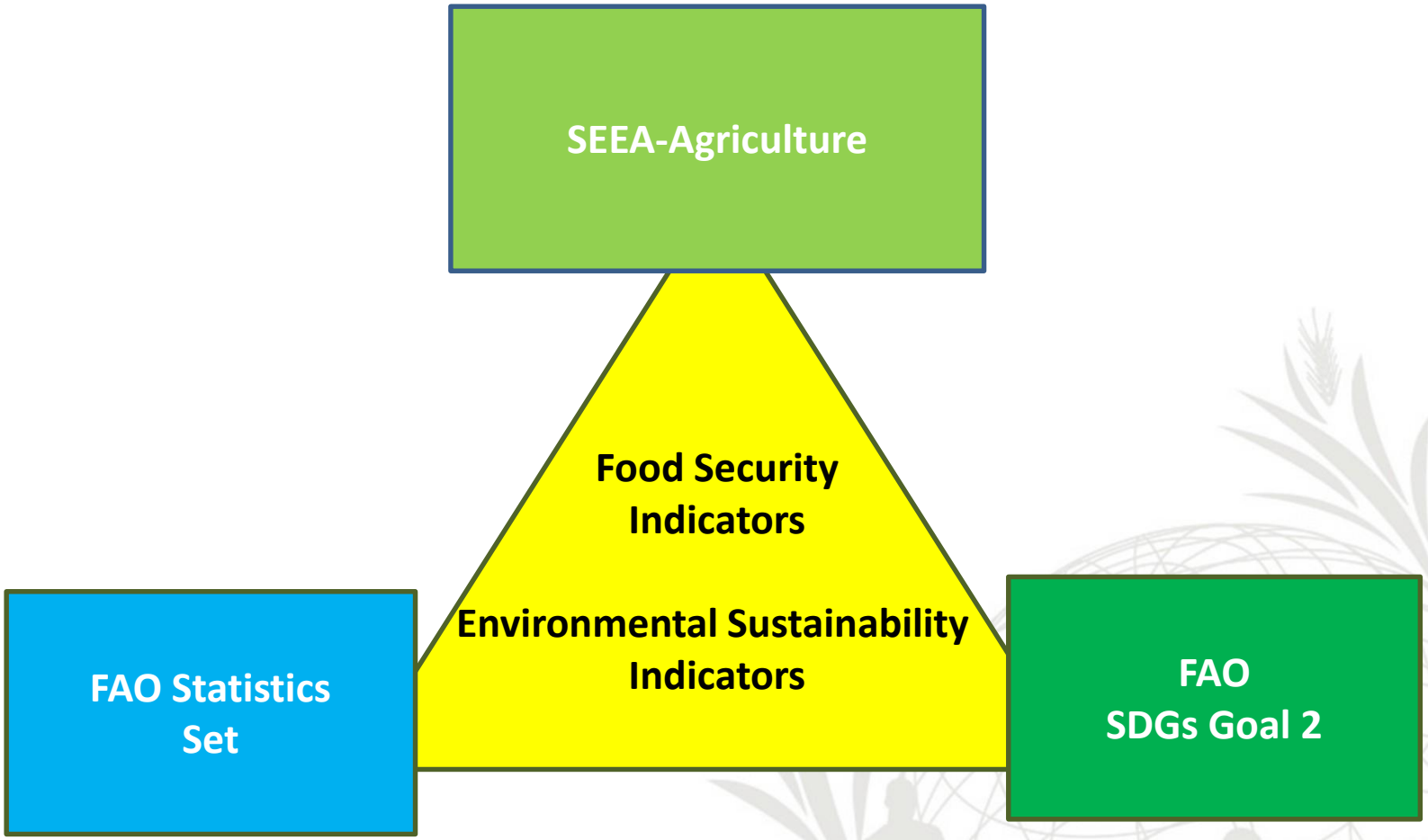
Connecting SEEA and Food security Indicators



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FAO Food Security Indicators and SEEA-Agriculture

- Following the recommendation of experts gathered at the Committee on World Food Security (CFS) Round Table on hunger measurement, hosted at FAO in September 2011, a set of indicators aiming to capture the four dimensions of food security (Availability, Access, Stability, Utilization) were developed by the FAO Statistics Division. Examples:

Type of indicator	Source	Coverage
Availability		
Average dietary energy supply	FAO	1990-2016
Average value of food production	FAO	1990-2013
Share of dietary energy supply derived from cereals, roots and tubers	FAO	1990-2011
Average protein supply	FAO	1990-2011
Average supply of protein of animal origin	FAO	1990-2011

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Type of indicator	Source	Coverage
Access		
Percent of paved roads over total roads	WB	1990-2011
Domestic food price index	FAO/ILO/WB	2000-2014
Prevalence of undernourishment	FAO	1990-2016
Depth of the food deficit	FAO	1990-2016
Prevalence of food inadequacy	FAO	1990-2016

FAO Food Security Indicators and SEEA-Agriculture

- Critical indicators can already be derived and expanded by SEEA-Agriculture, Global Combined Presentation:

  - ✓ Average Value of Food Production (Availability)
  - ✓ Share of dietary energy supply derived from cereals, roots and tubers (Availablity)
  - ✓ Prevalence of Undernourishment (Access)
  - ✓ Cereal import dependency ratio (Stability)
  - ✓ Per capita food supply and variability (Stability)

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SEEA-Agriculture Global Combined Presentation

Land | Assets | Inputs | Outputs | Impacts

SEEA-Agriculture Global Combined Presentation (Assets)

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 (Outputs and Impacts)

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														

Targets and Indicators for the SDGs and SEEA: Goal 2: Food Security Indicators

- In its "Targets and Indicators for the Sustainable Development Goals and the Post-2015 Development Agenda", FAO proposed indicators to monitor progress towards SDGs goals and targets.
- Examples for Goal 2 and direct linkages to SEEA-Agriculture include:

Target 2.1:	**By 2030, end hunger and ensure access by all people, in particular the poor and people in vulnerable situations, including infants, to safe, nutritious and sufficient food all year round**
Indicator 2.1.1	Prevalence of population with moderate or severe food insecurity, based on the Food Insecurity Experience Scale (FIES)
Indicator 2.1.2	Prevalence of Undernourishment (PoU)

Target 2.3:	**By 2030, double the agricultural productivity and incomes of small-scale food producers, in particular women, indigenous peoples, family farmers, pastoralists and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets and opportunities for value addition and non-farm employment**
Indicator 2.3.1	Value of production per labour unit (measured in constant USD), by classes of farming/pastoral/forestry enterprise size

Targets and Indicators for the SDGs and SEEA: Goal 2: Linking Food Security to Agri-environmental Indicators

- In its "Targets and Indicators for the Sustainable Development Goals and the Post-2015 Development Agenda", FAO has proposed indicators that could be considered for FAO to monitor progress towards a subset of SDGs and related targets. Examples for Goal 2:

Target 2.4: By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality

Indicator 2.4.1 Percentage of agricultural area under sustainable agricultural practices

Soil Quality, Land Cover and Land Use Change; Deforestation and Forest Degradation

Greenhouse gas emissions/removals, including per unit commodity

Water accounts; water stress indexes

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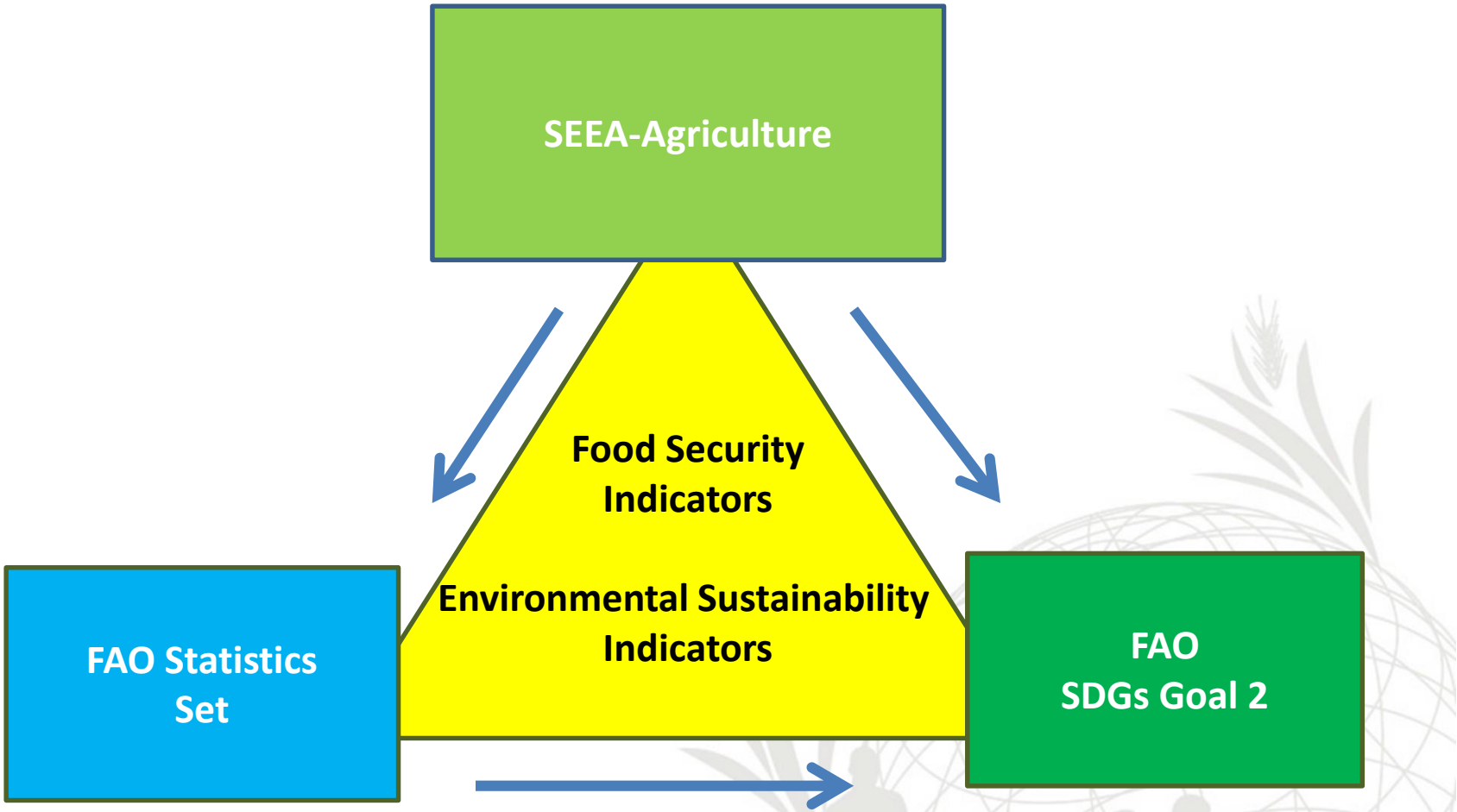
Connecting SEEA and Food security Indicators



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Conclusions

- Key Food Security Indicators developed by FAO, relevant to the SDG monitoring process, can be directly derived from SEEA-Agriculture Global Combined Presentation

- Others, including environmental sustainability variables, can be derived through more specialized SEEA-Agriculture Accounting Tables

- The linking process through SEEA Agriculture facilitated alignment across environmental databases at FAO, with new key connections between FAOSTAT and FRA

Questions and discussion

After this meeting:

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Thank You!

FAO Food Security Indicators and SEEA-Agriculture

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Type of indicator	Source	Coverage
Stability		
Cereal import dependency ratio	FAO	1990-2011
Percent of arable land equipped for irrigation	FAO	1990-2012
Value of food imports over total merchandise exports	FAO	1990-2011
Domestic food price volatility	FAO/ILO/WB	2000-2014
Per capita food production variability	FAO	1990-2013
Per capita food supply variability	FAO	1990-2011

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Type of indicator	Source	Coverage
Utilization		
Access to improved water sources	WHO/UNICEF	1990-2012
Access to improved sanitation facilities	WHO/UNICEF	1990-2012
Percentage of children under 5 years affected by wasting	WHO/UNICEF	1990-2014
Percentage of children under 5 years who are stunted	WHO/UNICEF	1990-2014
Percentage of children under 5 years who are underweight	WHO/UNICEF	1990-2014

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SEEA-Agriculture Global Combined presentation (Inputs)

SEEA-AGRI COMBINED PRESENTATION Global Level	Inputs						
	Irrigation Water	Energy Use	Synthentic Fertilizer			Manure (N content)	Pesticides
	(10^9 m3/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							