

Developing a Shared Spatial Data Platform for Ecosystem Accounting in the EU

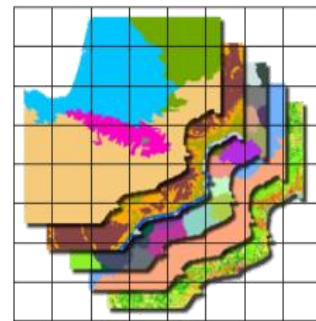
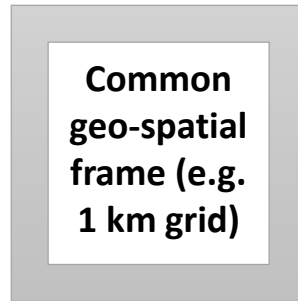
Jan-Erik Petersen (EEA)

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Goal: Sharing data via one (virtual) system



Different data sets and data layers



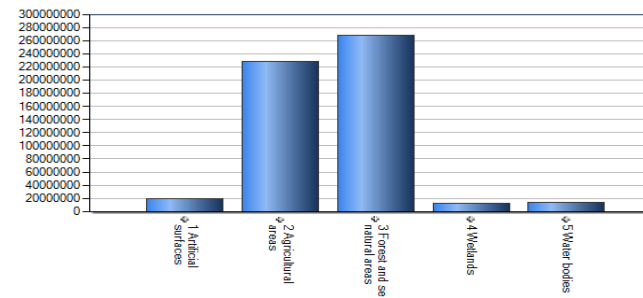
Combined data sets



AREA in KM2	MAES ECOSYSTEM TYPES									Total
	1 Urban	2 Cropland	3 Grassland	4 Woodland and forest	5 Heathland and shrub land	6 Sparsely vegetated land	7 Inland wetlands	8 Rivers and lakes	9 Marine Inlets and transitional waters	
Ecosystem extent 2006	232,494	2,035,766	652,817	2,009,117	279,496	344,585	129,079	141,319	27,858	5,852,532
Reductions to initial ecosystem extent	2,539	11,812	4,722	69,756	1,253	2,181	189	272	84	92,817
Additions to initial ecosystem extent	8,259	6,867	9,246	70,394	586	1,913	248	1,256	48	92,817
Net additions to ecosystem extent (additions - reductions)	+ 5,720	- 4,945	- 1,476	+ 628	- 667	- 268	+ 59	+ 984	- 36	
Net additions as % of initial year	+ 2.5	- 0.2	- 0.2	+ 0.0	- 0.2	- 0.1	+ 0.0	+ 0.7	- 0.1	
Total turnover of ecosystem extent (reductions + additions)	10,798	18,680	7,968	140,161	1,839	4,094	436	1,528	132	185,635
Total turnover as % of initial year	4.6	0.9	1.2	7.0	0.7	1.2	0.3	1.1	0.5	3.2
Stable ecosystem stock in KM2	229,956	2,023,954	648,096	1,939,351	278,243	342,404	128,891	141,047	27,774	5,759,715
% of ecosystem stock that was stable	98.9	99.4	99.3	96.5	99.6	99.4	99.9	99.8	99.7	98.4
Ecosystem extent 2012	238,215	2,030,821	651,342	2,009,746	278,829	344,316	129,138	142,303	27,822	5,852,532

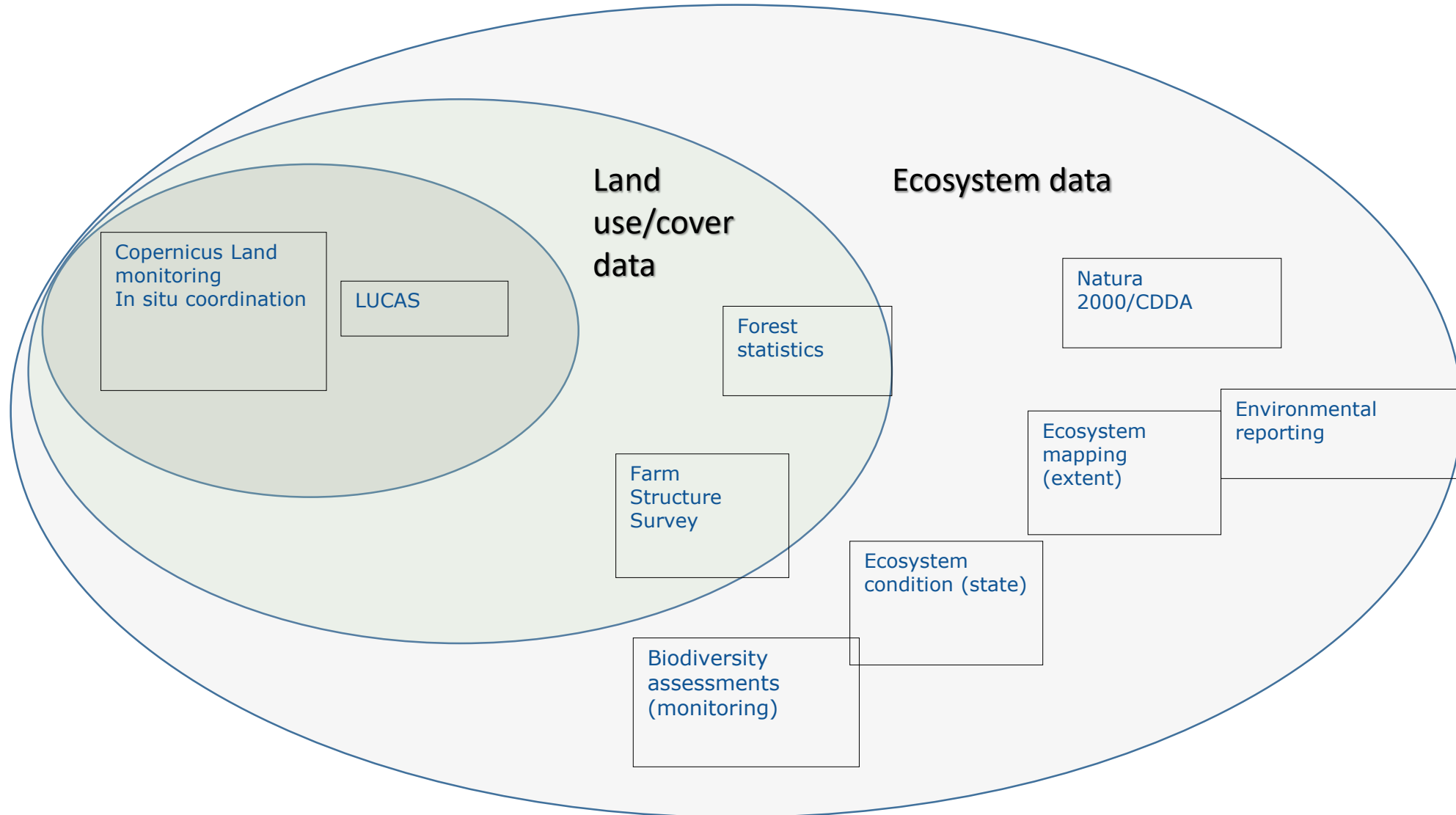
source: EEA/CLC V18.5 DD calculation

Accounting tables

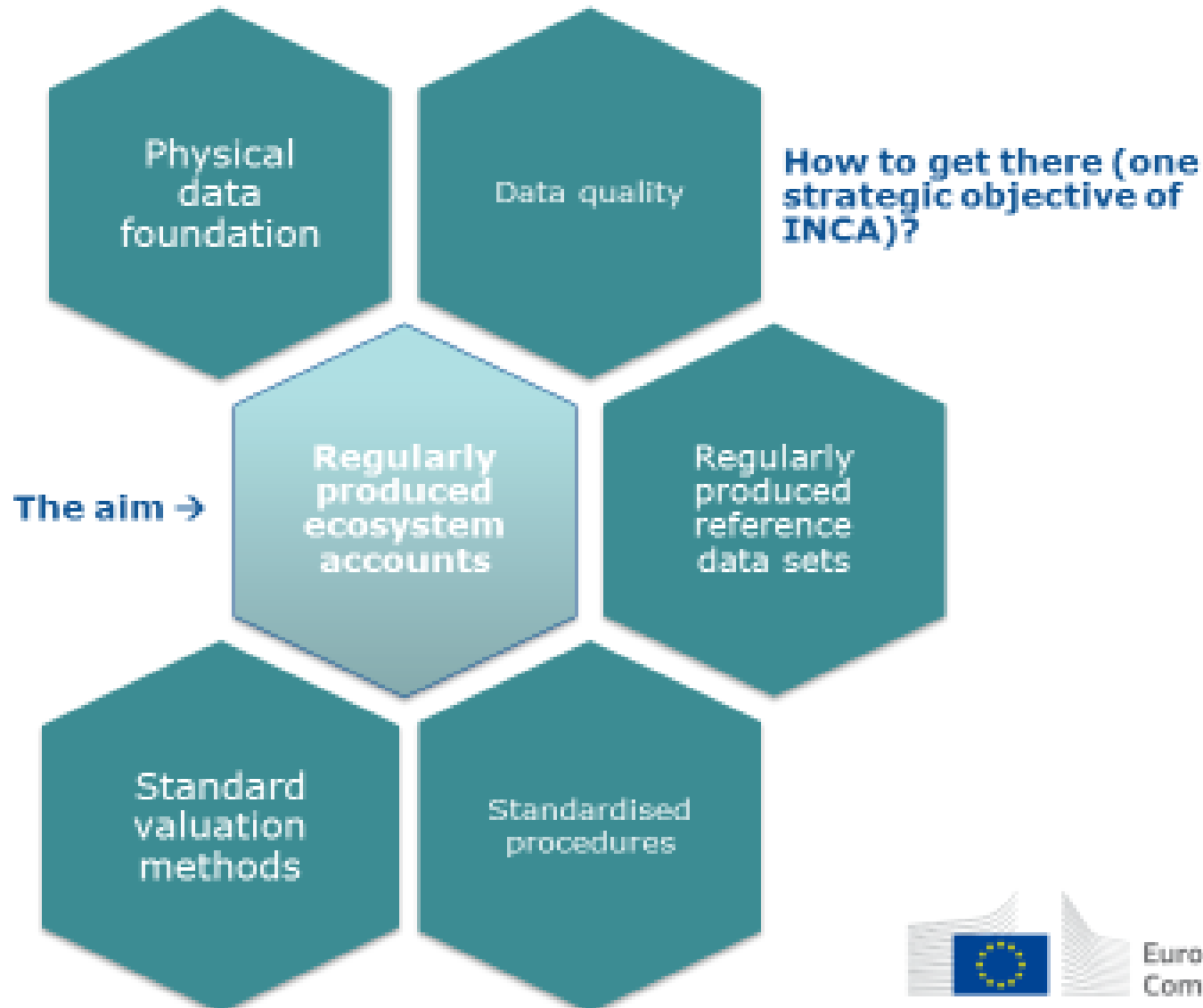


Accounting results in charts, figures, maps etc.

Starting point: many data relevant to ecosystem accounting but not in same spatial frame



Elements for a regular production of ecosystem accounts in the EU



What do we need – identifying functionalities

Potential functionalities (by order of difficulty):

- a) Documenting data sources and workflows for account production
- b) Providing structured and easy access to all existing data sets
- c) Development of shared spatial reference data on natural capital
- d) Enabling more efficient (machine-based) production of accounts in future

Sharing & using input data sets – key challenges

- Who are data suppliers? Is current set-up efficient for data access?
- How do we ensure common geometry and other key data standards for efficient data sharing and integration into different analytical tools.
- How to ensure there is only one master version per data set, how is that maintained/updated? Governance of that process?

⇒ We probably can build on past and current investments to enable access to data across the KIP INCA partners

⇒ Substantial investment is likely required if we want to achieve (more) automated regular production of accounts in the future

Developing shared spatial reference data

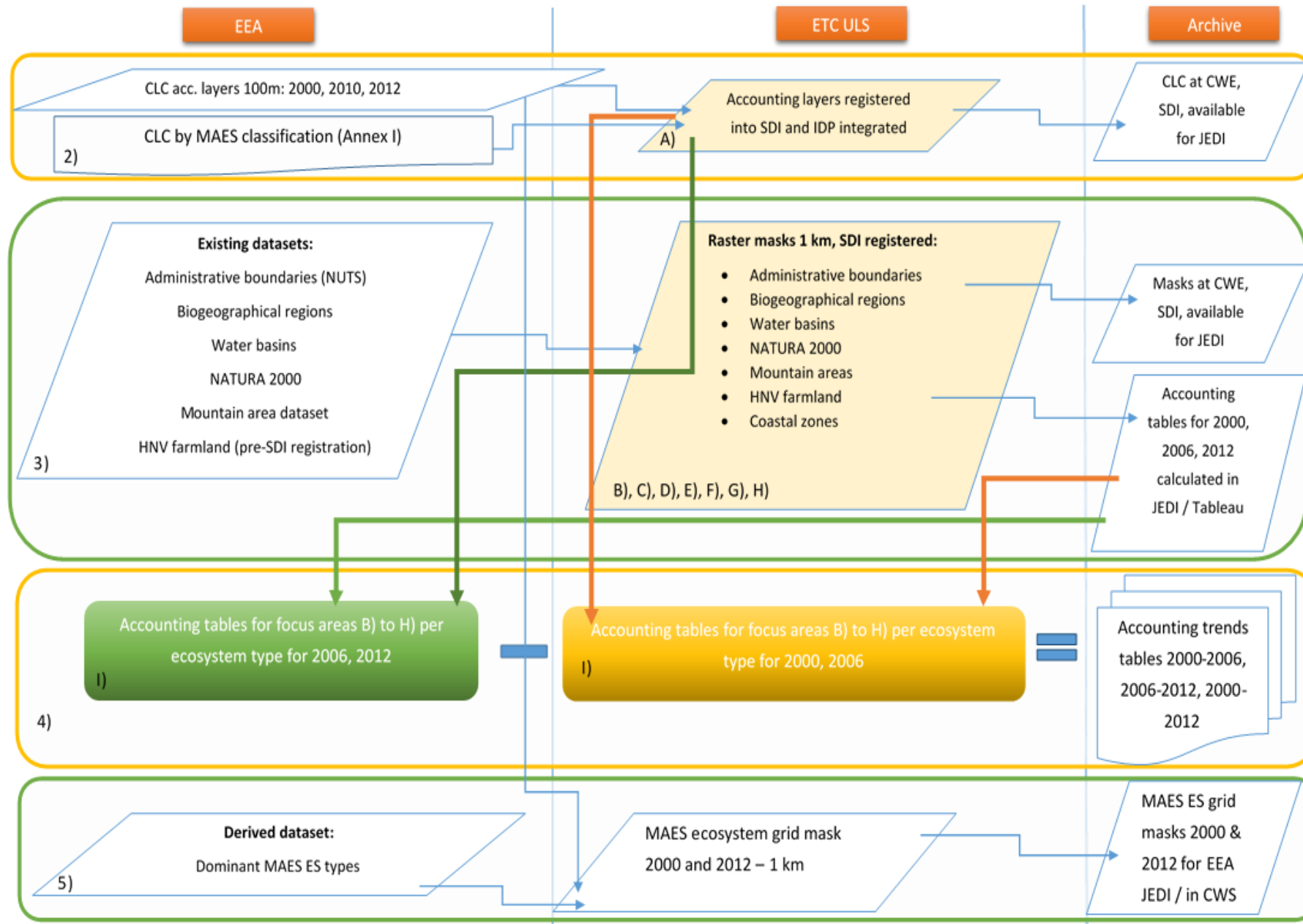
- 1) Identifying priority data sets (current work includes downscaled agricultural land use, 'integrated biodiversity data', landscape elements)
- 2) Where existing efforts/creative data combinations still leave gaps:
 - Are current EU plans likely to close identified gaps (e.g. via Copernicus)
 - Do we need new monitoring or data collection schemes?
- 3) Where we create NCA reference data sets by joining forces: How to organise that? How to achieve regularity and future resourcing?

=> This is probably where KIP INCA can make a substantial difference

Ongoing work to identify useful functionalities

- KIP INCA Workshop on spatial data platform in March 2018, see:
<https://projects.eionet.europa.eu/ecosystem-capital-accounting/library/workshop-kip-inca-spatial-data-platform>
- Review and identification of priority natural capital data sets
- Survey of selected EU countries on national set-up for compiling and managing input data for ecosystem accounting
- Developing 'data architecture test cases' for individual ecosystem accounts

Example of data architecture test case (extent accounts)



Outlook and next steps

- Complete ongoing review in coming months
- Final proposal for technical design of spatial platform by autumn 2018, for review and resource decisions at management level
- Further development and roll-out of agreed elements in 2019
- Demonstrate full functionality of system during 2020 (on basis of integrating CLC 2018 data set and other refreshed or new data sets).

Thank you for your attention!