2nd Day -16 April 2016:

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

This presentation starts by introducing the Driving forces-Pressure-State-Impact-Responses conceptual model as a framework for organising information on the relationships between the environment and the socio-economic system.

Two perspectives on Nature's Assets taken in Environmental Accounting are then presented– the individual resources focus of the Central Framework (CF) and the more systemic view taken in the Experimental Ecosystem Accounts (linked to monetary and non-monetary evaluation of Ecosystem services).Details are provided on the kind of accounts – on assets and flows - present in the SNA and the SEEA. Their interrelation is shown and how they add value to existing statistical information highlighted.

The structure of the SEEA Central Framework is described and the accounts present in it is illustrated by referring to their kind and the specific themes dealt with.

The application of the SEEA CF to Agriculture, Forestry and Fisheries is dealt with thoroughly, by using the forest products and forestry activity example to illustrate the cross-cutting view that characterises the SEEA-Agriculture.

BACKGROUND MATERIAL/NOTES: SEEA-Agriculture (draft - 47th UNSC meeting)

http://unstats.un.org/unsd/statcom/47th-session/documents/BG-2016-8-SEEA-Agriculture-E.pdf

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

ENVIRONMENTAL AND ECONOMIC ACCOUNTING TRAINING

APRIL 15 – 17, 2016 – ENTEBBE, UGANDA

ENVIRONMENT – TEAM
FAO STATISTICS DIVISION

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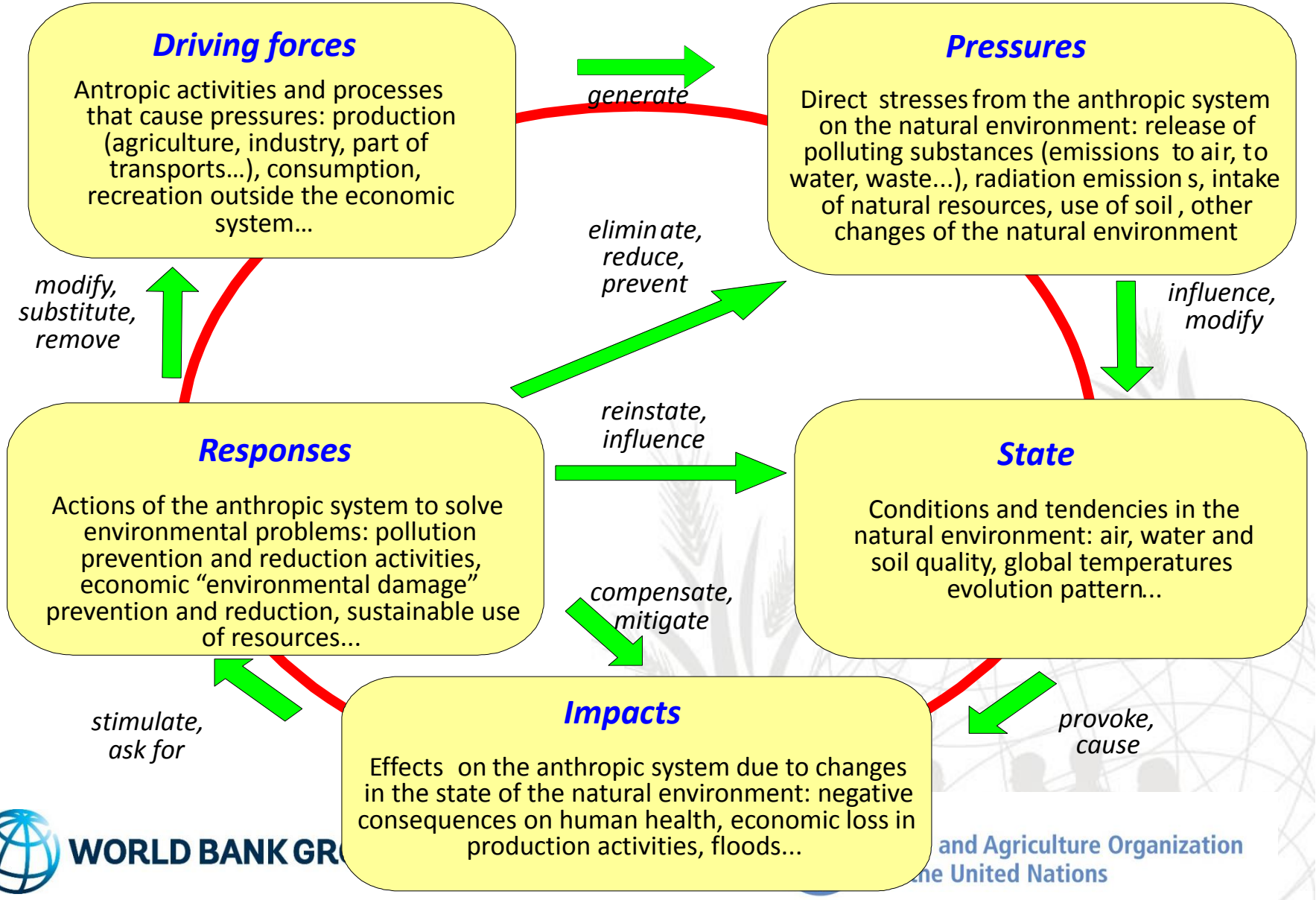
THE DPSIR FRAMEWORK



SUMMARY

- Basic SEEA-Central Framework (CF)/SEEA Agriculture concepts
  - Defining the environment
    - Individual Environmental Assets
    - The Ecosystem Accounts perspective
  - Sequence, kind of accounts
- Specific features of the SEEA for Agriculture, Forestry and Fisheries
    - Aims
    - Development process
    - Data domains, Cross-cutting approach
    - Accounting issues
    - The way forward: implementation

Defining the environment

Defining the environment: assets

Environmental assets are the naturally occurring living and non-living components of the Earth, together constituting the bio-physical environment, which may provide benefits to humanity"

2012 SEEA Central Framework 2.17

Many environmental assets are economic assets too!

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Environmental Assets and Ecosystems: two sides of the same coin

Individual environmental assets / resources

Timber

Water

Soil

Fish

Forests

Lakes

Agricultural areas

Ecosystems

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One Environment: Two Perspectives

SEEA
Central Framework:
Individual Environmental Assets/Resources

SEEA
Experimental Ecosystem Accounts:
Ecosystem Assets (spatially based)

Ecosystem Assets are environmental assets viewed from a systems perspective

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Scope of Individual Resources

1	**Mineral and energy resources**
1.1	Oil resources
1.2	Natural gas resources
1.3	Coal and peat resources
1.4	Non-metallic mineral resources (excluding coal and peat resources)
1.5	Metallic mineral resources
2	**Land**
3	**Soil resources**
4	**Timber resources**
4.1	Cultivated timber resources
4.2	Natural timber resources
5	**Aquatic resources**
5.1	Cultivated aquatic resources
5.2	Natural aquatic resources
6	**Other biological resources** (excluding timber resources and aquatic resources)
7	**Water resources**
7.1	Surface water
7.2	Groundwater
7.3	Soil water

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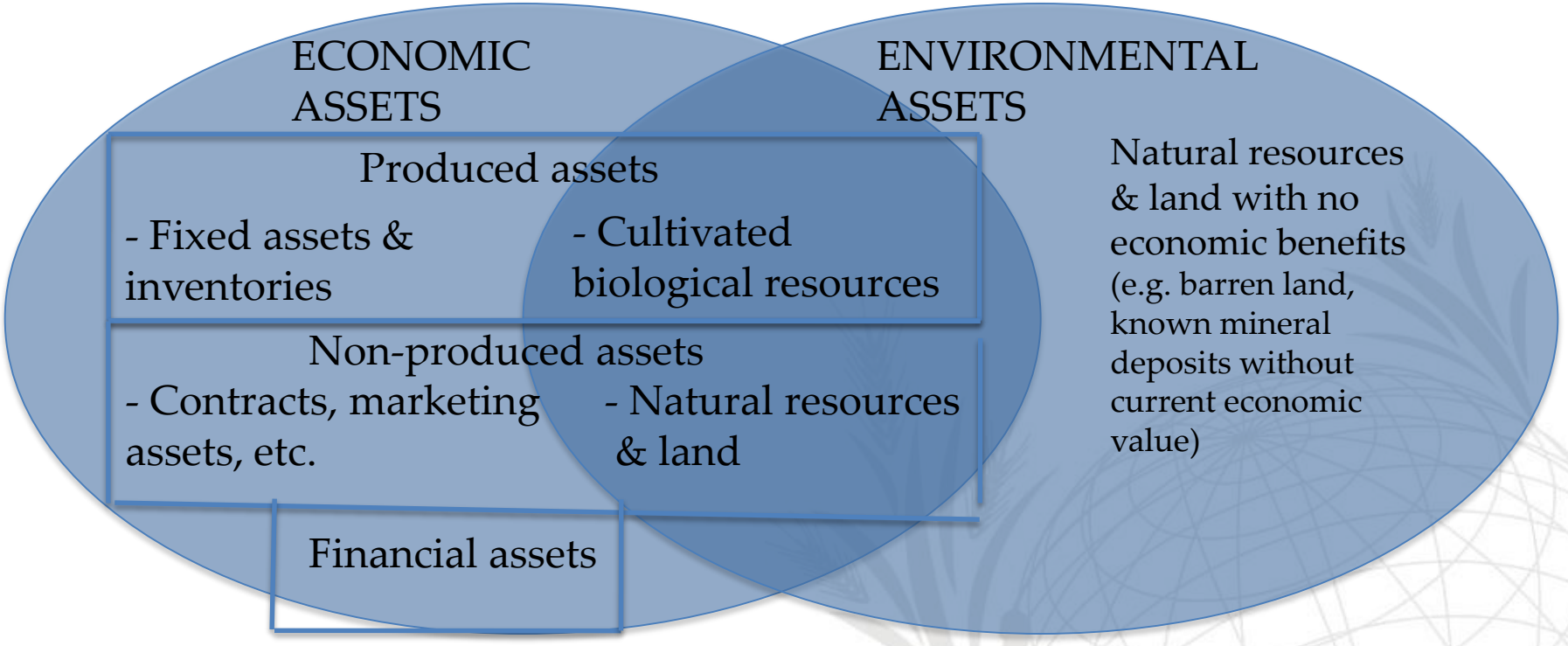
Economic and Environmental Assets



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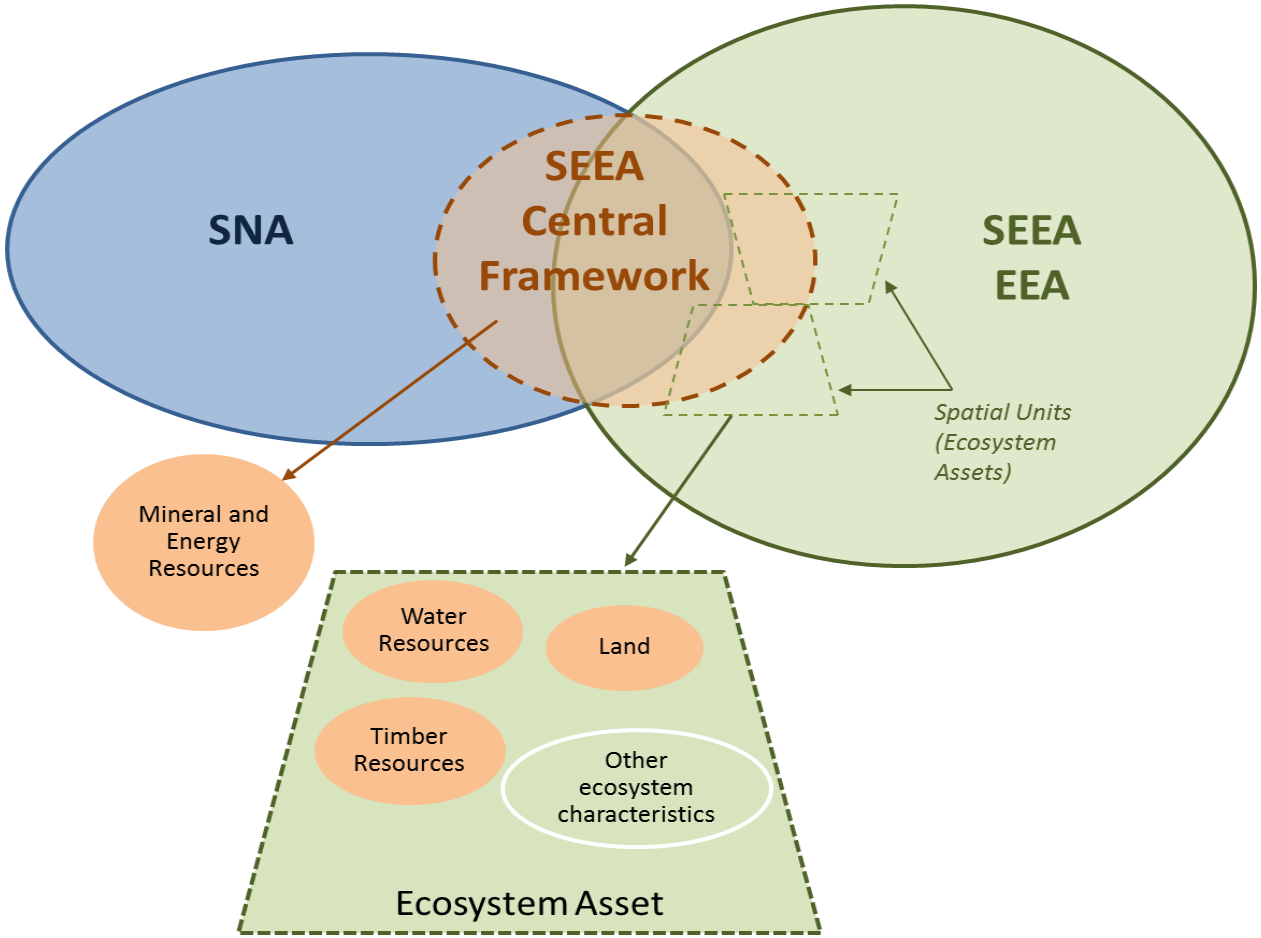
Physical and Monetary Scope

- In principle, when accounting for environmental assets in physical terms all environmental assets are included, **whether or not they have a monetary value**
  - > All land in a country is included in physical land accounts
  - > Also timber resources, other biological resources, soil, inland water resources
- Mineral and energy resources scope is known deposits
- Aquatic resources scope is all resources within EEZ plus rights on high seas
  - > In practice limit to commercial stocks and subsistence

SEEA Conceptual Framework



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Ecosystem Assets

- Areas comprising combinations of individual resources (timber, soil, water, etc) but also having ecological processes and characteristics
- Aim to assess
  - Condition of the ecosystem within an area (i.e. how is it functioning, quality of processes)
  - Flow of ecosystem services to economic and human activity
- Ecosystem asset accounting measures environmental impact rather than environmental pressures

SEEA Experimental Ecosystem Accounting

- An integrated measurement framework for ecosystem **stocks** (assets) and **flows** (services)
  - It covers "natural" as well as human-dominated systems such as croplands and intensive pastures
  - It takes a detailed spatial approach (maps and statistics)
- A synthesis of current knowledge on ecosystem services, ecosystem condition and related concepts
  - "Experimental" because significant measurement challenges remain and further testing of concepts is needed

Sequence and kinds of accounts in the SEEA-CF

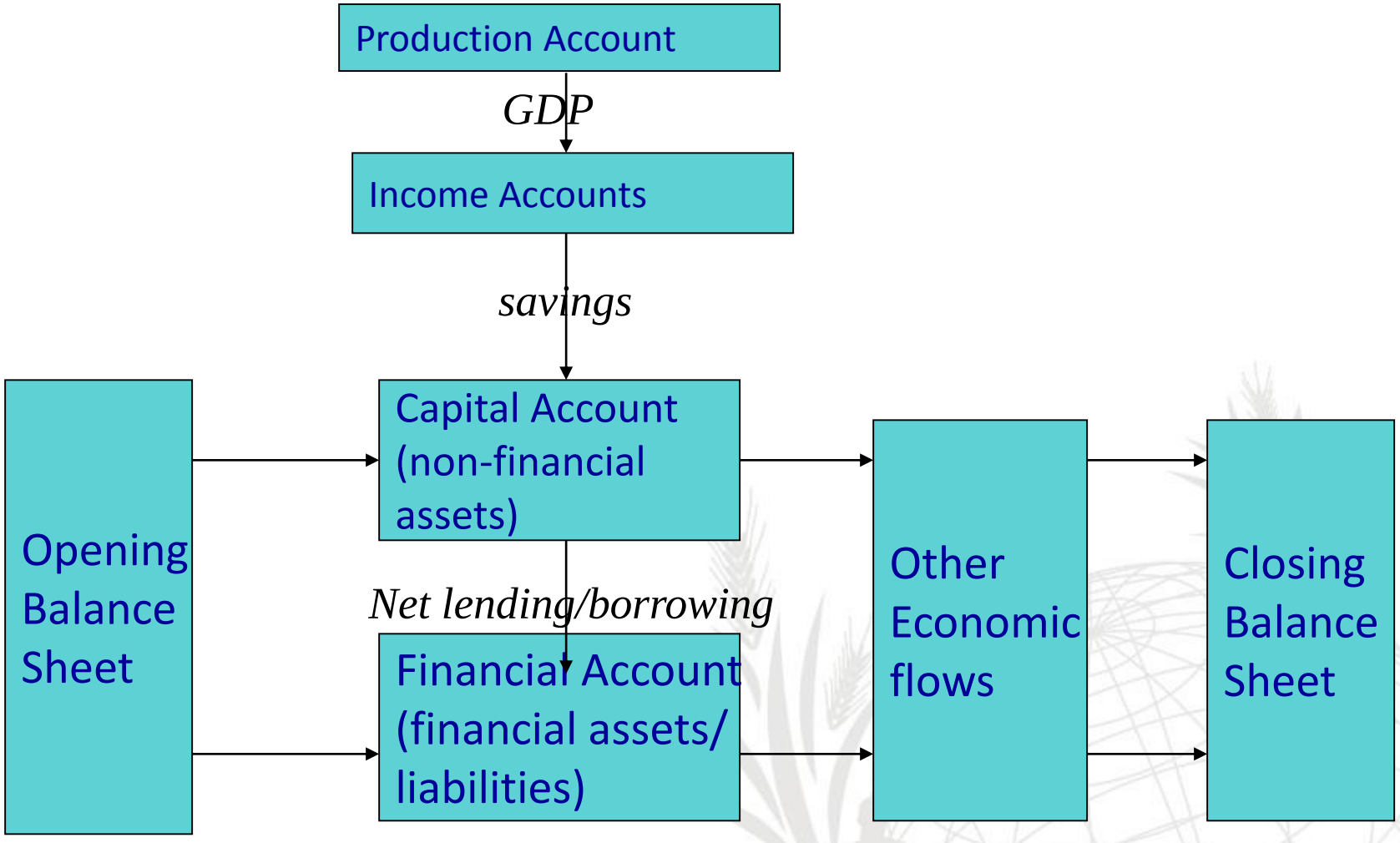
Sequence of Accounts

- **Flow accounts**, linked to different "moments" or "steps" of the economic activity taking place within a given period of time,
- together with **balance sheets** that record the values of the stocks of assets and liabilities held by institutional units or sectors at the beginning and end of the period

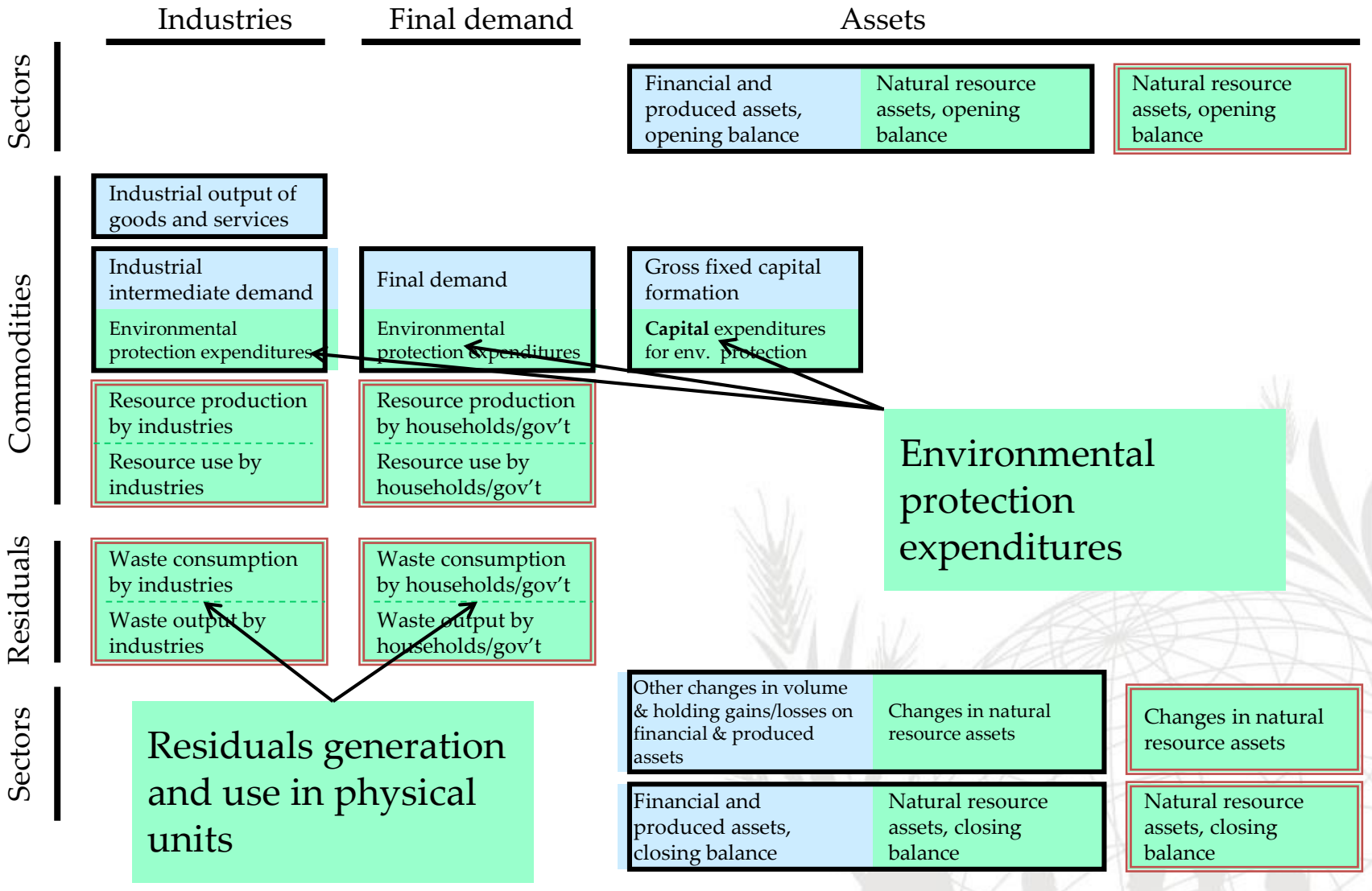
are shown in a logical sequence and interconnected

- The moments described are e.g. production, generation of income, its distribution and redistribution, its use, the accumulation of capital…

SNA Sequence of Accounts an their links



SEEA framework



SEEA framework

	Industries	Final demand	Assets	
Sectors			Financial and produced assets, opening balance	Natural resource assets, opening balance	Natural resource assets, opening balance
Commodities	Industrial output of goods and services			
	Industrial intermediate demand Environmental protection expenditures	Final demand Environmental protection expenditures	Gross fixed capital formation **Capital** expenditures for env. protection	
	Resource production by industries Resource use by industries	Resource production by households/gov't Resource use by households/gov't		
Residuals	Waste consumption by industries Waste output by industries	Waste consumption by households/gov't Waste output by households/gov't		
Sectors			Other changes in volume & holding gains/losses on financial & produced assets	Changes in natural resource assets	Changes in natural resource assets
			Financial and produced assets, closing balance	Natural resource assets, closing balance	Natural resource assets, closing balance

Output and intermediate consumption in physical units

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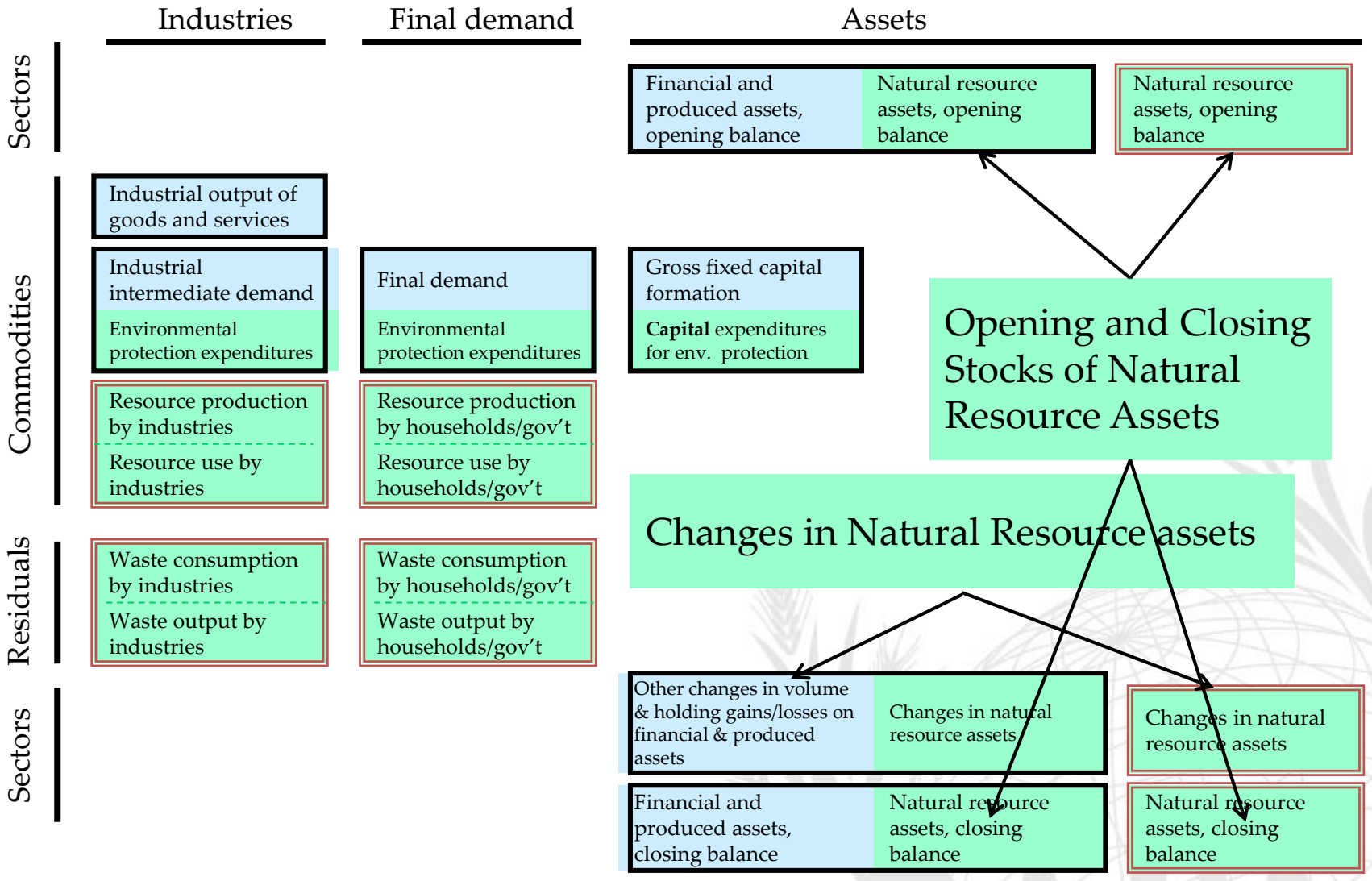
SEEA framework



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The SEEA Central Framework Accounts

1. **Flow accounts**: supply and use tables for products, natural inputs and residuals (e.g. waste, wastewater) generated by economic activities.
   - Mostly physical (e.g. m^2 of water)
2. **Stock accounts** for environmental assets: natural resources and land
   - physical (e.g. timber stocks and changes in stocks) and/or monetary values (e.g. value of natural capital, depletion)
3. **Activity / purpose accounts** that explicitly identify environmental transactions already existing in the SNA.
   - e.g. Environmental Protection Expenditure (EPE) accounts, environmental taxes and subsidies
4. **Combined physical and monetary accounts** bringing together physical and monetary information for the derivation indicators

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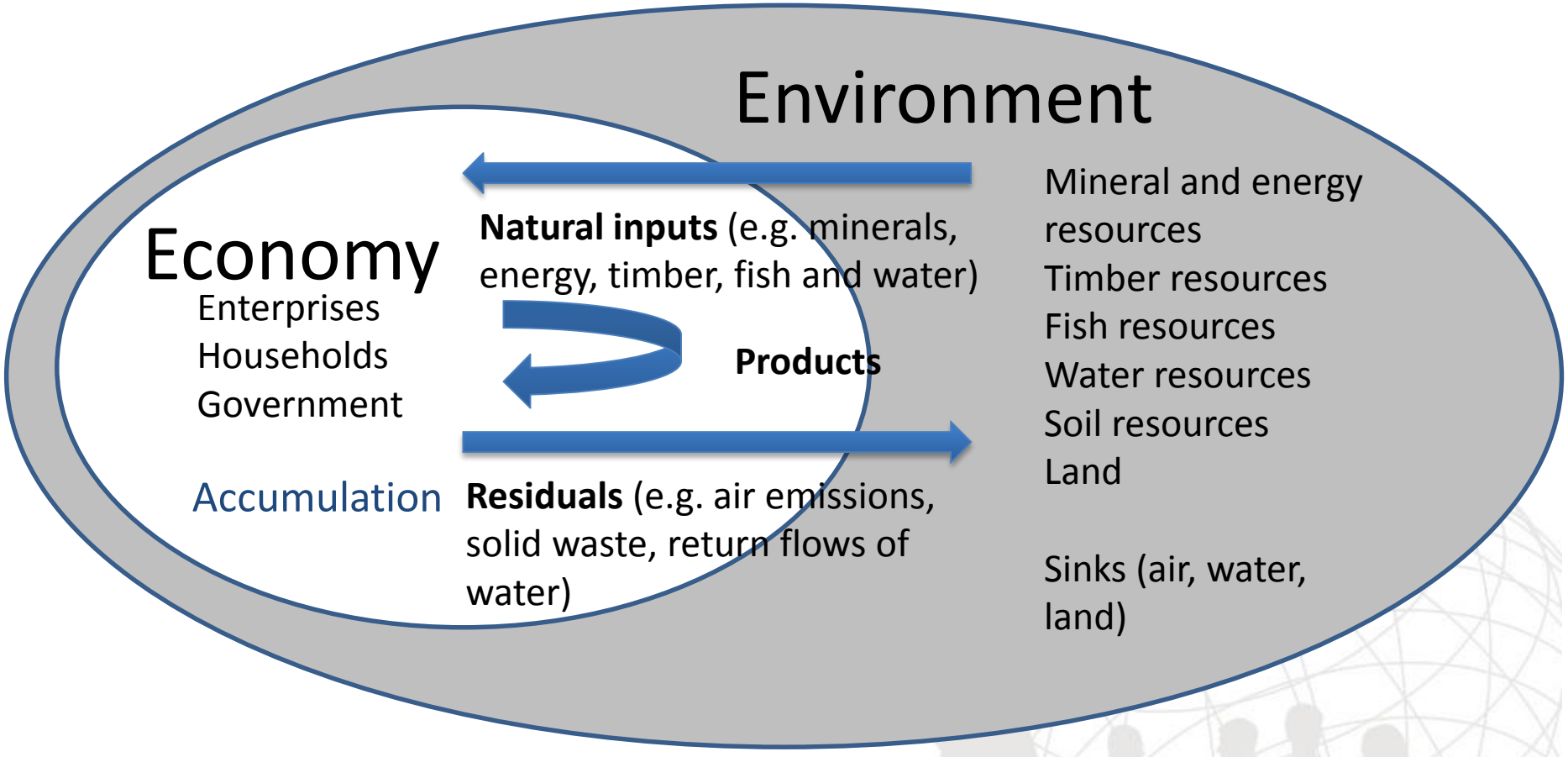
Physical Flows in the SEEA



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Supply and Use Tables

- Matrices that record how supplies of different kinds of goods and services originate from domestic industries and imports and how those supplies are allocated between various intermediate or final uses, including exports
- Used in the SEEA to describe flows of materials and energy, as well as of environment protection services
- Provide an accounting framework within which the product flow method of compiling national accounts, can be systematically exploited
  - Balancing of the total supplies and uses of individual types of natural inputs, products, residuals (physical, monetary)
- Allow the use of EnvironmentallyExtended Input-Output Analysis (EE-IOA) techniques

Basic National Accounts' Supply and Use Table

	Industries	Households	Government	Accumulation	Rest of the world	Total
Supply table						
Products	Output				Imports	Total supply
Use table						
Products	Intermediate consumption	Household final consumption expenditure	Government final consumption expenditure	Gross capital formation (incl. changes in inventories)	Exports	Total use
	Value added					

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Supply table extended to the environment

Shows the flows relating to the **production, generation, and supply** of *natural inputs, products and residuals* by different economic units by different economic units or the environment

Supply table

	Accumulation	Flows from the rest of the world	Flows from the environment	Total
	Industries - classified by ISIC			
Natural inputs			A. Flows from the environment (incl. natural resource residuals)	Total Supply of Natural Inputs (TSNI)
Products		D. Imports of products		Total Supply of Products (TSP)
Residuals	K1. Residuals from scrapping and demolition of produced K2. Emissions from controlled landfill sites	L. Residuals received from rest of the world	M. Residuals recovered from the environment	Total Supply of Residuals (TSR)
Total supply				

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Use table extended to the environment

Shows the flows relating to the **consumption and use** of *natural inputs, products and residual* by different economic units or the environment

Use table

	Accumulation Industries - classified by ISIC	Flows to the rest of the world	Flows to the environment	Total
Natural inputs				Total Use of Natural Inputs (TUNI)
Products	G. Gross Capital Formation (incl. fixed assets and inventories)	H. Exports of products		Total Use of Products (TUP)
Residuals	O. Accumulation of waste in controlled landfill sites	P. Residuals sent to the rest of the word	Q. Residual flows to the environment Q1. Direct from industry and households (incl. natural resource residuals & landfill emissions) Q2.Following treatment	Total Use of Residuals (TUR)
Total use				

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Specific SEEA Flow accounts

Physical flow accounts tons,	*Topics covered (unit)*
Supply and use tables for all materials	All resources and materials - minerals, energy, water, products, air emissions, water emissions, solid waste
Economy-wide material flow accounts (MFA)	Supply and consumption of virgin material resources; air emissions, water emissions, and solid waste (Tonnes)
Physical supply and use tables for water (PSUT water)	Abstraction, distribution, generation of return flows and destination of water in its various stages (mc)
Physical supply and use tables for energy (PSUT energy)	Supply and consumption of energy natural inputs, products, residuals (Joules)
Air emissions accounts	Air emissions - CO2, pollutants (T, CO2eq.)
Water emissions accounts	BOD/COD, solids, metals, P, N (Tonnes)
Waste accounts	Solid wastes by kind (Tonnes)

Integration of Asset Accounts and Supply and Use Tables (2/2)

						Asset accounts (Physical and monetary terms)	
		Industries	Households	Government	Rest of the world	Produced assets	Environmental assets
						Opening stock	
Monetary supply and use table	Product-supply	Output			Imports		
	Product-use	Intermediate consumption	Household final consumption expenditures	Government final consumption expenditures	Exports	Gross capital	
Physical supply and use table	Natural inputs-supply						Extracted natural resources
	Natural inputs-use	Inputs of natural resources					
	Product- supply	Output			Imports		
	Product-use	Intermediate consumption	Household final consumption		Exports	Gross capital formation	
	Residuals-supply	Residuals generated by industry	Residuals generated by household final consumption		Residuals received from the rest of the world	Residuals from scrapping and demolition of produced assets; emissions from controlled landfills	
	Residuals-use	Collection and treatment of waste and other residuals			Residuals sent to the rest of the world	Accumulation of waste in controlled landfills	Residuals flowing to the environment[a]
						Other changes in volume of assets (e.g., natural growth, discoveries, catastrophic losses)	
						Revaluations	
						Closing stock	

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Asset accounts

Asset accounts	*Topics covered*
Mineral and energy resources	Physical and monetary accounts for minerals and energy stocks (oil, natural gas, coal and peat, non-metallic minerals and metallic minerals)
Land	Physical and monetary accounts for land, land cover, land use and forest
Soil resources	Area and volume of soil resources
Timber resources	Physical and monetary accounts for timber resources
Aquatic resources	Physical and monetary accounts for fish, crustaceans, molluscs, shellfish and other aquatic organisms such as sponges and seaweed as well as aquatic mammals such as whales.
Other biological resources	Cultivated animals and plants including livestock, annual crops such as wheat and rice, and perennial crops such as rubber plantations, orchards and vineyards.
Water resources	Stock of water resources

General structure of the physical account for environmental assets (physical units)

	Mineral & energy resources	Land (incl. forest land)	Soil resources	Timber resources		Aquatic resources		Water resources
				Cultivated	Natural	Cultivated	Natural	
Opening stock of resources	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Additions to stock of resources								
Growth in stock	na	Yes*	Soil formation Soil deposition	Growth	Natural growth	Growth	Natural growth	Precipitation Return flows
Discoveries of new stock	Yes	na	na	na	na	Yes*	Yes*	Yes*
Upwards reappraisals	Yes	Yes	Yes*	Yes*	Yes*	Yes*	Yes	Yes*
Reclassifications	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Total additions to stock								
Reductions in stock of resources								
Extractions	Extractions	na	Soil extraction	Removals	Removals	Harvest	Gross catch	Abstraction
Normal reductions in stock	na	na	Erosion	Natural losses	Natural losses	Normal losses	Normal losses	Evaporation Evapotranspiration
Catastrophic losses	Yes*	Yes*	Yes*	Yes	Yes	Yes	Yes	Yes*
Downwards reappraisals	Yes	Yes	Yes*	Yes*	Yes*	Yes*	Yes	Yes*
Reclassifications	Yes	Yes	Yes	Yes	Yes	Yes	Yes	na
Total reductions in stock								
Closing stock of resources	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

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Environmental activity accounts

	Industries	Final demand	Assets	
Sectors			Financial and produced assets, opening balance	Natural resource assets, opening balance	Natural resource assets, opening balance
Commodities	Industrial output of goods and services			
	Industrial intermediate demand Environmental protection expenditures	Final demand Environmental protection expenditures	Gross fixed capital formation Capital expenditures for environmental protection	
	Resource production by industries Resource use by industries	Resource production by households/gov't Resource use by households/gov't		
Wastes	Waste consumption by industries Waste output by industries	Waste consumption by households/gov't Waste output by households/gov't		
Sectors			Other changes in volume & holding gains/losses on financial & produced assets	Changes in and holding gains/losses on natural resource assets	Changes in natural resource assets
			Financial and produced assets, closing balance	Natural resource assets, closing balance	Natural resource assets, closing balance

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Activity/purpose accounts

Monetary flow accounts	*Topics covered*
Environmental protection expenditure accounts (EPEA)	Output of EP services in economy and expenditures on EP goods and services by resident units
Resource use and management accounts (RUMEA)	Production, supply and use, expenditures on and financing of resource management
Environmental goods and services sector (EGSS)	Characteristics of all producers of products intended for environmental protection and resource management
Environmentally related payments by government	Environmental subsidies, social benefits to households, investment grants and other current and capital expenditures
Environmentally related payments to government	Environmental taxes (taxes on products, production and income; other current taxes and capital taxes) and other payments to government (rent, sales of some goods and services, some fines and penalties)
Permits and licenses to use environmental assets	Permits to extract and harvest natural resources
Emissions permits	Permits for the use of the environment as a pollution sink (emissions permits)
Costs related to termination of fixed assets	Environmental consequences of disposing of fixed assets (nuclear power plants, oil rigs and other equipment, landfills, mines, etc.)

Specific features of the SEEA for Agriculture, Forestry and Fisheries

SEEA

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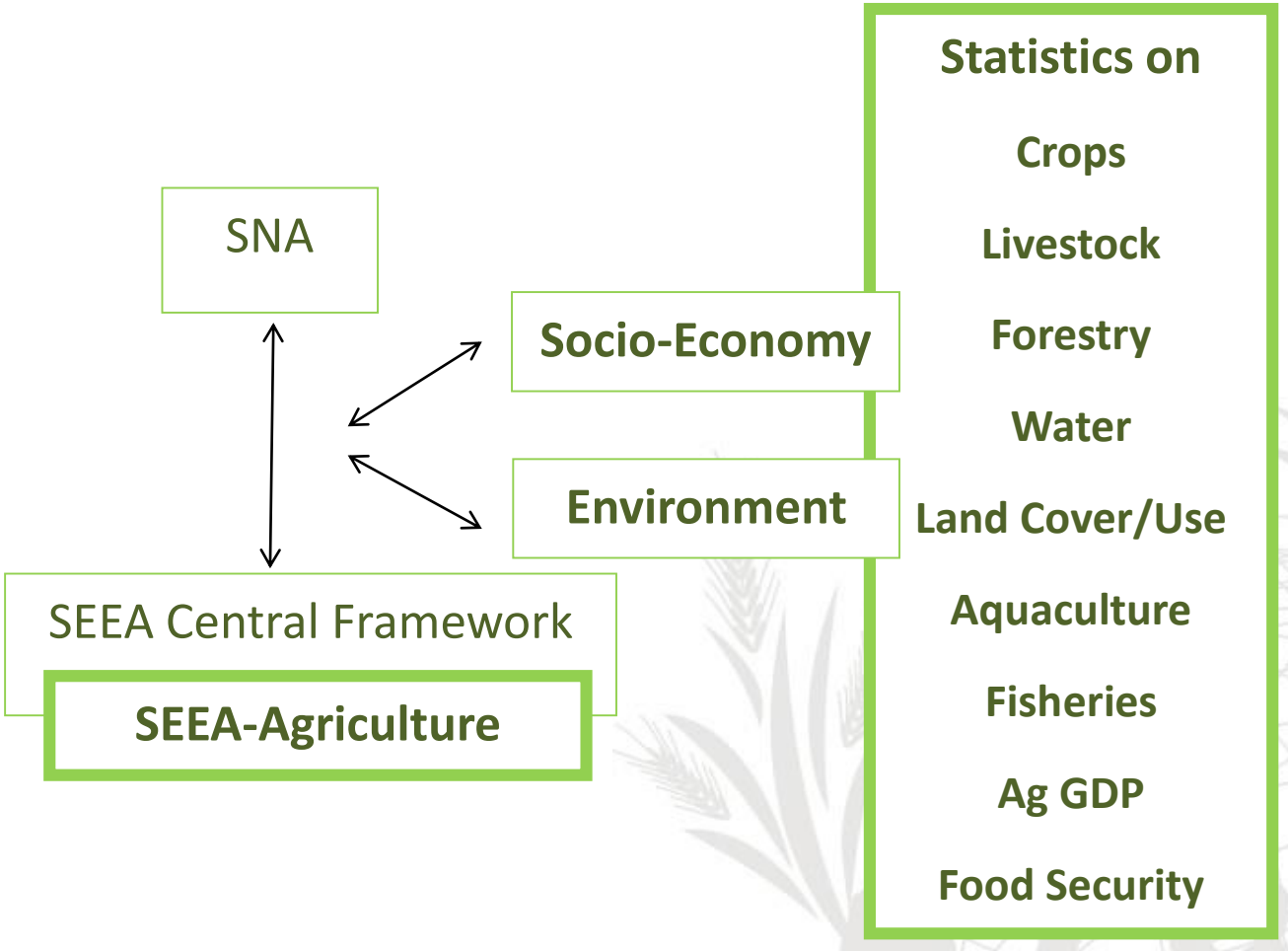
What is the SEEA-Agriculture?

The *System of Environmental-Economic Accounting for Agriculture, Forestry and Fisheries* is an ***application*** of the SEEA Central Framework to environmental and economic ***data domains*** specially relevant to ***Agriculture, Forestry and Fisheries activities.***

SEEA Agriculture Forestry and Fisheries



Aims of the SEEA-Agriculture

The *System of Environmental-Economic Accounting for Agriculture, Forestry and Fisheries* aims at

- helping ***organise*** and ***harmonise wide range of relevant statistics***
- in a ***coherent accounting framework***
- allowing the derivation of ***indicators and ratios based on the soundest statistics available***
- thus ***supporting the development of the statistical system***

and ultimately at

- ***supporting*** the design of ***policies for the sustainable development/management*** of these activities

What does the SEEA-Agriculture not do

The *SEEA for Agriculture, Forestry and Fisheries* does not

- ***Provide new basic data*** … although it may
  - ✓ Draw attention on areas needing greater **attention**
  - ✓ help identify **gaps** in currently available information
  - ✓ help identify and correct **inconsistencies** in existing data
  - ✓ provide **estimates** of certain figures, from balancing

- ***Suggest specific policy approaches*** **-** e.g. whether to develop subsistence or market agriculture

  … however, it does suggest **opportunities** (e.g. high-efficiency areas) and **constraints** (e.g. resources) that deserve attention in view of the implementation of the chosen policies

Main initial development steps

- Proposed by the FAO in 2010, endorsed by UNCEEA in 2011.
- Direct work commenced in June 2013
- Feasibility and usefulness tested in 2014 (Australia, Canada, Guatemala, Indonesia). New Pilot in Uruguay just commenced Oct 2015.
- Expert Group Meeting October 2014, discussion at UNCEEA and London Group, side event at UNSC March 2015
- First global consultation on draft SEEA Agriculture completed by March 2015;

Progress to date

- country implementation approach with Tiers presented at 10th UNCEEA Meeting (New York, Jun 2015); working draft published by the Global Strategy in August 2015.
- Additional informal expert consultations within and outside FAO leading to a Final Revised Draft for a 2nd Global Consultation Dec 2016-Jan 2017 in close coordination with UNSD, UNCEEA and SEEA-CF TC
- The 47th UNSC discussed it and
  - urged its revision by the UN Committee of Experts on environmental economic accounting (UNCEEA), given the "importance […] in support of the implementation of the SEEA Central Framework for the 2030 Agenda for Sustainable Development",
  - encouraged its "expedient implementation in countries"

Contents of the volume

Contents of the volume

SEEA Agriculture: data domains

- The SEEA Agriculture framework covers 10 broad data domains:

1	Agricultural products and related environmental assets
2	Forestry products and related environmental assets
3	Fisheries products and related environmental assets
4	Water resources
5	Energy
6	Greenhouse Gas (GHG) emissions
7	Fertilizers, nutrient flows and pesticides
8	Land
9	Soil resources
10	Other economic data

SEEA-Agriculture: Data domains base accounts

Data domains	Kind of account	Base accounts
Agriculture	Flows Assets	for crops for livestock products for plantations for livestock
Forestry	Flows Assets	for timber products for forests for timber resources
Fisheries	Flows Assets	for fish and aquatic products for fish and other aquatic resources
Water	Flows Assets	for water abstraction for water distribution and use for water resources
Energy	Flows	for energy use
GHG emissions	Flows	for greenhouse gas emissions
Fertilizers, pesticides	Flows	for fertilizers, for N and P (budgets), for pesticides
Land	Assets	for land use for land cover
Soil	Assets	for soil resources
Economic data	Flows (monetary)	Monetary SUT for agricultural, forestry and fisheries products Extended production and income account

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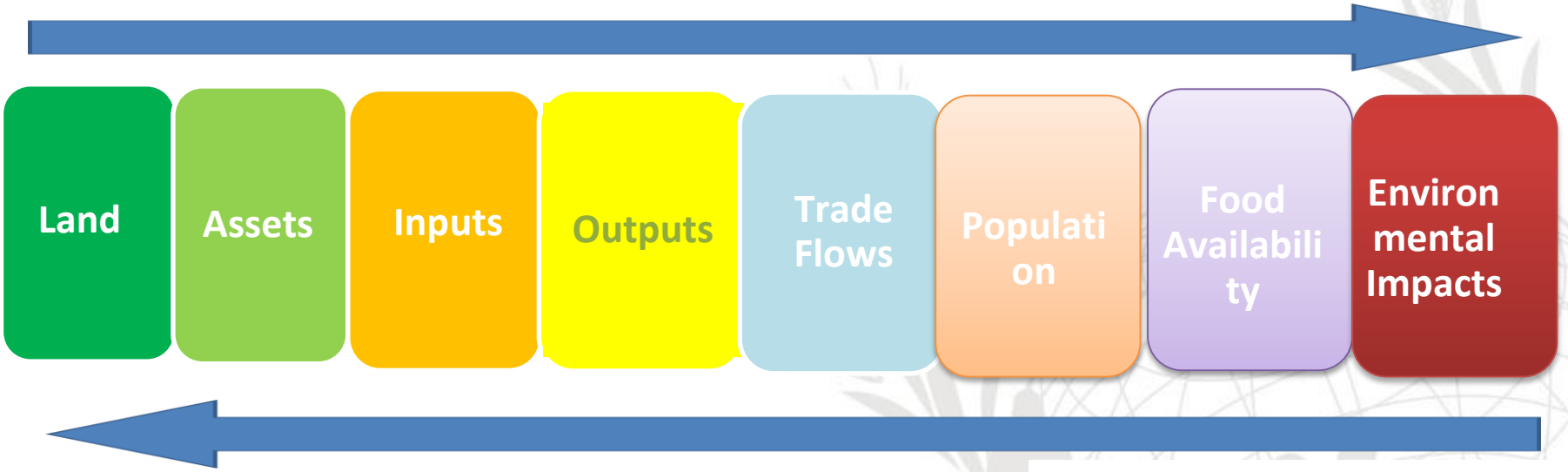
Cross-cutting view

- The SEEA Agriculture Forestry and Fisheries offers a cross cutting perspective of environmental and economic variables, and a coherent framework for analysis across relevant data domains: Land, Assets, Inputs, Outputs, Trade Flows, Population, Food availability and Environmental Impacts.



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Cross-cutting view: Forestry example

Data domains	Kind of account	Base accounts
Agriculture	Flows Assets	for crops for livestock products ***for plantations*** for livestock
Forestry	**Flows** **Assets**	**for timber products** **for forests** **for timber resources**
Fisheries	Flows Assets	for fish and aquatic products for fish and other aquatic resources
Water	Flows Assets	for water abstraction ***for water distribution and use*** for water resources
Energy	Flows	***for energy use***
GHG emissions	Flows	for greenhouse gas emissions
Fertilizers, pesticides	Flows	for fertilizers, for N and P (budgets), for pesticides
Land	Assets	***for land use*** ***for land cover***
Soil	Assets	for soil resources
Economic data	Flows (monetary)	Monetary SUT for agricultural, ***forestry*** and fisheries products Extended production and income account for… ***forestry*** …

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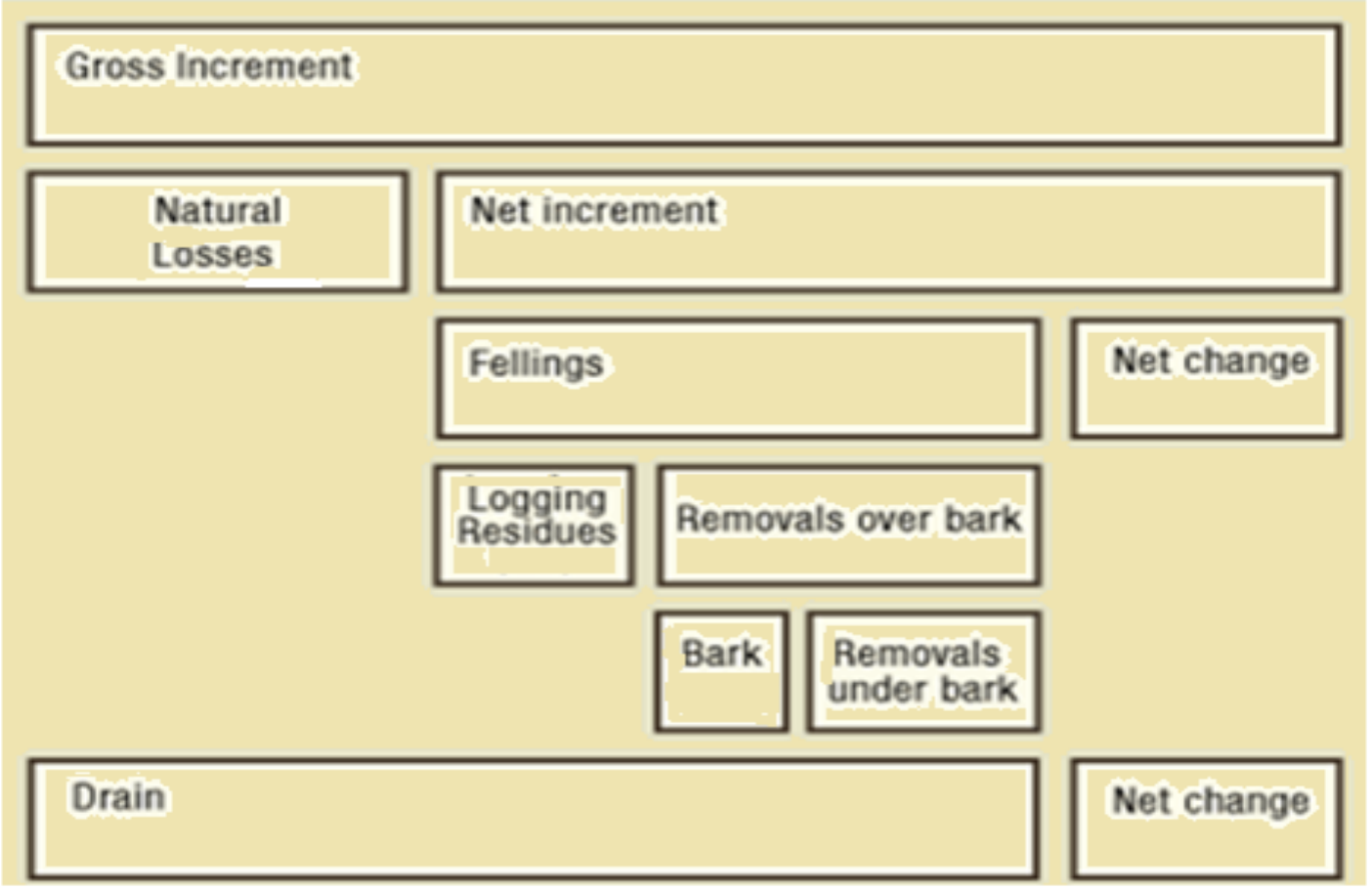
Forests in SEEA-Agriculture

- Complement to the SEEA-CF treatment
- Like the SEEA-CF, SEEA-Agriculture uses the FAO/FRA categories of forest land (however, in the broader land-use accounts land use for forestry is distinct from land use for other purposes, including env. maintainance)
- Asset Account for forests concerns areas of land identified as «forest» and «other wooded land»
  - «other land with tree cover» or «Woodland on agricultural land» excluded
  - «forested land» measured in accordance with FAO/FRA, based on land use rather than cover.
- Timber resources Asset Account records the volume of all marketable standing timber
- Physical Flow Account limited to timber (can be extended, though)
- Monetary data are SNA-consistent => no extensive text

Forestry concepts used for timber assets and product flows



(Päivinen et al. 1999)

Coordination example: timber resources physical tables

Table 3.7: Physical asset account for timber resources (cubic metres)

	Opening stock	Additions to stock			Reductions in stock						Net changes in stock	Closing stock
		Natural growth	Reclassi-fications	Total additions	Removals	Felling residues	Natural losses	Catastrophic losses	Reclassi-fications	Total reductions		
Type of timber resource												
Cultivated timber resources												
Natural timber resources												
Total												

SUPPLY TABLE

Product	Output			Total output	Imports	Total Supply
	Forestry activity (ISIC 021)	Logging activity (ISIC 022)	Other industries			
Net annual increment						
Gross fellings						
Felling residues (not removed)						
Removals (over bark)						
Bark						
Removals (under bark)						
Roundwood (under bark)						
of which Industrial roundwood						
Wood fuel						

Table 3.5: Physical flow account for timber products (cubic metres)

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Activity data in SEEA-Agriculture

Table 3.10 Monetary SU table for Agriculture, Forestry and Fisheries products

SUPPLY table headings

SUPPLY TABLE						
Ouput		Imports	Trade and transport margins	Taxes on products	less Subsidies on products	Total supply at purchasers prices
Agriculture, Forestry and Fisheries units	Non-Agriculture, Forestry and Fisheries units					
Total Agriculture						
Forestry products						
Forestry						
Logging						
Other forestry products						
Total Forestry						
Fisheries products						

Products (row headings)

USE TABLE					
Intermediate consumption	Household consumption	Gross fixed capital formation	Changes in inventories	Exports	Total Use at purchasers prices

USE table headings

Activity data in SEEA-Agriculture

Table 3.11 Extended production and income account

…

Total Agriculture
Forestry and logging
Forestry
Logging
Gathering non-wood forest products
Support services to forestry
Total Forestry and logging
Fisheries

…

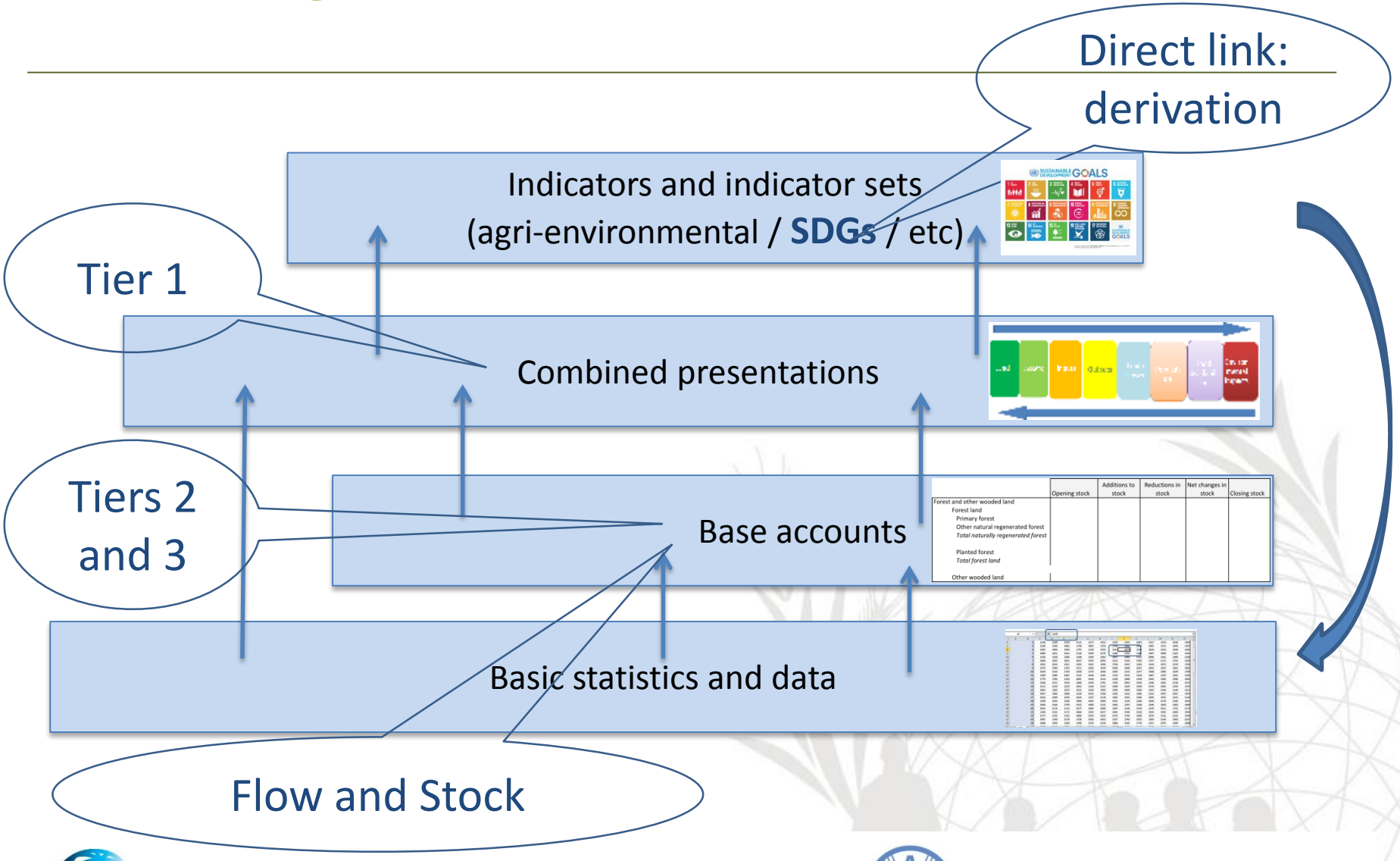
Row headings

Column headings

Output	Intermediate consumption					Gross value added	Compensation of employees	Gross operating surplus & Gross mixed income
	Water	Energy	Fertiliser	Other	Total			
(1)					(2)	(3) = (1)-(2)	(4)	(5) = (3) - (4)

Taxes less subsidies on production and imports	Gross fixed capital formation		Changes in inventories		Consumption of fixed capital (Depreciation)	Employment (000 people)
	Cultivated biological resources	Other produced assets	Cultivated biological resources	Other changes in inventories		
	(6)				(7)	(8)

SEEA-Agriculture and the data architecture



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Uses for detailed analysis and modelling

- The SEEA Agriculture can be used to compile environmentally extended Input-Output Tables, which are suited for a number of analyses concerning the indirect impacts of e.g. exogenous demand changes, structural decomposition of observed variations, calculation of "footprint" indicators and life cycle analysis
- Policy can be supported by SEEA-Agriculture through scenario analysis, simulation of policy outcomes, analysis of outcomes of policy
- Themes possibly supported include:
  - Activity- or product-specific use of inputs
  - Food product consumption, losses and waste
  - Bioenergy
  - Depletion of environmental assets
  - Land-use planning, trade-offs between alternatives involving environmental resources

Accounting Issues

- Scoping of products:
  - main (physical) outputs of ISIC rev. 4 01-03 Divisions
  - Distinction between primary and derived products
  - Forestry ≠ Logging
  - Fisheries include aquaculture
- Intra-unit flows Own-account production and use,
  - Usually not recorded in national accounting if not inter-activity (at ISIC group level)
  - Two standard exceptions: use for final consumption; use for capital formation
  - Principle of "exhaustive" recording of physical flows, also when use is in the same activity, introduced in SEEA-Agriculture. E.g. seeds for sowing, besides those for feeding, are counted (some of these flows are hardly visible in monetary transactions)

    => IN PHYSICAL TERMS, ALL FLOWS ARE RECORDED

Country Implementation: A Tiered Approach

- SEEA Agriculture will be implemented using a tiered approach:

Tier 1: Compilation of accounts using global datasets of official country data, such as those communicate to FAO and disseminated via FAOSTAT

- Based on official national data, thus useful for data gap analysis and QA QC of more advanced accounting methods
- Designed as entry point for accounting
- Less detail, focus on organising data for derivation of indicators
- Basis for cross-country comparison

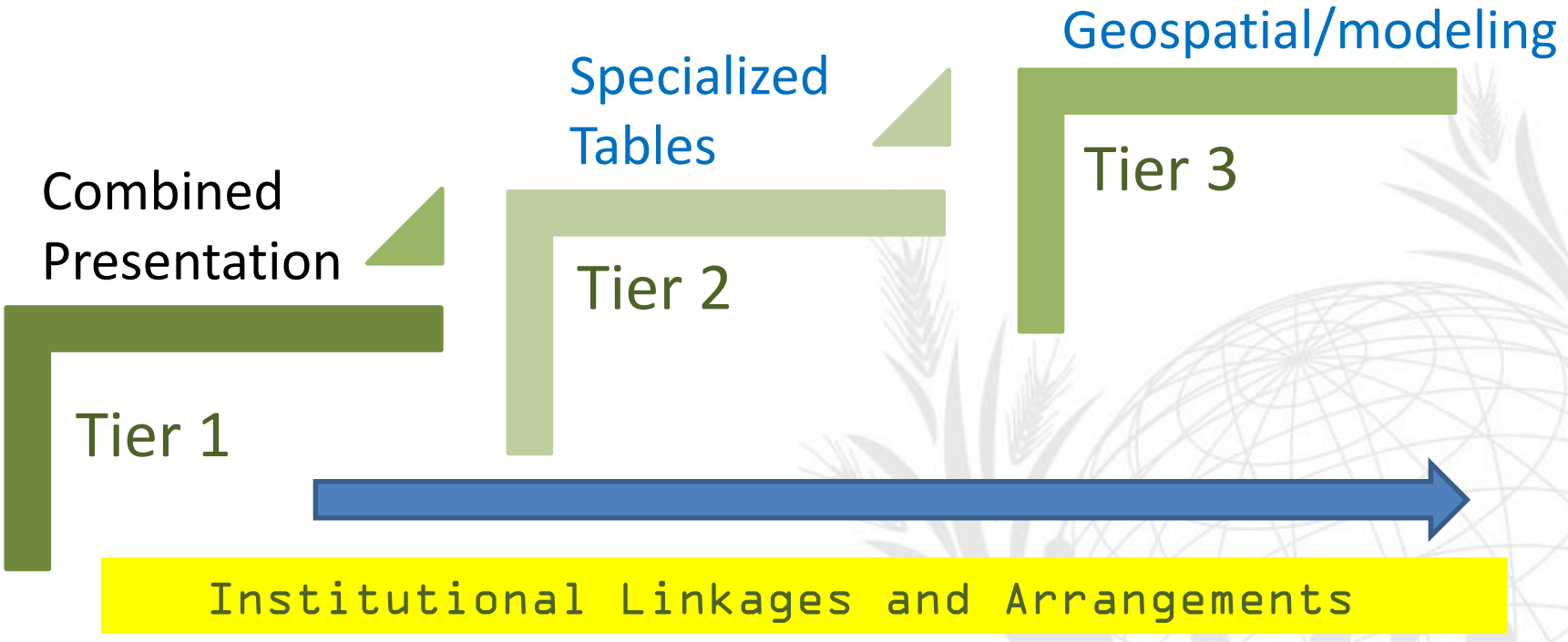
Tier 2: Use of available national level data

- Provide a platform for integration of data from multiple agencies
- Additional detail and broader coverage compared to Tier 1
- Additional analytical potential and national relevance

A Phased Tiered Approach for national processes

Tier 3: Full implementation

- Likely to require additional data collection
- Extend to sub-national, geo-spatial data
- Build progressively, perhaps develop Tier 3 accounts as benchmarks



SEEA Agriculture: Research agenda

- Build applications of the SEEA Experimental Ecosystem Accounting to agriculture, forestry and fisheries;
- Work on the treatment of crop residues and other unused biomass from agricultural activities;
- Clarify the precise links between the different approaches to land classification;
- Further discuss accounting for soil water and soil resources;
- Elaborate an accounting approach to the whole supply chain of biomass products, including "downstream" uses of agriculture, forestry and fishery products and waste generated thereof;
- Further clarify the treatment of emissions/removals in the land use, land use change and forestry in the SEEA, and developing measures of environmentally adjusted productivity
- … .

Ongoing implementation

- Uruguay commenced Pilot testing (soil and forests) in Oct 2015
- Netherlands is independently testing
- Kirgizystan volunteered – will start later this year
- New countries sought!

- Draft Guidelines based on practical experience planned by Dec 2016

Thank you!

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WORLD BANK GROUP

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