System of Environmental Economic Accounting

Online Course on SEEA Experimental Ecosystem Accounting

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Introduction

- Purpose of the online training
  - To help participants acquire knowledge and skills to deepen their understanding of the accounting principles and basic data needs for compiling ecosystem accounts and valuing ecosystem services based on the SEEA Experimental Ecosystem Accounting (SEEA EEA)
  - To become acquainted with the various biophysical modeling tools and global data resources;
- Components of the online training
  - Self-paced online training modules
  - Live webinars

Self-paced online training module

- Consisted of 8 modules
  i. Module 1: Key concepts
  ii. Module 2: Spatial units
  iii. Module 3: Ecosystem extent
  iv. Module 4: Ecosystem condition
  v. Module 5: Ecosystem services
  vi. Module 6: Carbon accounting
  vii. Module 7: Water accounting
  viii. Module 8: Biodiversity accounting

- Available in English and Spanish
- Accessed through the e-Learning Platform of the United Nations Statistics Division (https://elearning-cms.unstats.un.org/

SEEA EXPERIMENTAL ECOSYSTEM ACCOUNTING - VIRTUAL CLASSROOM FOR SEPTEMBER-NOVEMBER 2018 (ENGLISH)

Live webinar sessions to support the SEEA Experimental Ecosystem Accounting online training course between September and November 2018.

ABSTRACT

As part of the Regional Training Programme on the SEEA Experimental Ecosystem Accounting for Countries of Latin America and the Caribbean between September and November 2018, participants are expected to attend an online course to assure a common level of technical knowledge on the SEEA EEA. In addition to the self-paced online modules, there will be eight online live sessions (webinars) with SEEA EEA experts that can be found here.

Enroll

Return to course category page

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Live webinar schedule

	Topic	Date	Presenter
1	General introduction to SEEA and ecosystem accounting	18 September	Julian Chow, UNSD
2	Spatial units and ecosystem extent account	25 September	Statistics Canada
3	Ecosystem condition account	2 October	Joachim Maes, EU JRC
4	Ecosystem services	12 October	Lars Hein, Wageningen University
5	Valuation	16 October	Rocky Harris, UK DEFRA
6	Ecosystem accounts in the Netherlands	23 October	Sjoerd Schenau, Statistics Netherlands
7	Modelling techniques	30 October	Bethanna Jackson, University of Wellington
8	Policy aspects of ecosystem accounting	6 November	UN Environment

General Introduction to SEEA and ecosystem accounting

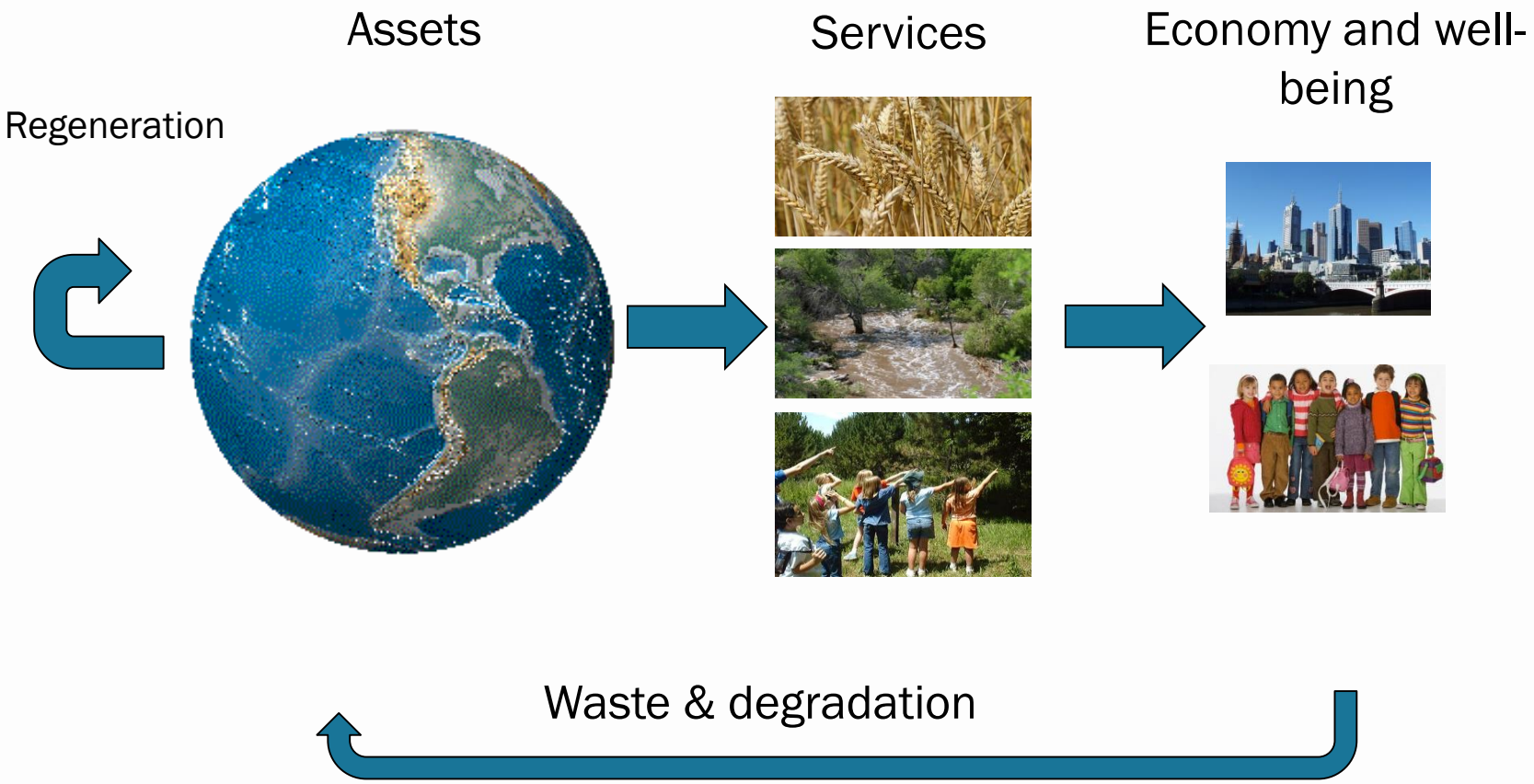
SEEA

Outline

- Overview of the System of Environmental Economic Accounting (SEEA)
- Introduction to SEEA Experimental Ecosystem Accounting
  - > Accounting for ecosystem extent
  - > Accounting for ecosystem condition
  - > Accounting for ecosystem services
  - > Thematic accounts
- Status of SEEA implementation

Overview of the SEEA

Measuring sustainability



Legal and political commitments

- 1992: CBD Aichi Targets (Target 2)
- 1992: Agenda 21 (Rio)
- 2012: The Future we Want (Rio+20)
- 2015: 2030 Agenda for Sustainable Development and the Sustainable Development Goals
- European Legislation
- Natural Capital Accounting

The System of Environmental Economic Accounting (SEEA)

- An internationally agreed statistical framework to measure the environment and its interactions with economy
- The SEEA Central Framework was adopted as an international statistical standard by the UN Statistical Commission in 2012
- The SEEA Experimental Ecosystem Accounting complement the Central Framework and represent international efforts toward coherent ecosystem accounting

The SNA and SEEA: Systems of integrated information

Natural Capital Accounting

Individual environmental **assets & resources:**

Timber
Water
Soil
Fish

Ecosystems: Biotic and abiotic elements functioning together:

Forests
Lakes
Cropland
Wetlands

SEEA Central Framework (SEEA_CF) starts with economy and links to physical information on natural assets, flows and residuals

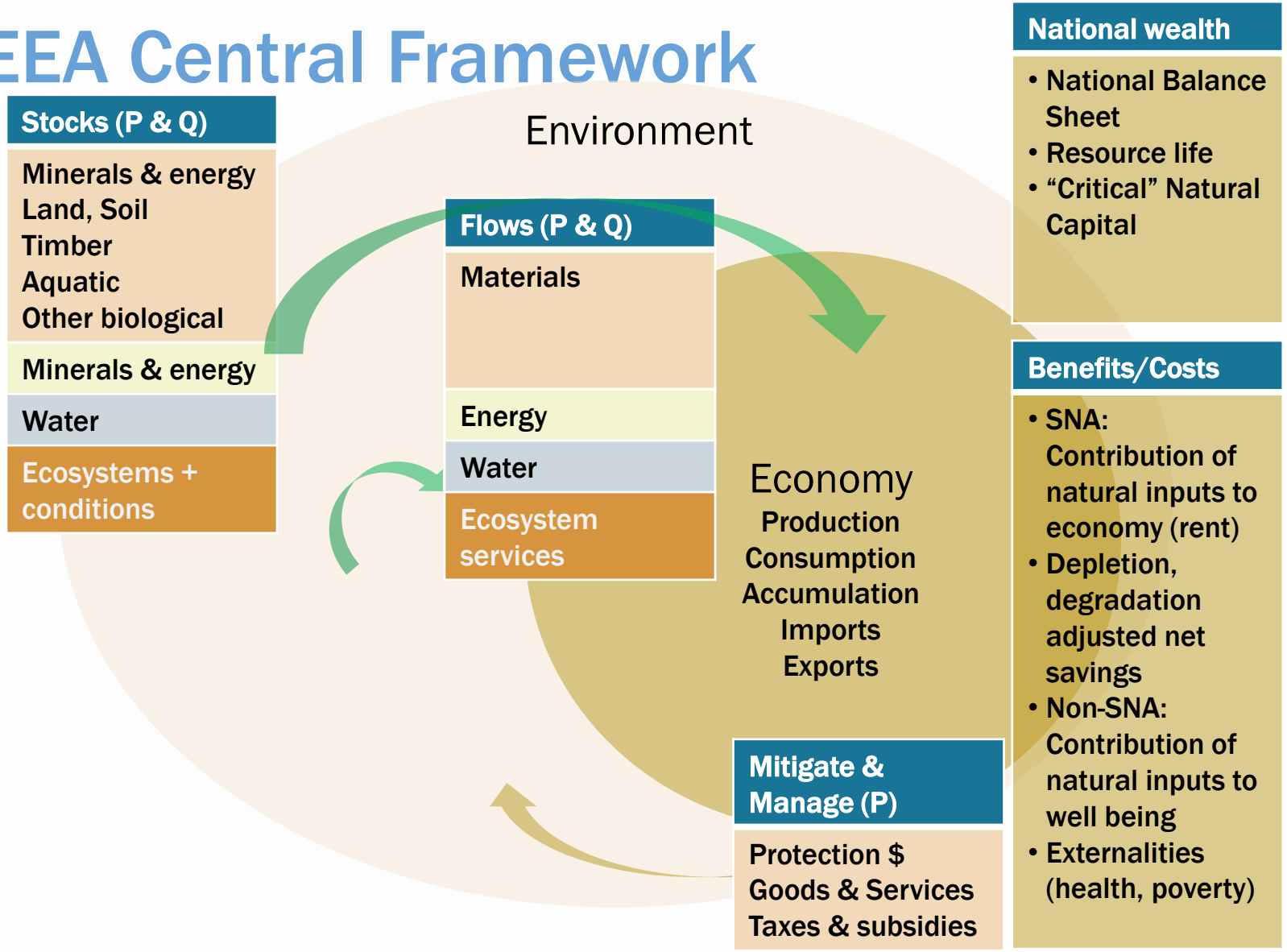
+

SEEA Experimental Ecosystem Accounting (SEEA-EEA) starts with ecosystems and links their services to economic and other human activity

=

Together, they provide the foundation for measuring the relationship between the environment, and economic and other human activity

SEEA Central Framework



SEEA

SEEA-CF (Central Framework)	• **Assets** • **Physical flows** • **Monetary flows**	• Minerals & Energy, Land, Timber, Soil, Water, Aquatic, Other Biological • Materials, Energy, Water, Emissions, Effluents, Wastes • Protection expenditures, taxes & subsidies
SEEA Water; **SEEA Energy;** **SEEA Agriculture, Forestry and Fisheries**	Add sector detail	As above for • Water • Energy • Agricultural, Forestry and Fisheries
SEEA-EEA (Experimental Ecosystem Accounting)	Adds spatial detail and ecosystem perspective	Extent, Condition, Ecosystem Services, Thematic: Carbon, Water, Biodiversity

SEEA-CF – Asset accounts

Assets (=stocks; physical and monetary)

- Opening balance; additions; removals. Closing balance
  - > Mineral and energy resources
  - > Land, Forest
  - > Soil
  - > Timber
  - > Aquatic resources
  - > Other biological resources
  - > Water

Table 153-0005[1, 2]

Value of established crude bitumen reserves

annual (dollars x 1,000,000)

Data table | Add/Remove data | Manipulate | Download | Related information | Help

The data below is a part of CANSIM table 153-0005. Use the Add/Remove data tab to customize your table.

Selected items [Add/Remove data]

Geography= Canada

Value	2005	2006	2007	2008	2009	2010	2011
Reconciliation account, established crude bitumen reserves, opening stock[3]	107,560.2	111,305.7	197,972.4	167,541.6	437,070.6	143,720.4	301,647.0
Reconciliation account, established crude bitumen reserves, additions[3]	1,185.8	105,844.5	11,345.0	89,040.4	68.2	97.3	2,872.7
Reconciliation account, established crude bitumen reserves, depletion[3]	3,934.1	3,894.6	3,685.9	7,725.0	2,931.7	6,378.5	9,359.3
Reconciliation account, established crude bitumen reserves, revaluation[3]	6,493.8	-15,283.1	-38,089.8	188,213.5	-290,486.7	164,207.9	81,064.9
Reconciliation account, established crude bitumen reserves, closing stock[3]	111,305.7	197,972.4	167,541.6	437,070.6	143,720.4	301,647.0	376,225.2

Back to original table

Footnotes:

1. Data source: Statistics Canada, Environment Accounts and Statistics Division.
2. For concepts, sources and methods, see "Concepts, Sources and Methods of the Canadian System of Environmental and Resource Accounts", catalogue number 16-505-GPE.
3. The reconciliation account entries are calculated using the present value methodology.
4. Negative values for net price I, net price II and present value are set to zero.

Source: Statistics Canada. *Table 153-0005 - Value of established crude bitumen reserves, annual (dollars)*, CANSIM (database). (accessed: 2014-06-06)

Back to search

Source: Statistics Canada

SEEA

General structure of the physical account for environmental assets

	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

SEEA-CF – Physical flow accounts

Air Emission Accounts by industry and type of emission Denmark 2012

	Carbon dioxide incl. biomass (CO2), 1000 tonnes	Carbon dioxide excl. biomass (CO2), 1000 tonnes	Carbon dioxide from biomass (CO2), 1000 tonnes	Suphur dioxide (SO2), tonnes	Nitrogen oxides (NOX), tonnes	Ammonia (NH3), tonnes	Nitrous oxide (N2O), tonnes	Methane (CH4), tonnes	Non-methane volatile organic compounds (NMVOC), tonnes	Particulate matter < 10 µm (PM10), tonnes	Sulphur hexafluoride (SF6), tons CO2-equivalents
Total	93 274	78 117	15 156	233 261	1089 108	76 222	21 557	262 535	108 838	48 188	117 852
Households	12 083	7 903	4 180	1 608	20 164	1 501	319	6 438	29 527	17 391	0
Total industries	81 190	70 214	10 976	231 652	1068 945	74 721	21 238	256 097	79 311	30 796	117 852
A Agriculture, forestry and fishing	2 528	2 264	264	1 336	19 908	73 447	17 515	200 933	4 258	7 176	0
B Mining and quarrying	1 932	1 777	155	180	7 380	0	37	2 663	3 982	116	0
C Manufacturing	6 537	5 801	736	4 999	12 331	379	101	2 606	31 492	811	66 369
D_E Utility services	24 017	14 599	9 419	2 833	15 111	703	917	48 443	1 681	797	11 036
F Construction	1 509	1 444	65	9	7 451	64	52	52	2 711	869	40 447
G_I Trade and transport etc.	42 969	42 793	176	222 148	1001 308	74	2 532	1 220	33 525	20 602	0
J Information and communication	101	96	5	5	304	4	3	11	92	21	0
K Financial and insurance	65	62	3	8	180	3	2	7	29	11	0
LA Real estate activities and renting of non-residential buildings	97	91	6	1	403	3	3	4	47	23	0
LB Dwellings	39	37	2	0	145	1	1	3	18	11	0
M_N Other business services	403	381	22	11	1 430	17	13	29	393	105	0
O_Q Public administration, education and health	846	727	119	98	2 489	19	57	109	863	230	0
R_S Arts, entertainment and other services	148	142	6	23	505	6	5	17	220	25	0

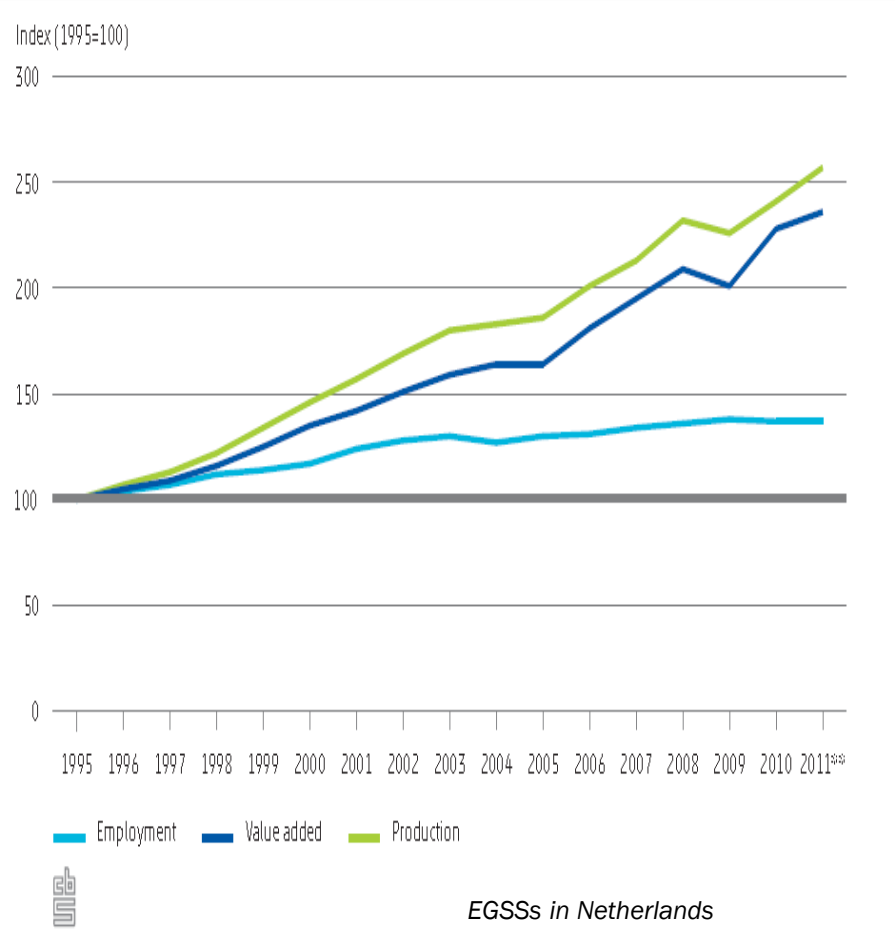
Physical flows

- Supply/use of materials (extract → consume)
- Material flows (through economy) to final *demand (e.g., GHGs)*
  - > *Water supply/use*
  - > *Energy supply/use*
  - > *Residuals*
    - > *Air emissions*
    - > *Water emissions*
    - > *Wastes (generated and used/recycled)*

SEEA

Source: Statistics Denmark

SEEA-CF – Environmental activity accounts



EGSSs in Netherlands
Source: Statistics Netherlands

Environmental activities

- Expenditures on protection, management and regulation
  - > EPE: Environmental protection expenditures (demand side)
  - > EGSS: Environmental goods and services sector (supply side)
  - > Resource use and management
  - > Environmentally-related payments by & to government (fines, fees, taxes, subsidies, concession payments)

Introduction to SEEA Experimental Ecosystem Accounting (SEEA EEA)

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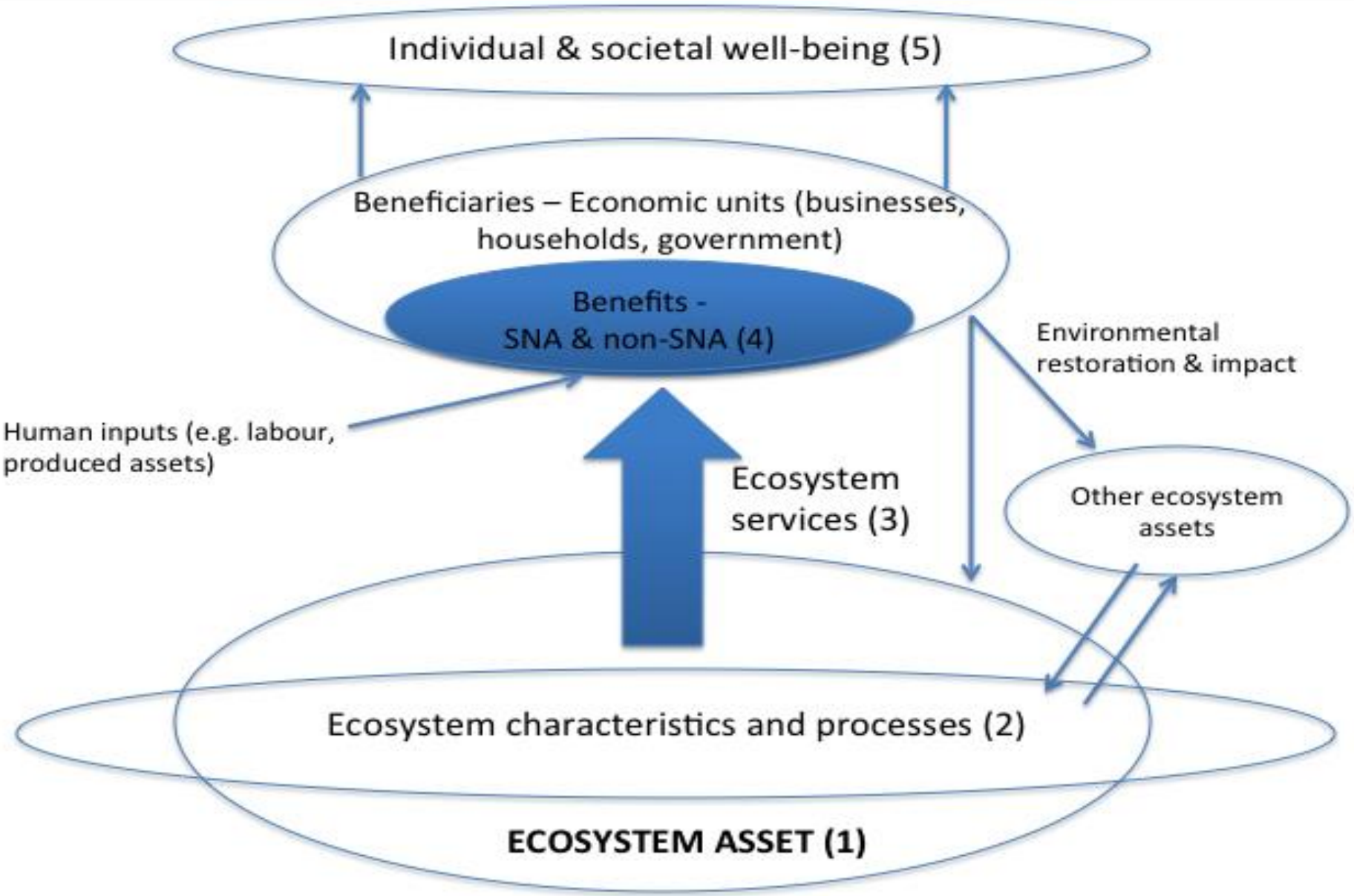
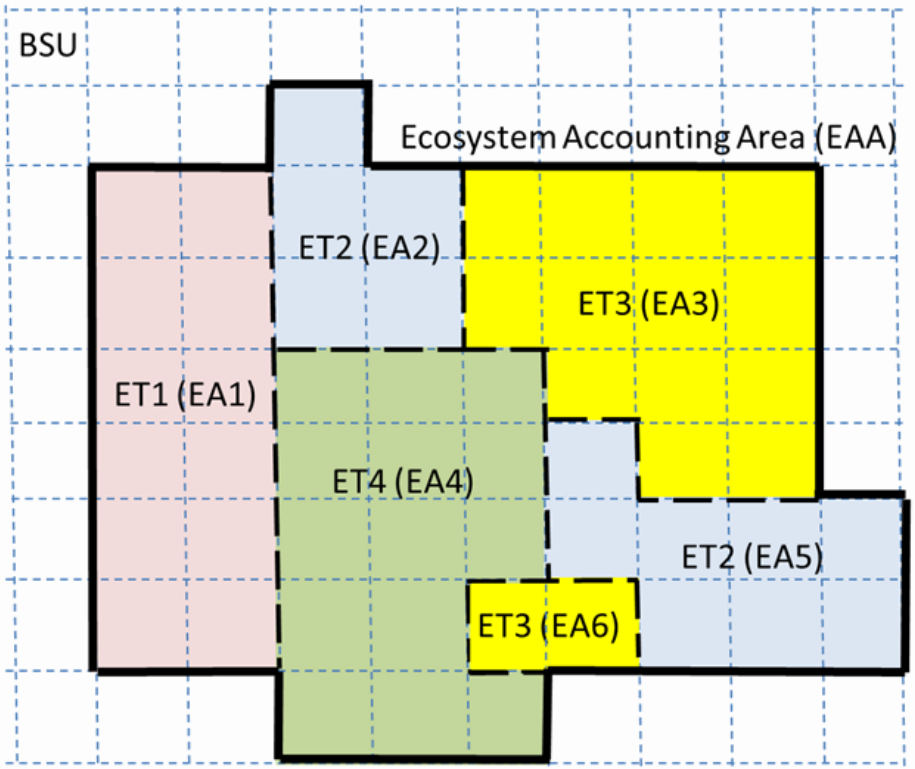
Ecosystem Accounting model



Spatial units



4 types of units

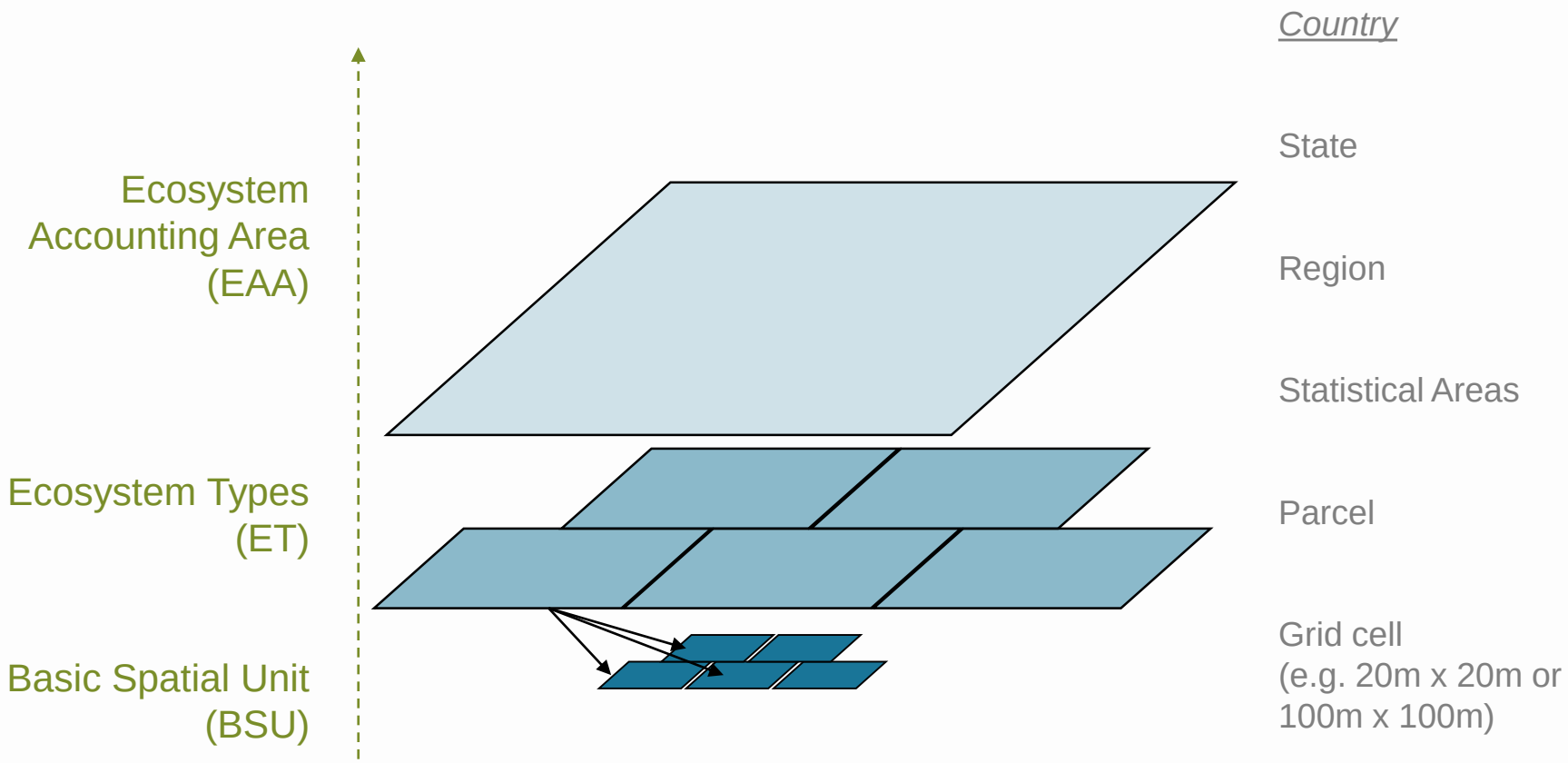
-Basic spatial units (BSU)

-Ecosystem asset (EA)

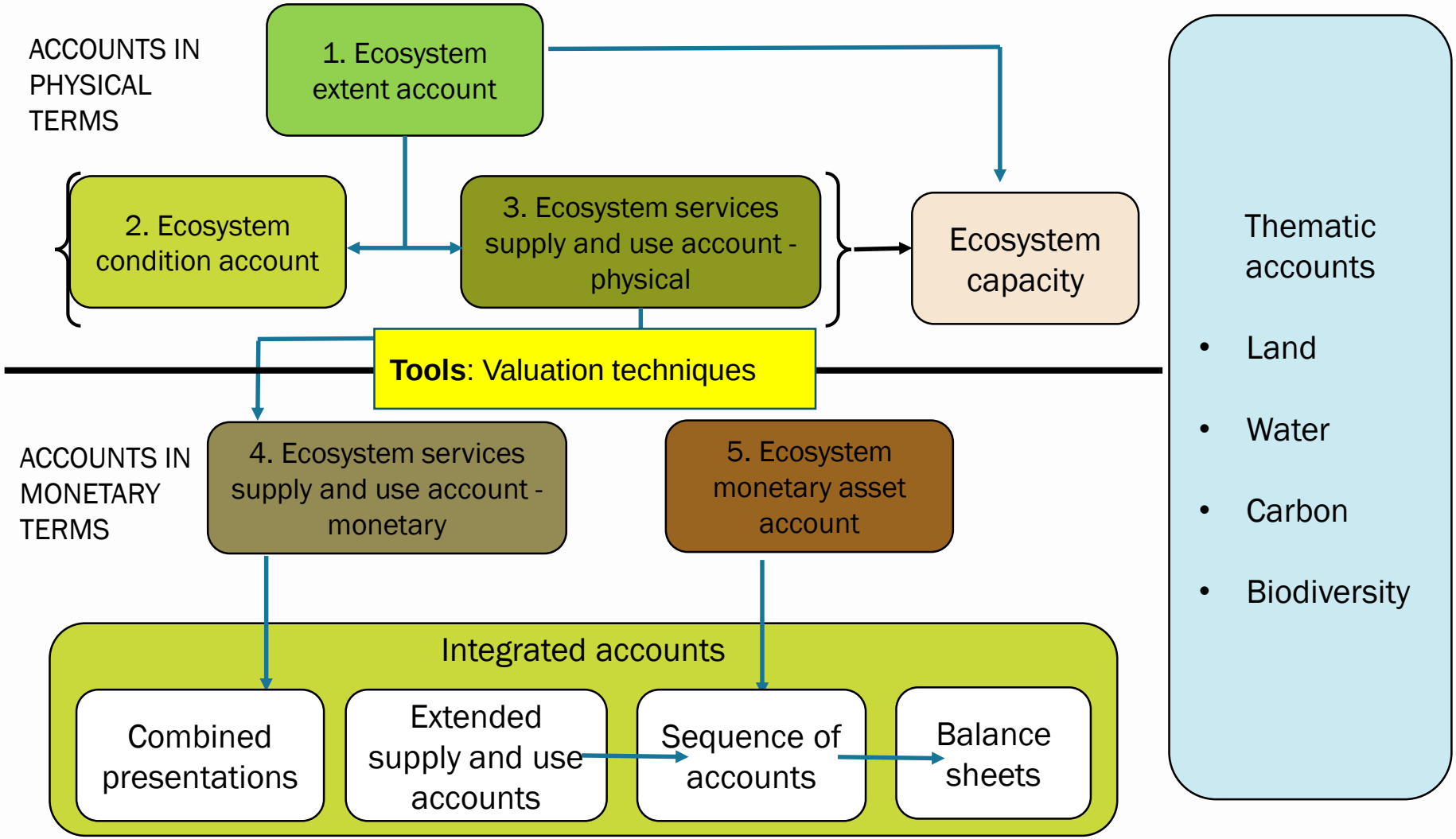
-Ecosystem type (ET)

-Ecosystem Accounting Area (EAA)

Hierarchical (nested-grid) aggregation



SEEA-EEA accounts



Ecosystem extent account

	Proxy ecosystem type (based on land cover)															
	Artificial surfaces	Herbaceous crops	Woody crops	Multiple or layered crops	Grassland	Tree-covered areas	Mangroves	Shrub-covered areas	Regularly flooded areas	Sparse natural vegetated areas	Terrestrial barren land	Permanent snow and glaciers	Inland water bodies	Coastal water and inter-tidal areas	Sea and marine areas	TOTAL
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
Opening extent																
Additions to extent																
Managed expansion																
Natural expansion																
Upward reappraisals																
Reductions in extent																
Managed regression																
Natural regression																
Downward reappraisals																
Net change in extent																
Closing extent																

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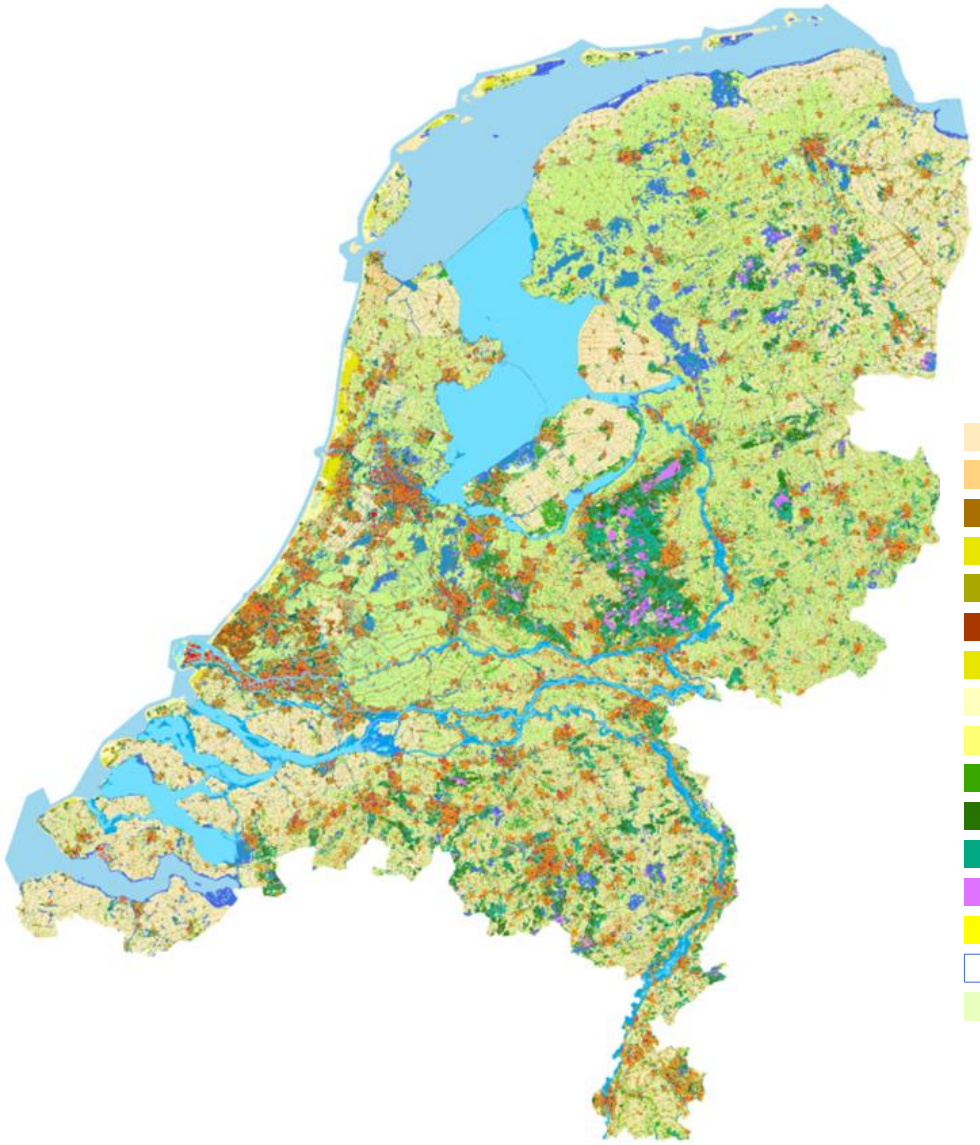
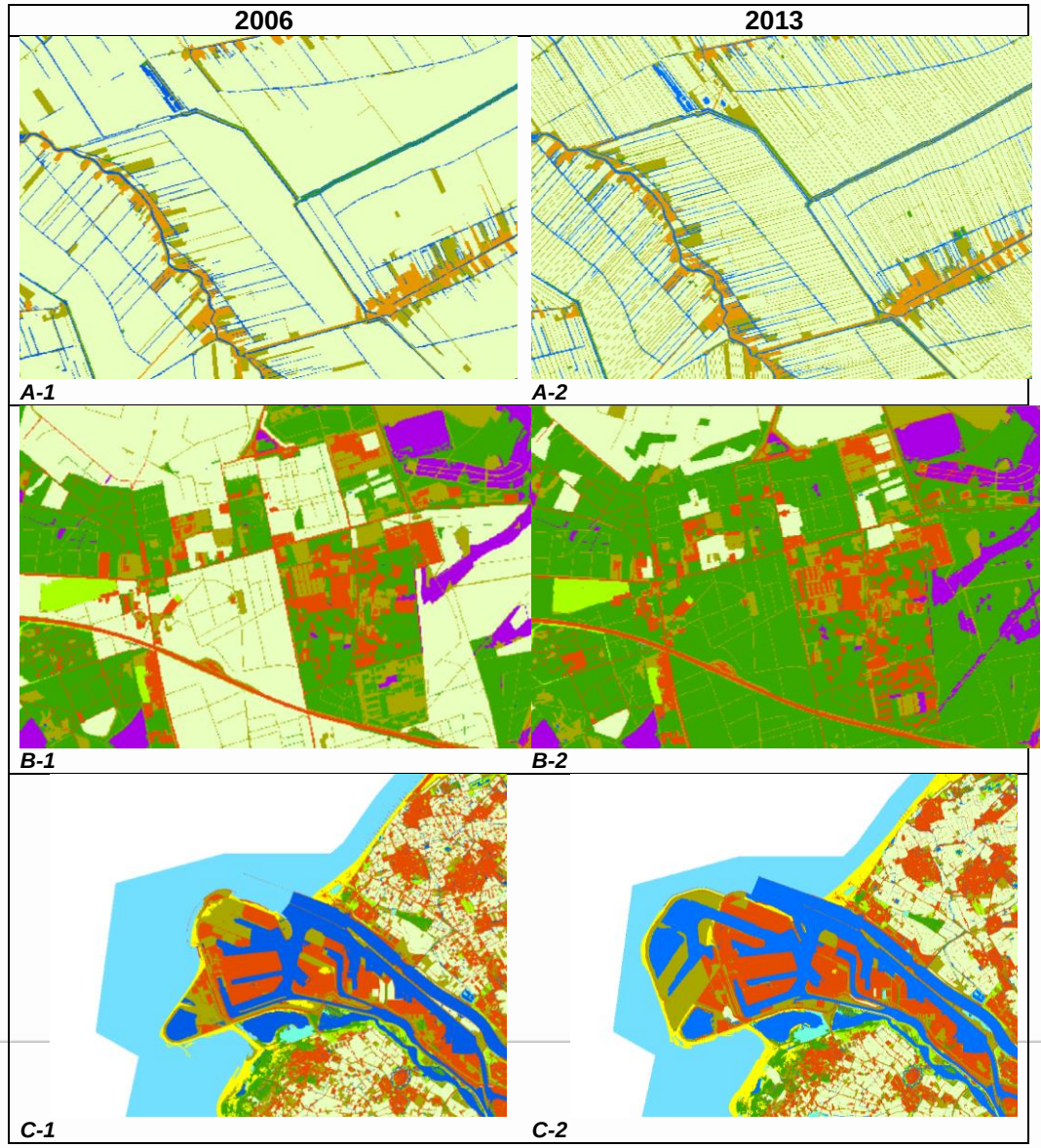
Example: Ecosystem Type map for the Netherlands



- Non-perennial plants
- Perennial plants
- Greenhouses
- Meadows (grazing)
- Bushes and hedges bordering fields
- Farmyards and barns
- Dunes with permanent vegetation
- Active coastal dunes
- Beach
- Deciduous forest
- Coniferous forest
- Mixed forest
- Heath land
- Inland dunes
- Fresh water wetland
- (semi) Natural grassland
- Public green space
- Other unpaved terrain
- Riverflood basin
- Salt marsh
- Residential area
- Industry: offices and businesses
- Services: offices and businesses
- Publica administration: offices and businesses
- Roads, parking lots, runway, other
- Forestry: offices and businesses
- Fishery: offices and businesses
- Non-commercial services: offices and businesses
- Sea
- Lakes and ponds
- Rivers and streams
- Other

Ecosystem extent 2006 - 2013



Ecosystem extent account, 2006 - 2013

Ecosystem Unit	Area (km2)			Area (percentage)		
	2006	2013	Δ	2006	2013	Δ
Agriculture	19174	18811	−363	46,16	45,29	−0,87
Forest	3207	3216	8	7,72	7,74	0,02
Heath	394	427	33	0,95	1,03	0,08
Sand	356	358	2	0,86	0,86	0,00
Wetlands	461	580	119	1,11	1,40	0,29
Other nature	4061	4007	−54	9,78	9,65	−0,13
Public green areas	710	708	−1	1,71	1,70	0,00
Built-up and paved	5236	5410	175	12,60	13,03	0,42
Inland water	4088	4199	111	9,84	10,11	0,27
Sea	3846	3815	−31	9,26	9,18	−0,08
Unknown/null	6	8	2	0,01	0,02	0,00
The Netherlands	41539	41539	0			0,00

Ecosystem condition account

(End of accounting period)

		Proxy ecosystem type (based on land cover)															
		Artificial surfaces	Herbaceous crops	Woody crops	Multiple or layered crops	Grassland	Tree-covered areas	Mangroves	Shrub-covered areas	Regularly flooded areas	Sparse natural vegetated areas	Terrestrial barren land	Permanent snow and glaciers	Inland water bodies	Coastal water and inter-tidal areas	Sea and marine areas	
Example indicators of condition		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
Vegetation (e.g. native cover)	Opening condition																
	Closing condition																
Water quality (e.g. turbidity, pH)	Opening condition																
	Closing condition																
Soil (e.g. erosion, pH, nutrients)	Opening condition																
	Closing condition																
Carbon (e.g. net primary productivity)	Opening condition																
	Closing condition																
Biodiversity (e.g. species richness)	Opening condition																
	Closing condition																
Habitats (e.g. fragmentation)	Opening condition																
	Closing condition																
Overall index of condition	Opening condition																
	Closing condition																

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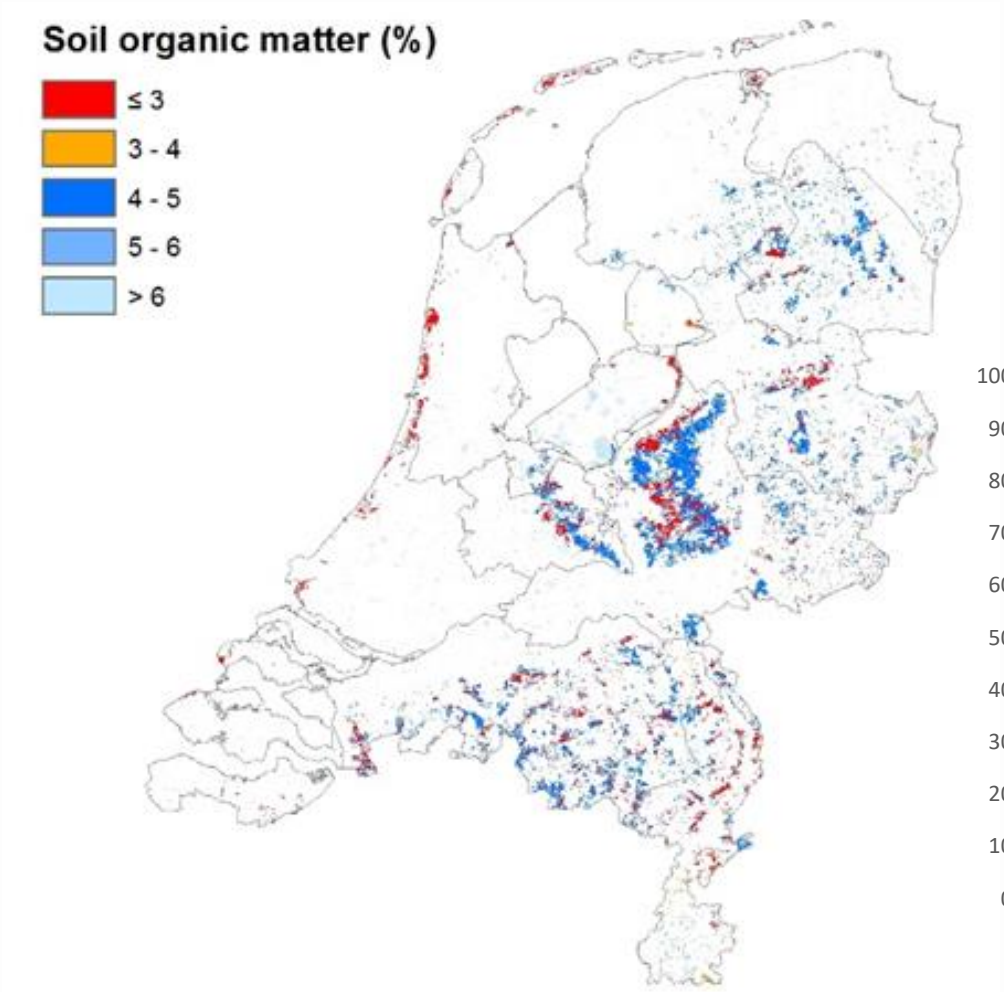
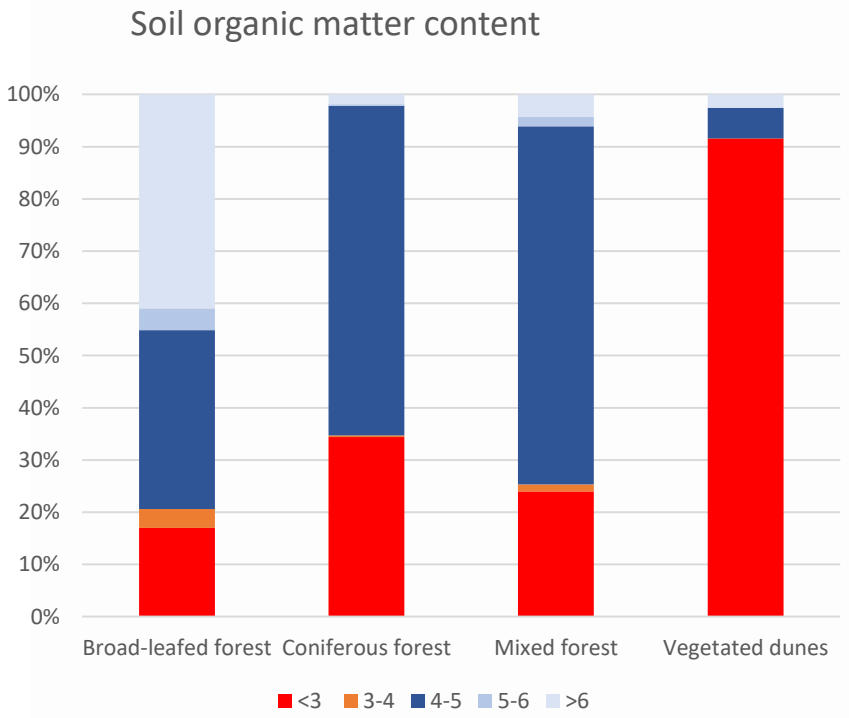
Example: soil organic matter in forests





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Example: Condition account for Dutch forests, 2013

	Indicator	Unit	Deciduous forest	Coniferous forest	Mixed forest	Mixed forest (Dunes)
EXTENT						
	Extent	ha	109,142	81,923	118,571	15,943
STATE INDICATORS	Tree cover	%	54	64	64	32
	Shrub cover	%	10	6	7	9
	Low vegetation cover	%	28	24	23	43
	Carbon stock in biomass	Mton C	6.8	5.1	7.4	1.0
	Protected areas (Natura2000, EHS)	% of area	16	44	38	
	Living Planet Index	Index 2000=100	102			54
	Characteristic species	Index intact=100	33.1			46.0
	Ecosystem quality	% of area with ≥50% of qualifying species	33.9			63.5
	Habitat structure and function		Unfavourable/inadequate			Unfavourable /bad
	Soil organic matter	% of area with <3% SOM	17	34	24	92
	Air pollution – PM10	µg PM_{10} /m^3	19.9	20.2	20.1	17.2
	Air pollution – PM2.5	µg $PM_{2.5}$ /m^3	12.8	13.0	12.9	10.8
	Air pollution – NO2	µg NO_2 /m^3	16.0	15.7	15.5	12.3
	Air Pollution – SO2	µg SO_2 /m^3	0.9	0.8	0.8	1.2
PRESSURE INDICATORS	Urbanisation	% paved surface	13	6	8	9
	Temperature change	°C increase	0.10	0.02	0.05	0.04
	Acidification	mol H^+/ha/ yr	2368	2724	2663	1887
	Eutrophication	mol N/ha/ yr	1713	2025	1982	1220
	Drainage organic soils	cm	67	97	85	29

Ecosystem services supply table

ECOSYSTEM SERVICES SUPPLY TABLE

	Measurement Units	Type of economic unit								Proxy ecosystem type (based on land cover)															TOTAL SUPPLY
		Agriculture, forestry and fisheries	Electricity, gas supply	Water collection, treatment and supply	Other industries	Governmens	Households	Accumulation	Rest of the world - Imports	Artificial surfaces	Herbaceous crops	Woody crops	Multiple or layered crops	Grassland	Tree-covered areas	Mangroves	Shrub-covered areas	Regularly flooded areas	Sparse natural vegetated areas	Terrestrial barren land	Permanent snow and glaciers	Inland water bodies	Coastal water and inter-tidal areas	Sea and marine areas	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15									
Ecosystem services																									
Provisioning services																									
Biomass accumulation																									
- Timber																									
- Crops																									
- Grass / fodder																									
- Fish																									
Water abstraction																									
Regulating services		A								B															
Carbon sequestration																									
Water regulation																									
Water purification																									
Air filtration																									
Nutrient/waste remediation																									
Pest & disease control																									
Soil retention																									
Cultural services																									
Enabling tourism and recreation																									
Enabling nature based education and research																									
Enabling nature based religious and spiritual experiences																									
Products		C								D															

ECOSYSTEM SERVICES USE TABLE

		Type of economic unit								Proxy ecosystem type (based on land cover)															
				ply																					

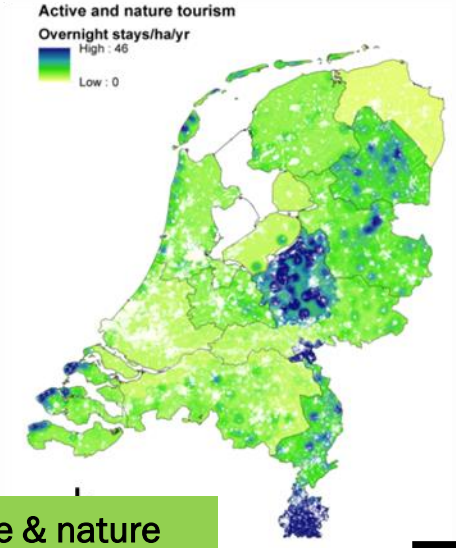
Ecosystem services use table

ECOSYSTEM SERVICES USE TABLE

	Measurement Units	Type of economic unit								Proxy ecosystem type (based on land cover)															TOTAL USE
		Agriculture, forestry and fisheries	Electricity, gas supply	Water collection, treatment and supply	Other industries	Governmens	Households	Accumulation	Rest of the world - Exports	Artificial surfaces	Herbaceous crops	Woody crops	Multiple or layered crops	Grassland	Tree-covered areas	Mangroves	Shrub-covered areas	Regularly flooded areas	Sparse natural vegetated areas	Terrestrial barren land	Permanent snow and glaciers	Inland water bodies	Coastal water and inter-tidal areas	Sea and marine areas	
										1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
Ecosystem services (detail correpsonding to supply table)																									
Provisioning services																									
Regulating services		E								F															
Cultural services																									
Products		G								H															

Example: Nature tourism

Beach recreation



Active & nature

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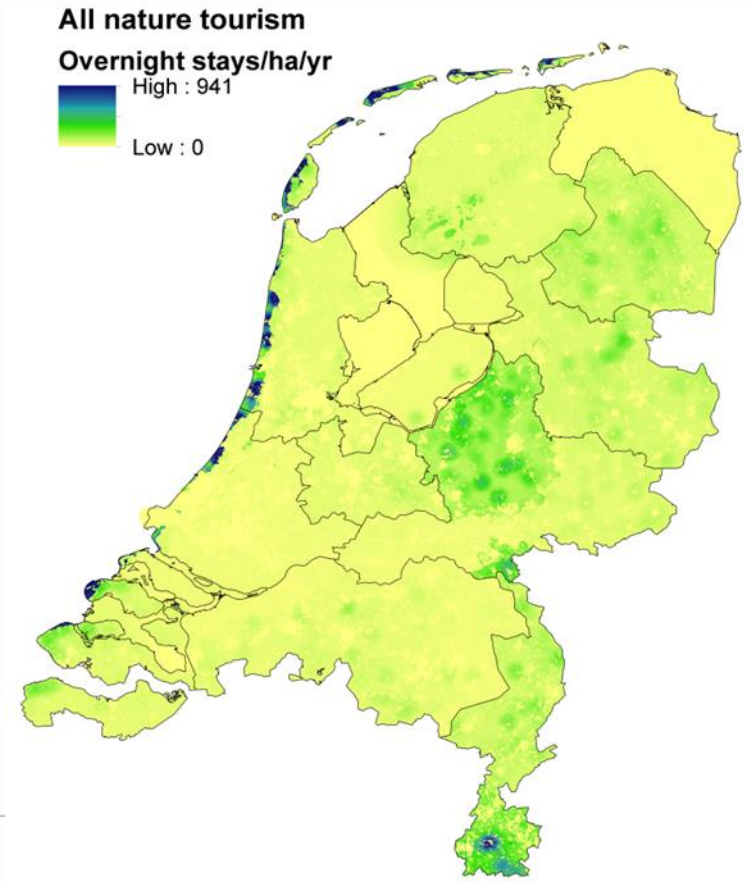
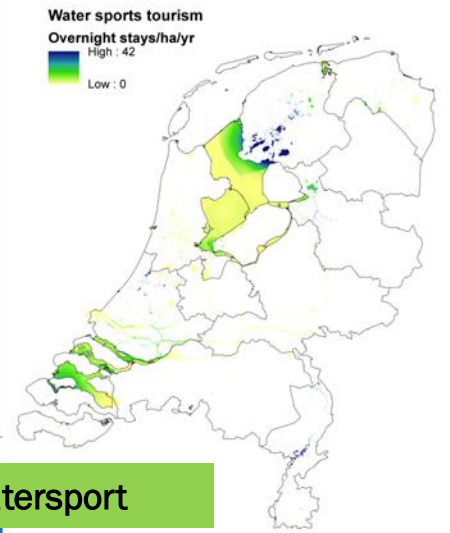




Watersport

Physical Supply table ecosystem services

Ecosystem unit / Ecosystem service	Unit	Agriculture - annual crops	Agriculture - perennial crops	Agriculture - glass houses	Agriculture - grassland	Agriculture - buffer strips	Agriculture - built-up	Dunes with permanent vegetation	Beach, sand and active dunes	Broad leafed forest	Coniferous forest	Mixed forest	Heath	Sand	Wetlands	Non-agricultural grassland
Area	ha	781.401	79.228	11.790	927.216	36.492	35.491	15.943	33.946	109.142	81.923	118.571	40.813	2.364	34.346	54.010
Crop production	ktons	15.177	1.081	0	0	0	0	0	0	0	0	0	0	0	0	0
Fodder production	ktons	9.517	0	0	6.181	0	0	0	0	0	0	0	0	0	0	0
Wood production	ktons	0	0	0	0	0	0	45	0	502	195	393	0	0	0	0
Biomass production	ktons	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Drinking water production	mln m3	2.991	453	10	4.845	151	141	3.119	7.742	1.526	2.780	3.809	1.405	83	143	434
Carbon sequestration in biomass	ktons	0	23	0	167	6	0	23	0	158	119	172	8	0	8	10
Pollination	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Natural pest control	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Erosion control	ktons soil	-3	21	6	930	79	47	195	-546	468	317	517	167	-24	32	163
Air filtration	ktons PM10	2.725	287	0	3.266	127	0	463	0	4.063	5.014	5.835	145	114	192	252
Protection against heavy rainfall	mln liters in 1 hour	171.713	23.731	953	193.341	8.166	5.019	10.895	16.799	48.138	57.441	79.896	23.636	1.161	7.156	16.841
Nature recreation (hiking)	x1000 hikers	29.126	5.762	651	42.238	2.103	3.397	11.406	16.922	27.937	25.474	32.975	11.826	703	6.290	6.022
Nature tourism	x1000 tourists	798	97	0	1.042	46	2	367	704	148	168	240	87	6	31	73

Physical Use table ecosystem services

Ecosystem service	Unit	A - Agriculture, forestry and fishing	B,C - Mining and manufacturing	D - Electricity	E - Water supply	F-H - Contruction, wholesale and transportation	I,R - Accommodation and food service, culture, sports and recreation	Other sectors	Export	Households	Government	Investments	Inventories	Environment (Global goods)	Total
Crop production	ktons	16.259													16.259
Fodder production	ktons	16.039													16.039
Wood production	ktons	1.134													1.134
Biomass production	ktons			360											360
Drinking water production	mln m3				41.313										41.313
Carbon sequestration in biomass	ktons													823	823
Pollination	-	x													x
Natural pest control	-	x													x
Erosion control	ktons soil	1.766	30		26	158	129	60		277	1.705				4.150
Air filtration	ktons PM10									23.832					23.832
Regulation against heavy rainfall	mln liter in 1 hour	506.112	2.002	43	689	13.682	22.355	12.255		59.866	288.493				905.497
Nature recreation (hiking)	x1000 hikers									429.526					429.526
Nature tourism	x1000 tourists						4.505								4.505

Thematic accounts

- Standalone accounts on topics of interest in their own right
- Direct relevance in the measurement of ecosystems and in assessing policy responses.
- Thematic accounts include accounts for land, carbon, water and biodiversity.

Example: Carbon Accounting in the Netherlands

	Geocarbon					Biocarbon				Carbon in the economy				Carbon in the atmosphere	Total
Mton C	oil	gas and shalegas	coal	limestone and marl	total geocarbon	Forests	Cropland / meadows	Other ecosystems	Total biocarbon	Inventories	fixed assets, cosumer durables	Waste	Total	Total	
Opening stock	54	627	12717		13398	48	206	123	377	24			24	3193	16993
Additions to stock	0	0	0	0	0	0.6	0.2	0.2	1.0	251	2	10	263	64.2	329
Natural expansion						0.6	0.2	0.2	1.0					1.8	3
Managed expansion										50			50	62.4	113
Discoveries	0	0	0		0										0
Upwards reappraisals	0	0	0		0										0
Reclassifications										15	2	6	23		23
Imports										186		4	190		190
Reductions in stock	1	41	0	0	42	0.6	1.3	0.6	2.4	246	0	10	256	9.4	310
Natural contraction						0.1	1.3	0.5	1.9					1.0	3
Managed contraction	1	40	0	0	41	0.5	0.0	0.0	0.5	60		3	62	8.5	113
Downwards reappraisals	0	1	0		1										1
Reclassifications										19	0	5	23		23
Exports										168		3	170		170
Net carbon balance	-1	-41	0	0	-42	0.0	-1.1	-0.4	-1.4	5	2	0	7	54.8	19
Closing stock	53	587	12717		13356	48	205	122	376	30			32	3248	17012

SEEA

SEEA EEA Technical Recommendations

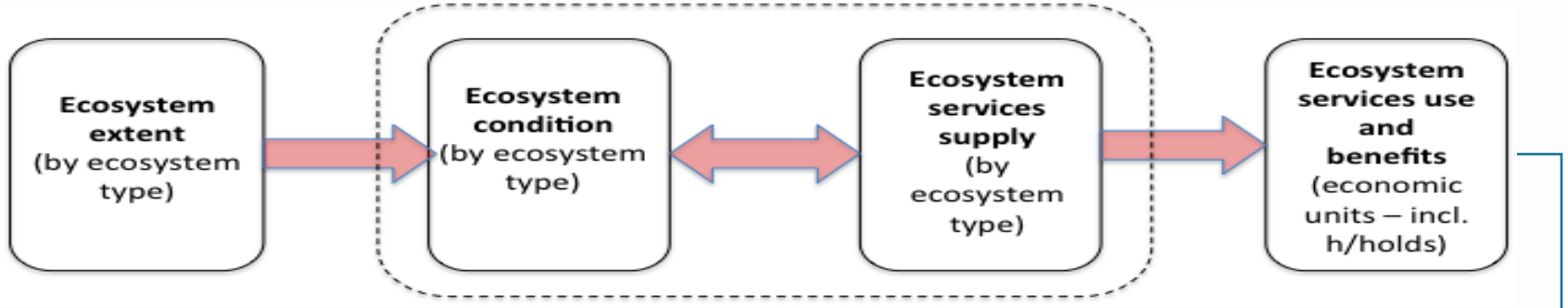
- Complements the SEEA EEA to provides a range of content to support testing and research on ecosystem accounting
- Available at https://seea.un.org/ecosystem-accounting

Topics

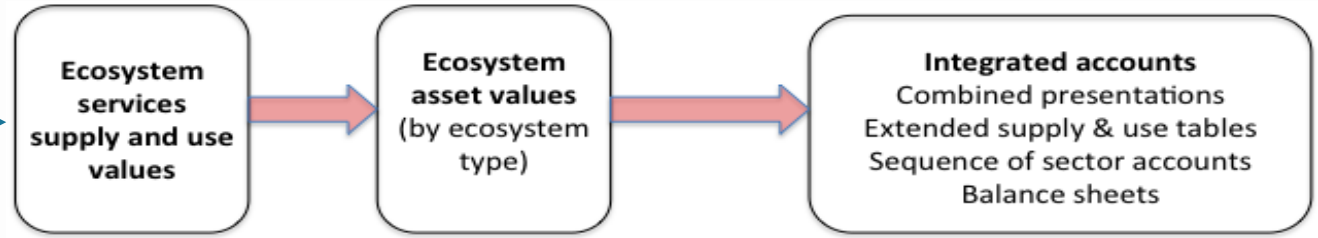
1. Introduction
2. Ecosystem accounts and approach to measurement
3. Organizing spatial data and accounting for ecosystem extent
4. The ecosystem condition account
5. Accounting for flows of ecosystem services
6. Valuation in ecosystem accounting
7. Accounting for ecosystem assets in monetary terms
8. Integrating ecosystem accounting with standard national accounts
9. Thematic accounts – Land, Water, Carbon and Biodiversity

Broad steps in ecosystem accounting

a. Physical Accounts



b. Monetary Accounts



Status of SEEA implementation

International bodies for SEEA

United Nations Committee of Experts on Environmental Economic Accounting (UNCEEA)

The governing body for the mainstreaming and implementation of the SEEA. Established by the UN Statistical Commission at its at its 36th Session in 2005.

Chair: Bert Kroese, Statistics Netherlands || Secretariat: UNSD

Technical Committee of the SEEA Central Framework

Technical Committee of the SEEA Experimental Ecosystem Accounting

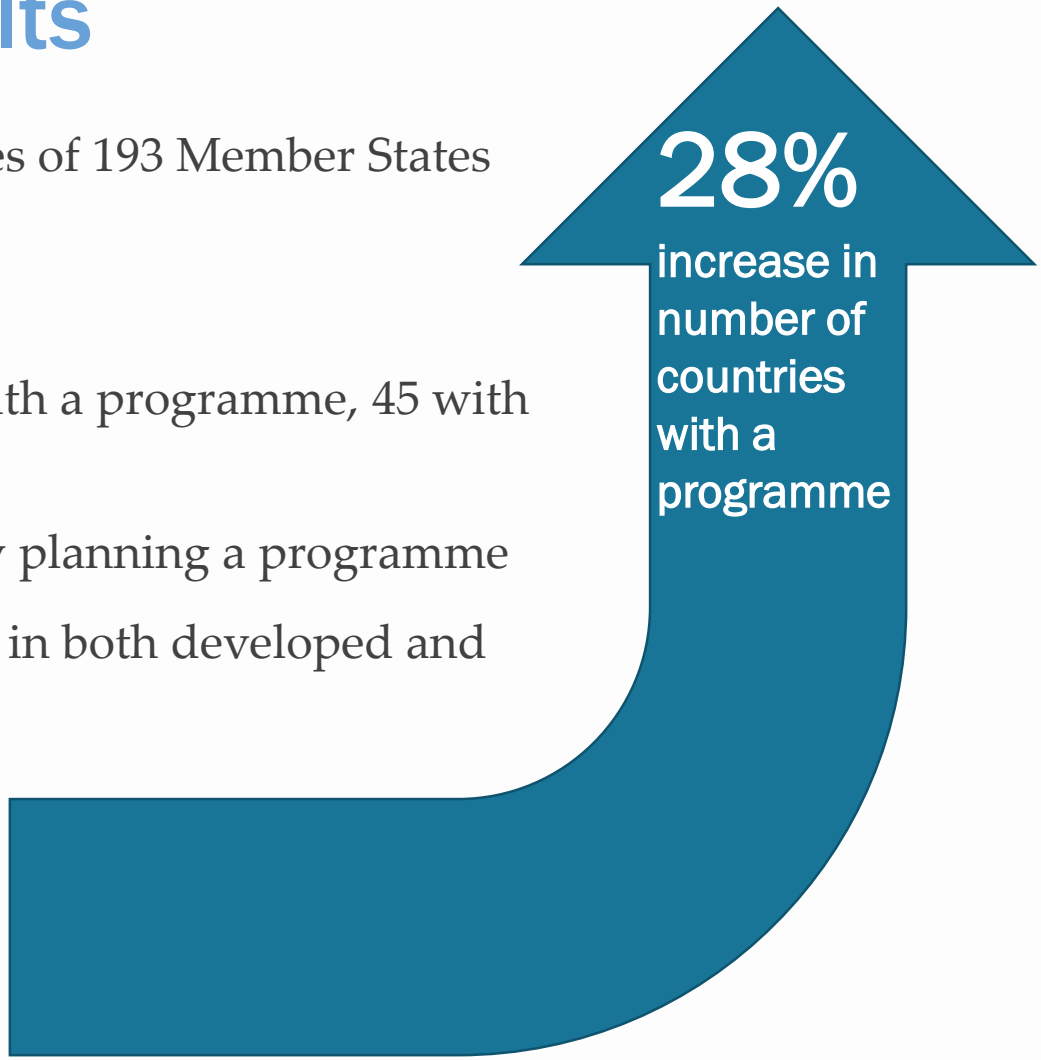
London Group on Environmental Economic Accounting

Forum of Experts on SEEA Experimental Ecosystem Accounting

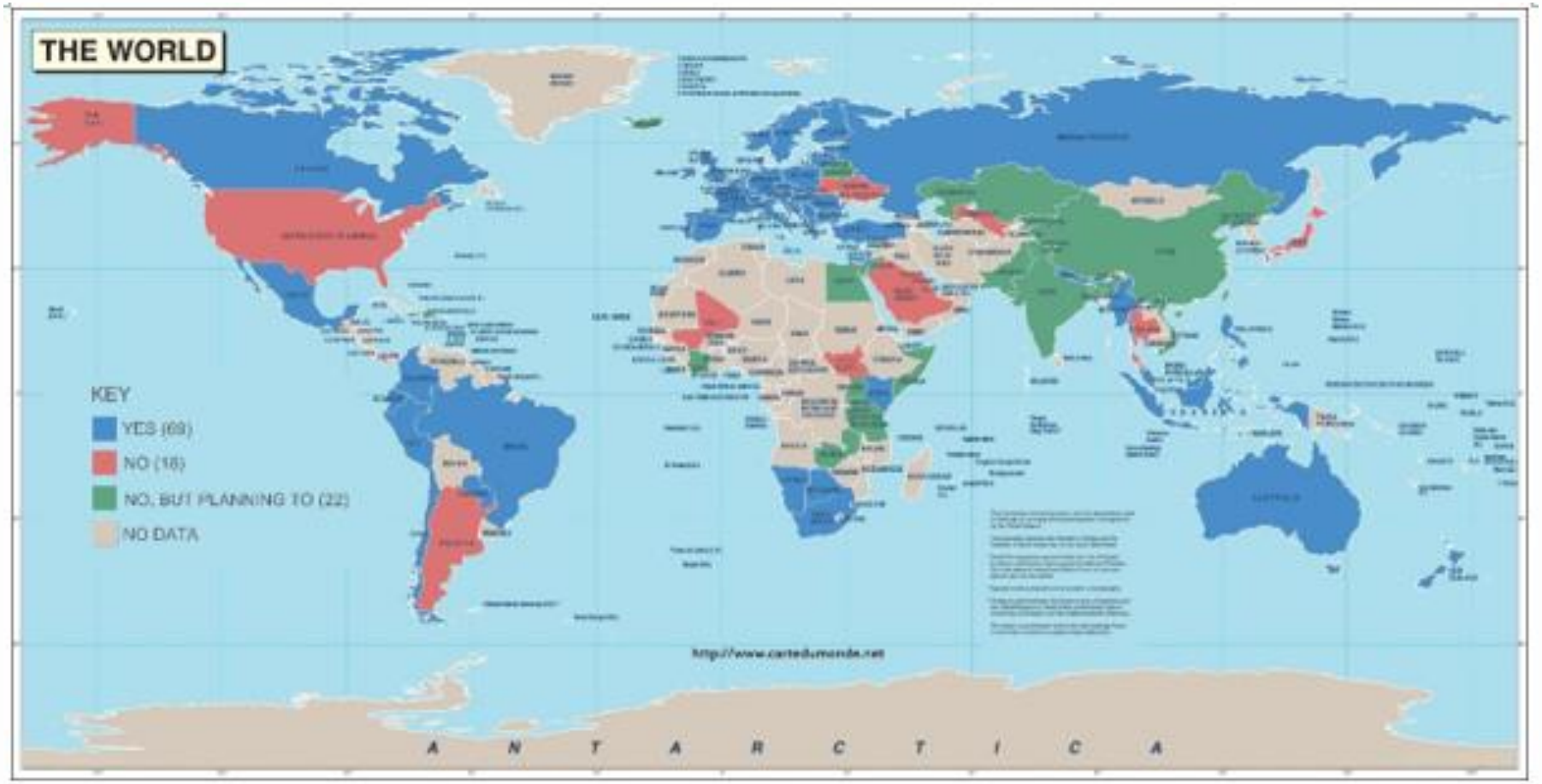
Global Assessment 2017: Summary of results

- Sent to national statistical offices of 193 Member States and 22 territories
- 109 respondents
- Results indicate 69 countries with a programme, 45 with regular funding
- A further 22 countries currently planning a programme
- Water and energy are priorities in both developed and developing countries

- In developed countries, accounts compiled appear to be driven by legislation



Global Assessment 2017: Summary of results



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THANK YOU

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