

Overview of other accounts

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Outline

- Environmental protection expenditure accounts
- Environmental taxes
- Solid waste and water emissions
- Carbon stock account

We will briefly cover these accounts!

Environmental Protection Expenditure Accounts



What are environmental activities?

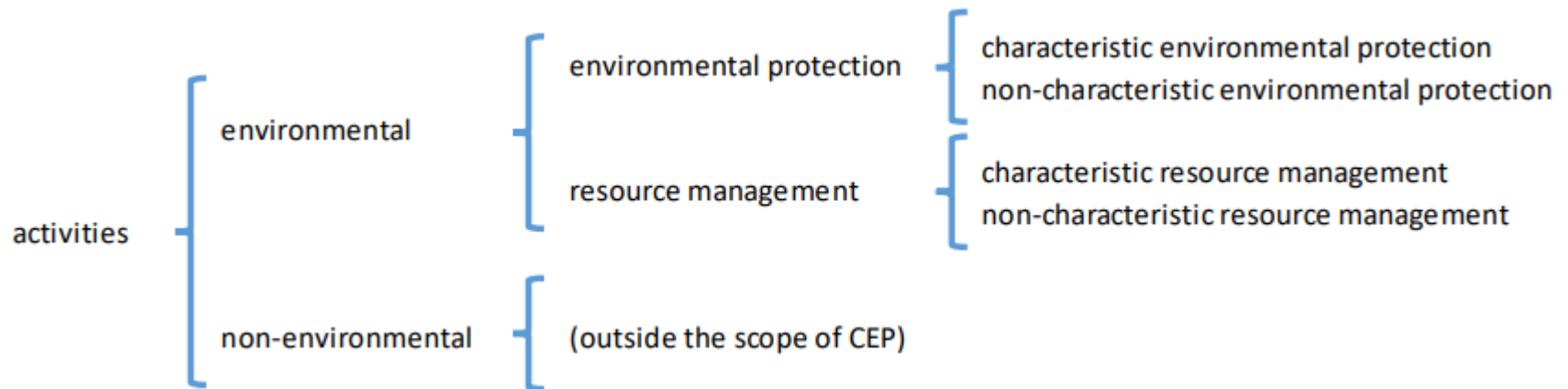
- * Environmental activities are the economic activities whose purpose is to reduce or eliminate pressures on the environment or to make more efficient use of natural resources.
- * Environmental protection activities are the first part of that definition: economic activities whose purpose is to reduce or eliminate pressures on the environment
 - > E.g. Waste management services; production of noise and heat insulating materials
- * Goal is to identify those expenses that are incurred for environmental protection activities.

Classification on environmental purposes (CEP)

- * Environmental purpose to classify environmental activities, environmental products and environmental expenditures
- * CEP adopted as international statistical classification by UN Statistical Commission in March 2024
- * To identify environmental protection activities, we use the primary purpose criterion
 - > Can be difficult in practice; often we consider the technical nature of the activity (regardless of what might have been the primary purpose)

Classification of environmental purposes divisions
01 Air and climate
02 Energy
03 Wastewater and water resources
04 Waste, materials recovery and savings
05 Soil, surface and groundwater, biodiversity and forest
06 Noise and radiation
07 Research and development
08 Cross-cutting and other environmental purposes

What are we measuring?



- * Characteristic EP activities: Waste and wastewater management services; monitoring of exhaust gas emissions; operation of equipment to clean exhaust gases at power plants;
- * Non-characteristic EP activities: Construction of waste treatment plants; production of noise and heat insulating materials; production of equipment to reduce air pollution

Bringing it all together

- * We have talked about WHAT.
- * We also need to identify WHO is undertaking the EP activities:
 - > specialist producer: primary activity is the production of environmental goods and services (e.g., private companies dealing with waste collection and processing)
 - > non-specialist producers: produce environmental goods and services for sale, although this is not their primary activity (e.g., manufacturing sectors investing in pollution prevention technologies)
 - > own-account producers

Environmental taxes



Definitions

- * Taxes are compulsory, unrequited payments, in cash or in kind, made by institutional units to government units.
 - > Taxes on products
 - > Other taxes on production
 - > Taxes on income
 - > Other current taxes
 - > Capital taxes

Definitions

- * An environmental tax is a tax whose tax base is a physical unit (or a proxy of it) of something that has a proven, specific, negative impact on the environment
 - > Energy taxes
 - Taxes on fuel used for transport (e.g., petrol, diesel)
 - Carbon taxes
 - Other energy taxes
 - > Transport taxes
 - Ownership and use of cars
 - > Pollution taxes
 - Emissions to water and air (other than carbon), solid waste
 - > Resource taxes
 - Taxes on water abstraction, taxes of sand and gravel, etc.

Environmental taxes by type of tax

Environmental taxes by type of tax

Type of environmental tax	Type of tax						Total
	Taxes on products	Other taxes on production	Taxes on income		Other current taxes	Capital taxes	
			Corporations	Households			
Energy taxes	10 800	1 500				300	12 600
Carbon taxes	4 600						4 600
Taxes on fuel used for transport	4 700						4 700
Other energy taxes	1 500	1 500				300	3 300
Transport taxes	2 600	800			1 400	100	4 900
Pollution taxes	400	500			200		1 100
Resource taxes	200	400			300		900
Total environmental taxes	14 000	3 200			1 900	400	19 500
Non-environmental taxes	79 000	15 400	23 000	74 000	5 800	1 600	198 800
Total taxes	93 000	18 600	23 000	74 000	7 700	2 000	218 300
Share of environmental taxes (percentage)	17.7	20.8	0.0	0.0	32.8	25.0	9.8

Approach

Starting point: All government levies (national, subnational)

- * Identification of tax base(s); environmentally-related levies
- * Distinction between environmental taxes and environmentally related payments
- * Allocation to environmental tax groups
- * Allocation to the final tax payer

Data Sources: Tax statistics, government finance statistics, national accounts

Emissions to water and solid waste



What are we accounting for?

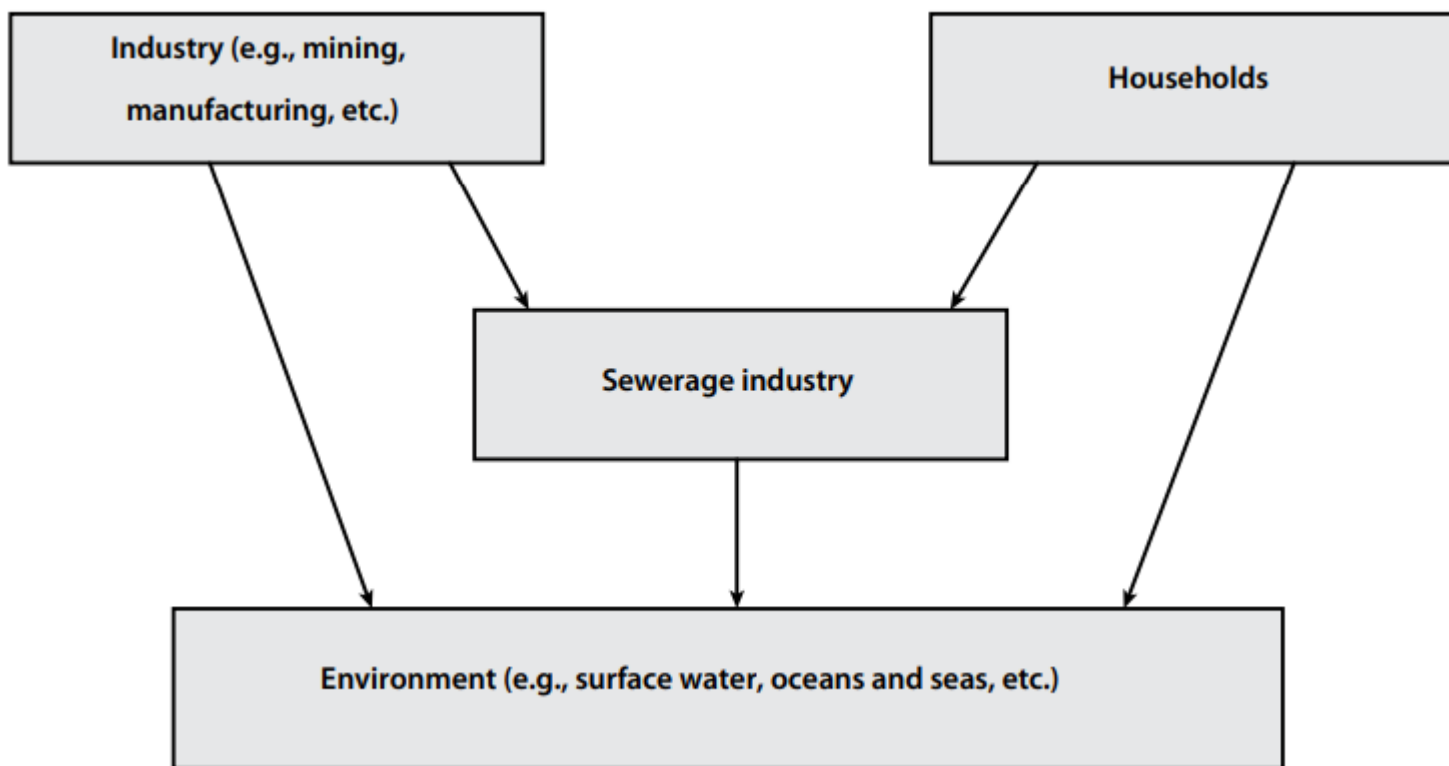
Emissions to water are substances released to water resources by establishments and households as a result of production, consumption and accumulation processes

What substances should we include?

- * BOD/COD
- * nitrogen,
- * phosphorus
- * total suspended solids
- * heavy metals

Other hazardous substances should be included based on country needs

Flows of emissions to water



Structure of PSUT

Structure should reflect data and indicator needs

Rows: different pollutants (adopt as needed)

Columns:

- * ISIC used for industry classification
- * Environment can be further separated by different resource

BOD/COD^a

Suspended solids

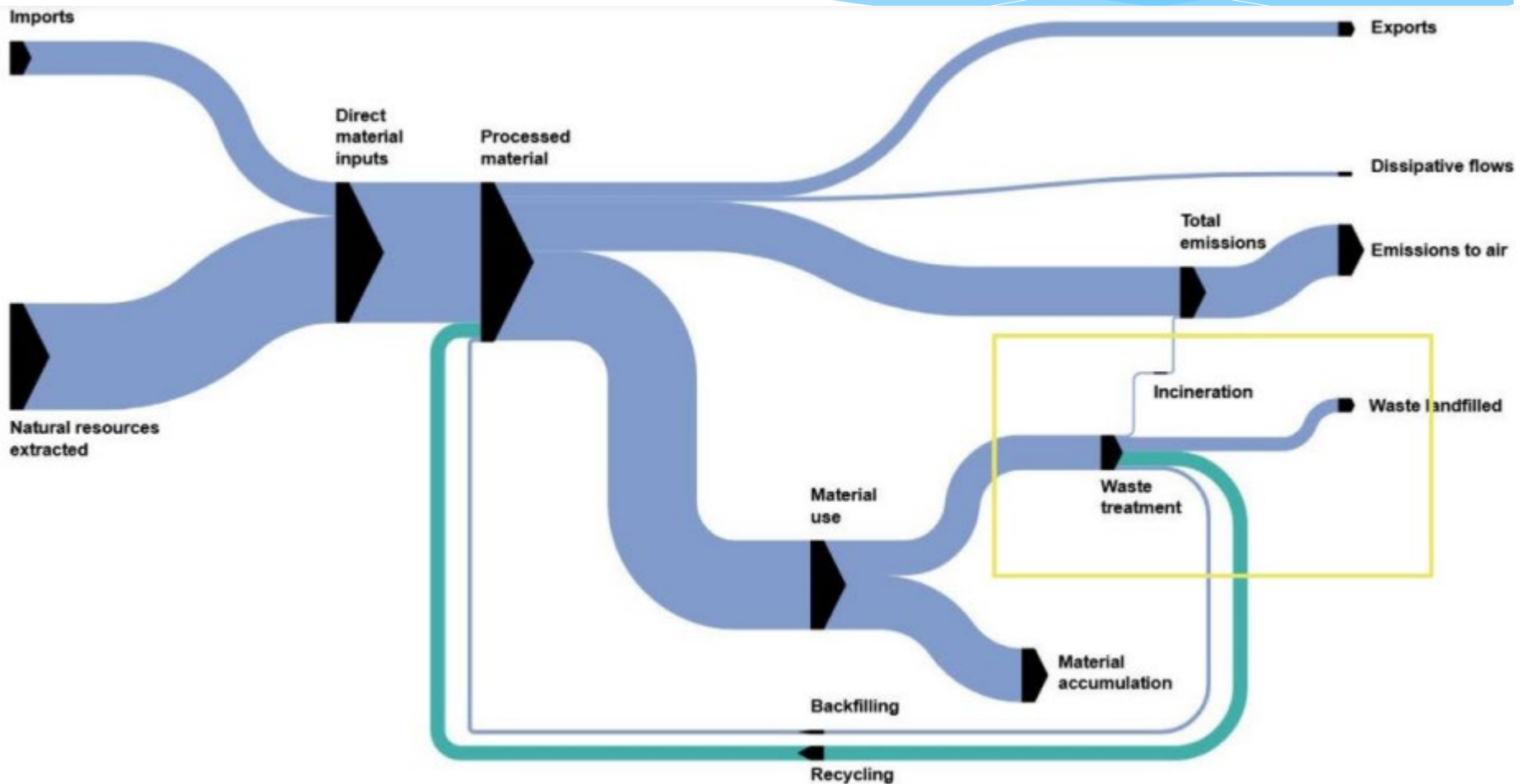
Heavy metals

Phosphorus

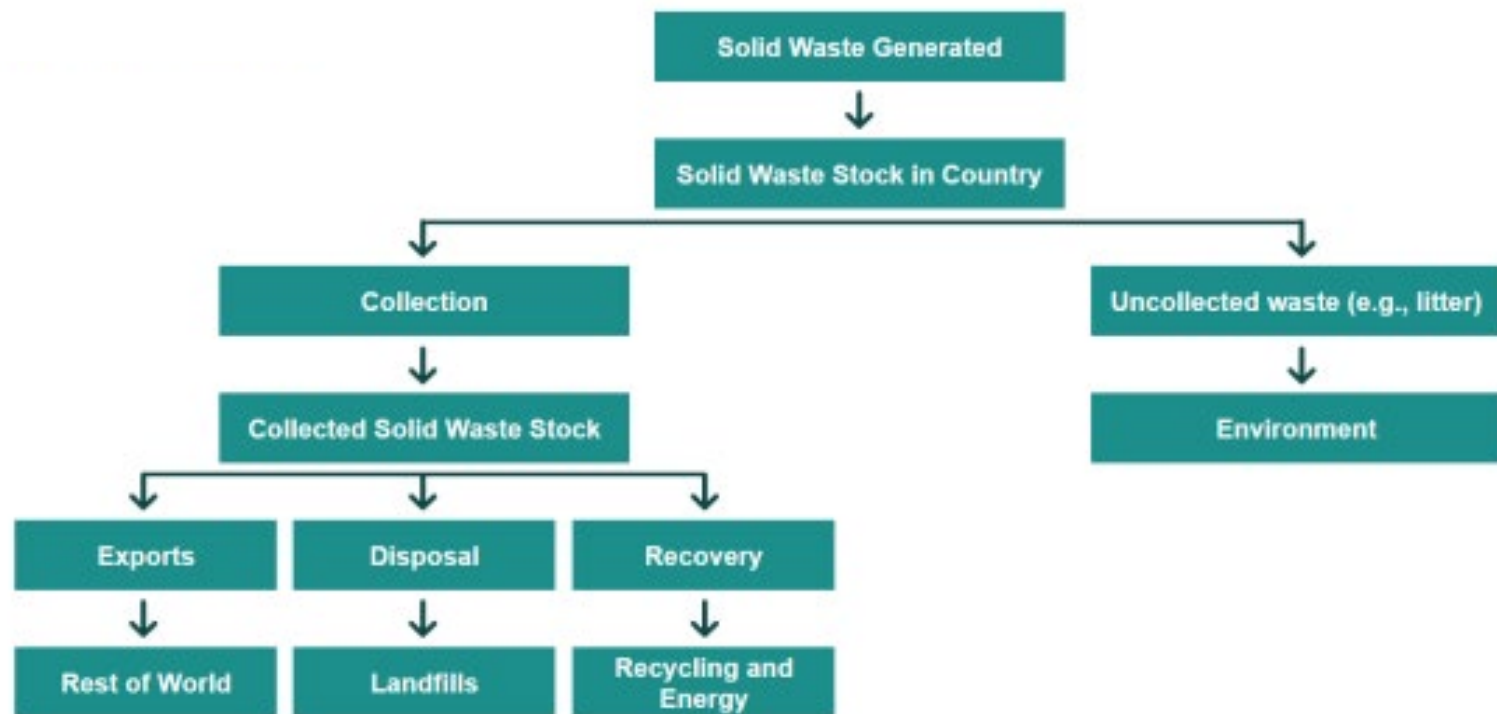
Nitrogen

Generation of gross releases to water			Accumulation	Flows with the rest of the world	Flows from the environment	Total supply
Sewerage industry	Other industries	Households	Emissions from fixed assets			

Waste accounts focus on one area of material flows (we discussed EW-MFA on Monday)



Simplified schematic of solid flow waste



Supply and use tables for waste track residuals and products separately

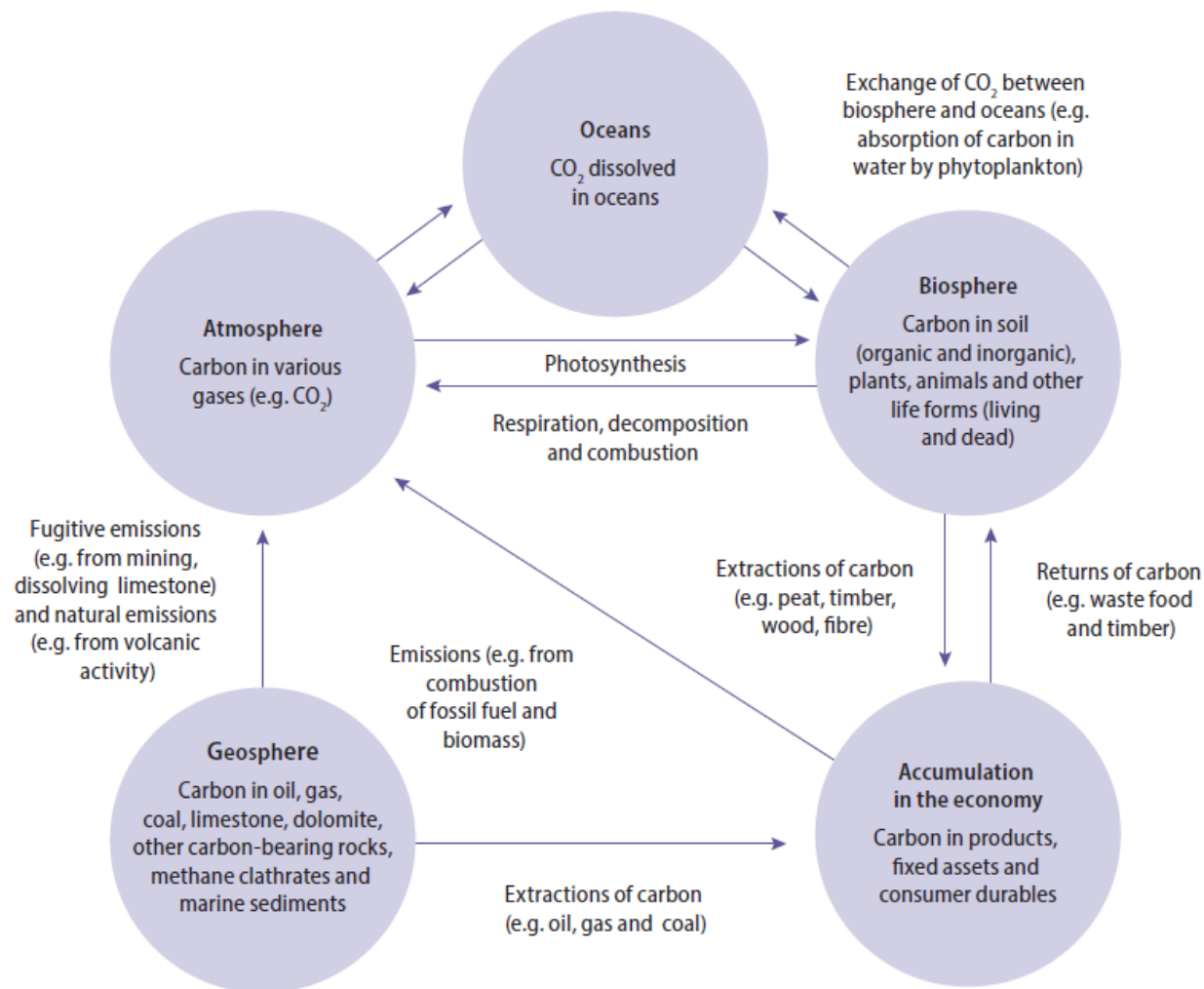
Physical supply table for solid waste									
Generation of solid waste						Rest of the world	Flows from the environment	Total supply	
Waste collection, treatment and disposal industry				Other industries	Households	Imports of solid waste	Recovered residuals		
Landfill	Incineration	Recycling and reuse	Other treatment						
Total	Of which: Incineration to generate energy								
Generation of solid waste residuals									
Chemical and healthcare waste									
Other wastes									
Generation of solid waste products									
Chemical and healthcare waste									
Other wastes									

Physical use table for solid waste									
Intermediate consumption; Collection of residuals						Final consumption	Rest of the world	Flows to the environment	Total use
Waste collection, treatment and disposal industry					Other industries	Households	Exports of solid waste		
Landfill	Incineration	Recycling and reuse	Other treatment						
Total	Of which: Incineration to generate energy								
Collection and disposal of solid waste residuals									
Chemical and healthcare waste									
Other wastes									
Use of solid waste products									
Chemical and healthcare waste									
Other wastes									

Carbon stock account



Main components of the carbon cycle



Accounting for carbon in the SEEA

- Ecosystem service accounts
 - Global climate regulation service
- Thematic accounts
 - Carbon stock account—We will focus on this today
- Land accounts
 - Land Use, Land-Use Change and Forestry (LULUCF)
- SEEA CF update to include carbon flows and carbon stocks

Carbon Stock Account

- Comprehensive coverage of all relevant carbon stocks and changes in stocks
 - Covers geosphere, biosphere, atmosphere, oceans and economy
- Note: broader in coverage than global climate regulation (e.g. includes oceans) and broader than SEEA EA (i.e., economy)
- Especially useful for land-use policies and ocean policy
 - Record depletion of carbon and resulting CO₂ emissions due to land use conversion or changes due to ocean policies
 - Indicate what land could be prioritized through reforestation/restoration to restore carbon stocks

Structure of carbon stock account

	Geocarbon					Biocarbon			Carbon in the economy			Carbon in the oceans	Carbon in the atmosphere	Total
	Oil	Gas	Coal	Limestone and marl	Other	Terrestrial	Freshwaters and saline wetlands	Marine	Inventories	Fixed assets, consumer durables	Waste	Total	Total	
Opening stock														
Additions to stock														
Unmanaged expansion														
Managed expansion														
Discoveries														
Reclassifications														
Imports														
Reductions in stock														
Unmanaged contraction														
Managed contraction														
Reclassifications														
Exports														
Catastrophic losses														
Net carbon balance														
Closing stock														

Thank you

