System of Environmental Economic Accounting

Taking the Environment into Account

Advances in the SEEA EEA revision and experience in the Netherlands

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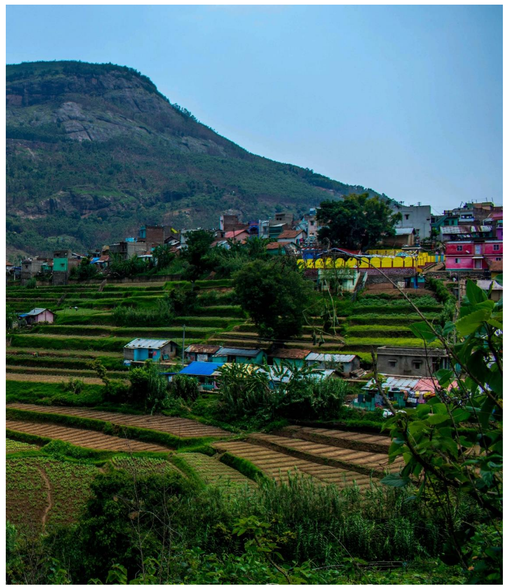
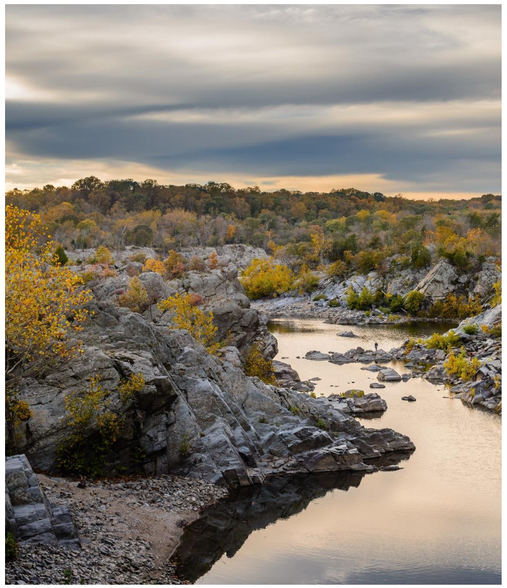
United Nations

The Need

- Our economic well-being crucially depends on nature.
- But headline indicators like GDP, the unemployment rate and inflation do not capture these vital economic contributions.
- Decision makers need information to effectively pursue and track sustainable development.
- The System of Environmental Economic Accounts (SEEA) fills that gap.



Why we need environmental accounts

- Present environmental and economic information together in a consistent way
  - Environmental data integrated with System of National Accounts
- Provide:
  - International comparability
  - Broad credibility
- Eliminate data siloes

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SEEA Experimental Ecosystem Accounting

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The System of Environmental-Economic Accounting (SEEA)

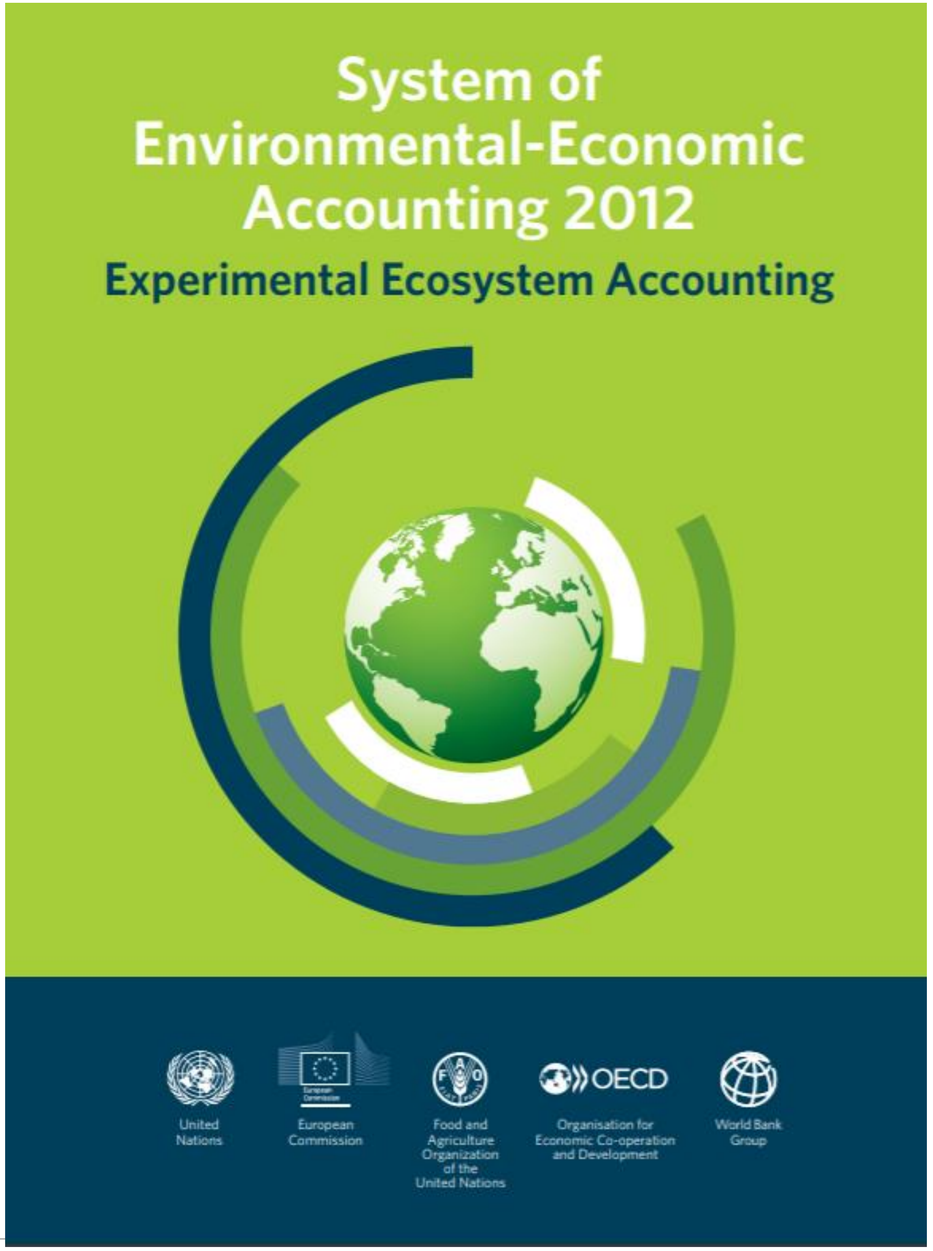
System of Environmental Economic Accounting

The SEEA is the statistical framework to measure the environment and its interactions with the economy.

- The **SEEA Central Framework** was adopted as an international statistical standard by the UN Statistical Commission in 2012.
- The **SEEA Experimental Ecosystem Accounting** complements the Central Framework and represent international efforts toward coherent ecosystem accounting.

SEEA Experimental Ecosystem Accounting (SEEA-EEA)

- Published in 2013
- Complements the Central Framework by taking the perspective of ecosystems
- Enables the presentation of indicators of the level and value of "ecosystem services"
- Biophysical and monetary
- Spatially explicit, makes use of geospatial data



Current Status of the SEEA-EEA

- A revision is underway and scheduled to be completed by end of 2020
- Working groups have involved **more than 100 experts** in statistics, national accounts, ecology, environmental economics
- More than **26 discussion papers** with **100 people** contributing to the drafting of the paper and more than **600 global experts** reviewing the papers
- Currently country testing on ecosystem extent and condition accounts
- To be brought to the UN Statistical Commission in March 2021

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SEEA Implementation and Global Initiatives

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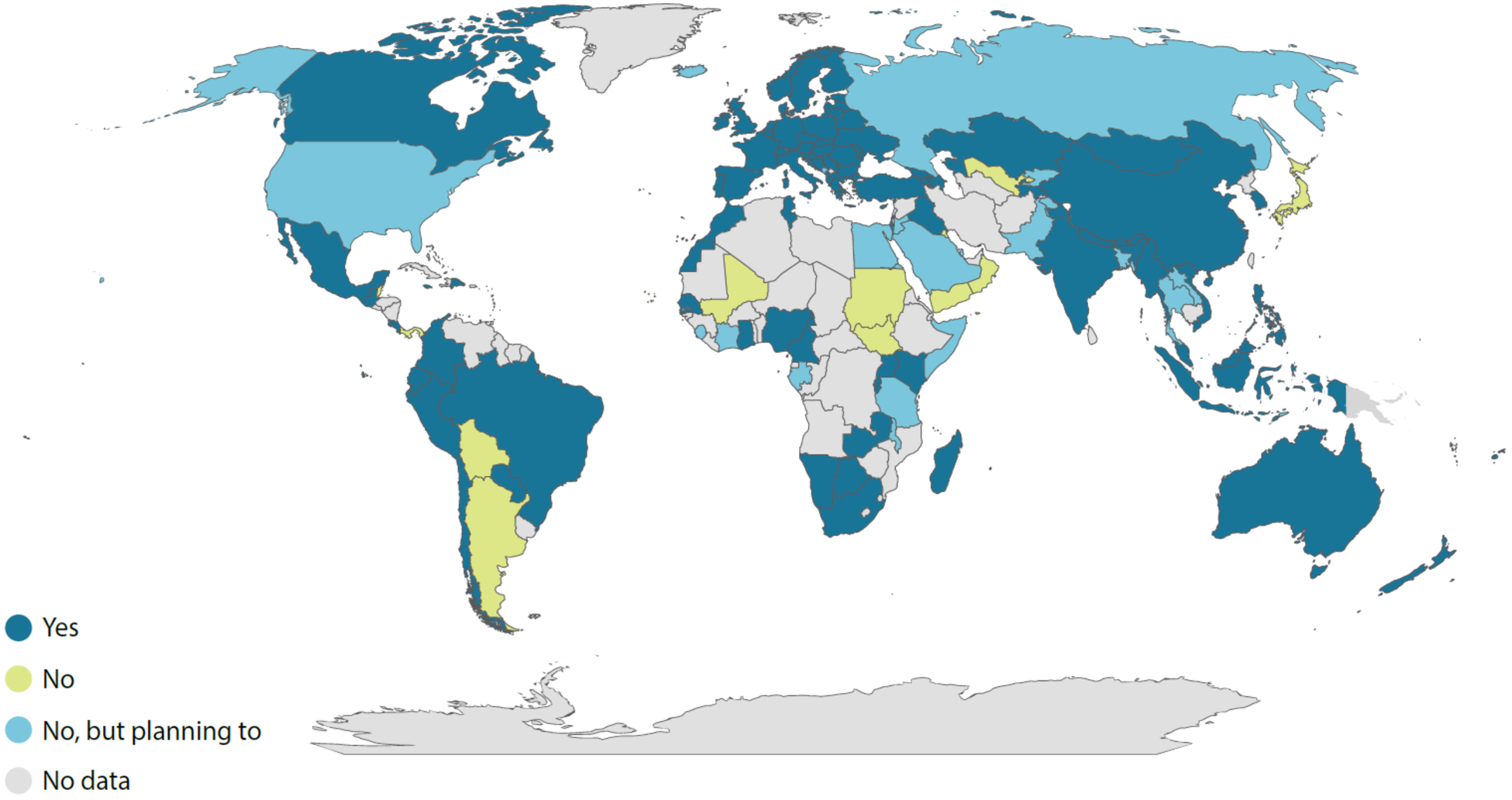
More than 90 countries have compiled SEEA accounts

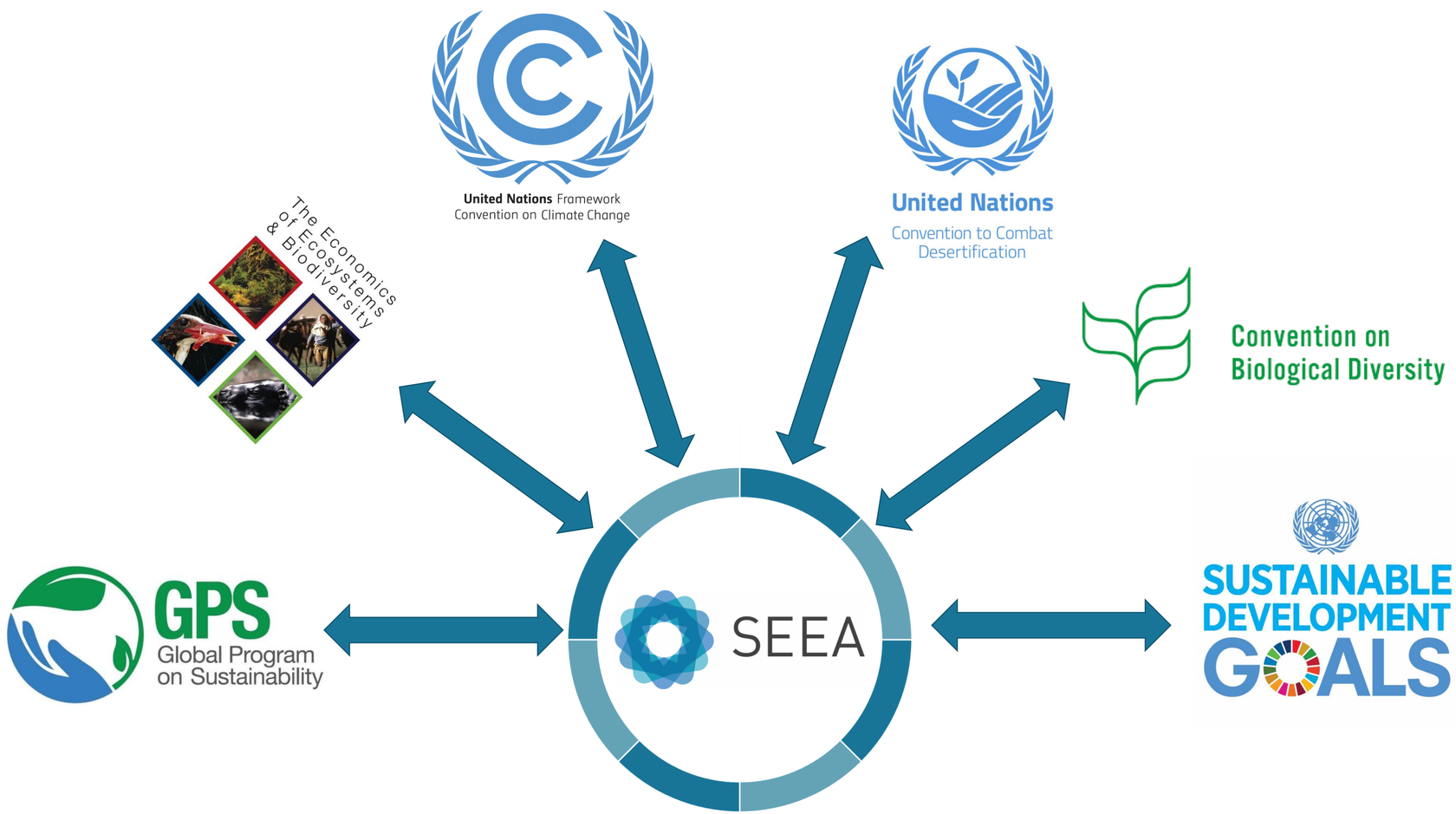


SEEA

Compilation of ecosystem accounts growing rapidly

- Ecosystem account supports decision making at multiple scales and for multiple communities
- **National accounts**
  - Canada, Costa Rica, Denmark, India, Italy, Mexico, Mauritius, Netherlands, Rwanda, Uganda, United Kingdom
- **National and subnational accounts**
  - Australia, Colombia, Croatia, Finland, Guatemala, Indonesia, Liberia, Madagascar, South Africa
- **Subnational accounts**
  - China, Norway, Peru, Philippines, Spain

The SEEA supports multiple ongoing initiatives



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Experience of the Netherlands

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Why SEEA ecosystem accounts for the Netherlands ?

SEEA ecosystem accounting in the Netherlands

- **Pilot project** of province Limburg in 2015
- Implementation of **full set of accounts** on national level started in 2016 and work in progress
  - Together with **Wageningen University**
  - **Financed** by the Dutch Ministry of Agriculture
  - **First results**, sometimes experimental methods
- **Outputs:** maps, accounts (tables), detailed reports, policy summaries
- Contribution to the development of guideliness, including the **SEEA EEA revision**)

Ecosystem types and extent account

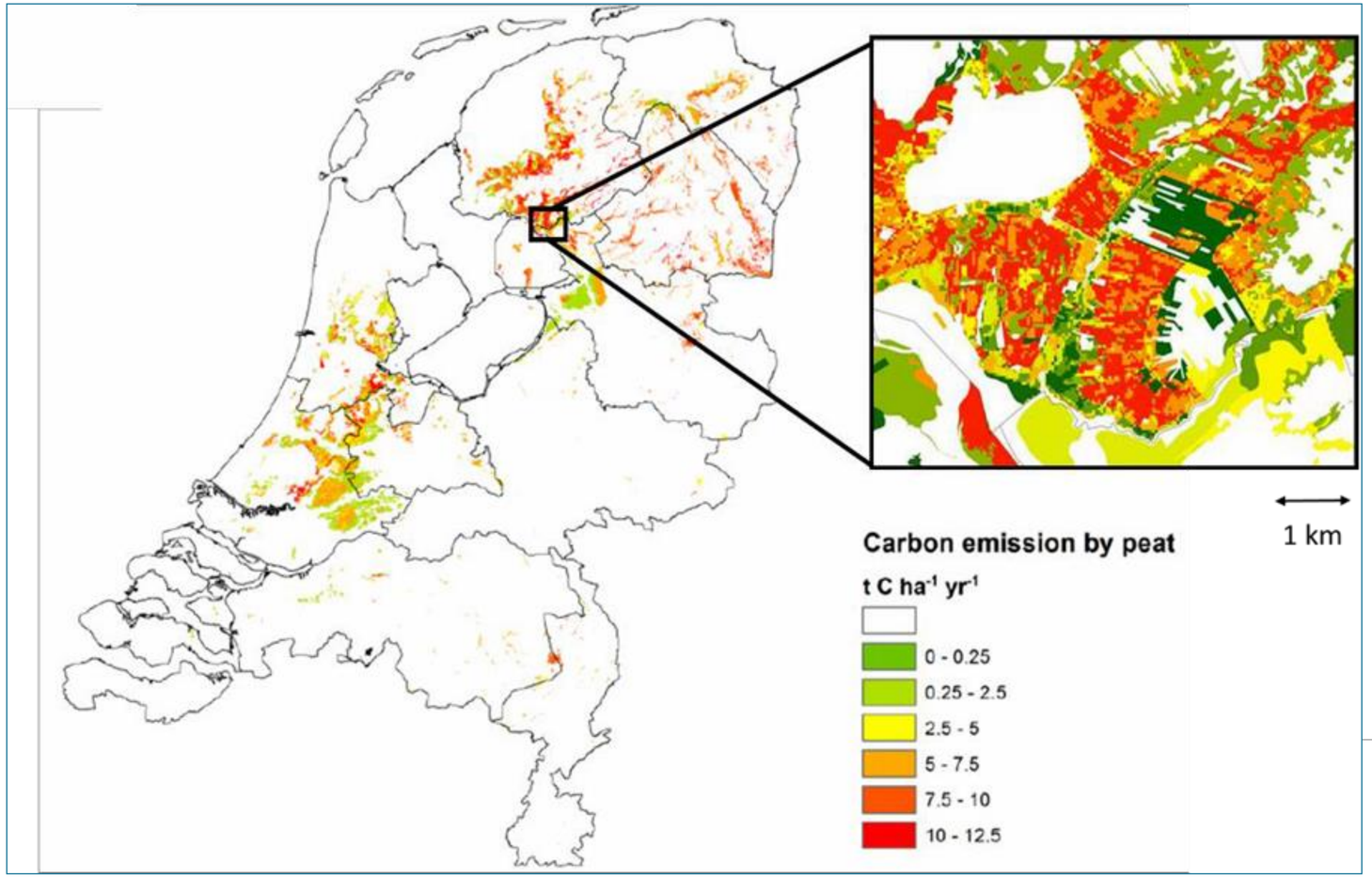
- Non-perennial plants
- Perennial plants
- Greenhouses
- Meadows (grazing)
- Bushes and hedges bordering fields
- Farmyards and barns
- Dunes with permanent vegetation
- Active coastal dunes
- Beach
- Deciduous forest
- Coniferous forest
- Mixed forest
- Heath land
- Inland dunes
- Fresh water wetland
- (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 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 services

- Provisioning
  - Crop production
  - Fodder production
  - Timber production
  - Biomass from non-agricultural sources
- Regulating
  - Air filtration
  - Carbon sequestration in biomass
  - Pollination
  - Water filtration
  - Natural pest control
  - Erosion prevention
  - Protection against heavy rainfall
- Cultural
  - Nature recreation (hiking)
  - Nature tourism
  - Amenity service

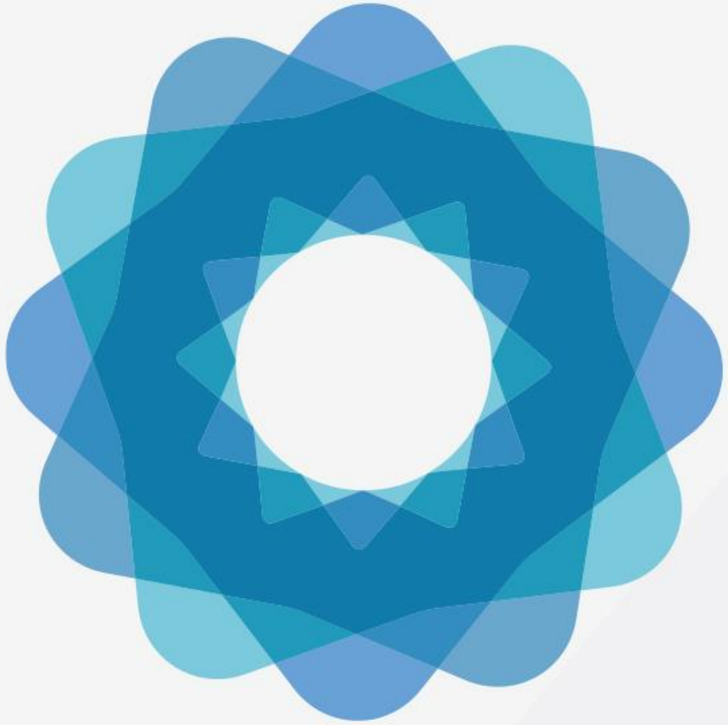
Application of SEEA EEA to support policy making: inputs provided to the Netherlands debate on better managing peatlands



- Peatlands cover around 8% of the land area
- CO2 emissions peat 7% of national emissions
- Depend upon drainage
- Different management leads to major emission reductions
- Accounts can facilitate local actions

SEEA EEA in the Netherlands – Lessons learned

- **High interest** at government and businesses
- **Step-by-step approach**: account-by-account and learning by doing
- **Collaboration** between statistical office and university
- Data available from many sources and institutes: **integration of data is already valuable**
- **Spatial approach is challenge** in terms of knowledge and infrastructure



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