DG ECFIN-OGWG workshop on natural capital measurement and modelling – input to session 1

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Jan-Erik Petersen
European Environment Agency

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Approach to review of issues and advances presented:

a)   Brief initial comments on the presentations

b)   Review of knowledge needs for managing natural capital better

c)   Some personal comments on resource needs for natural capital knowledge base

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Brief reflections on the presentations I

1) **Approaches and data needs for modelling the contribution of natural capital to economic production (Döhring & Thum-Thyssen)**

   a) Well-structured & clear; some acronyms a challenge for non-economists

   b) Slide 12: the 9 'ESTAT' ESS accounts overlap with 7 proposed in new EU ecosystem accounting module

   c) Data needs review builds on perspective of macro-economic modellers, ie (simplified) aggregates at national level

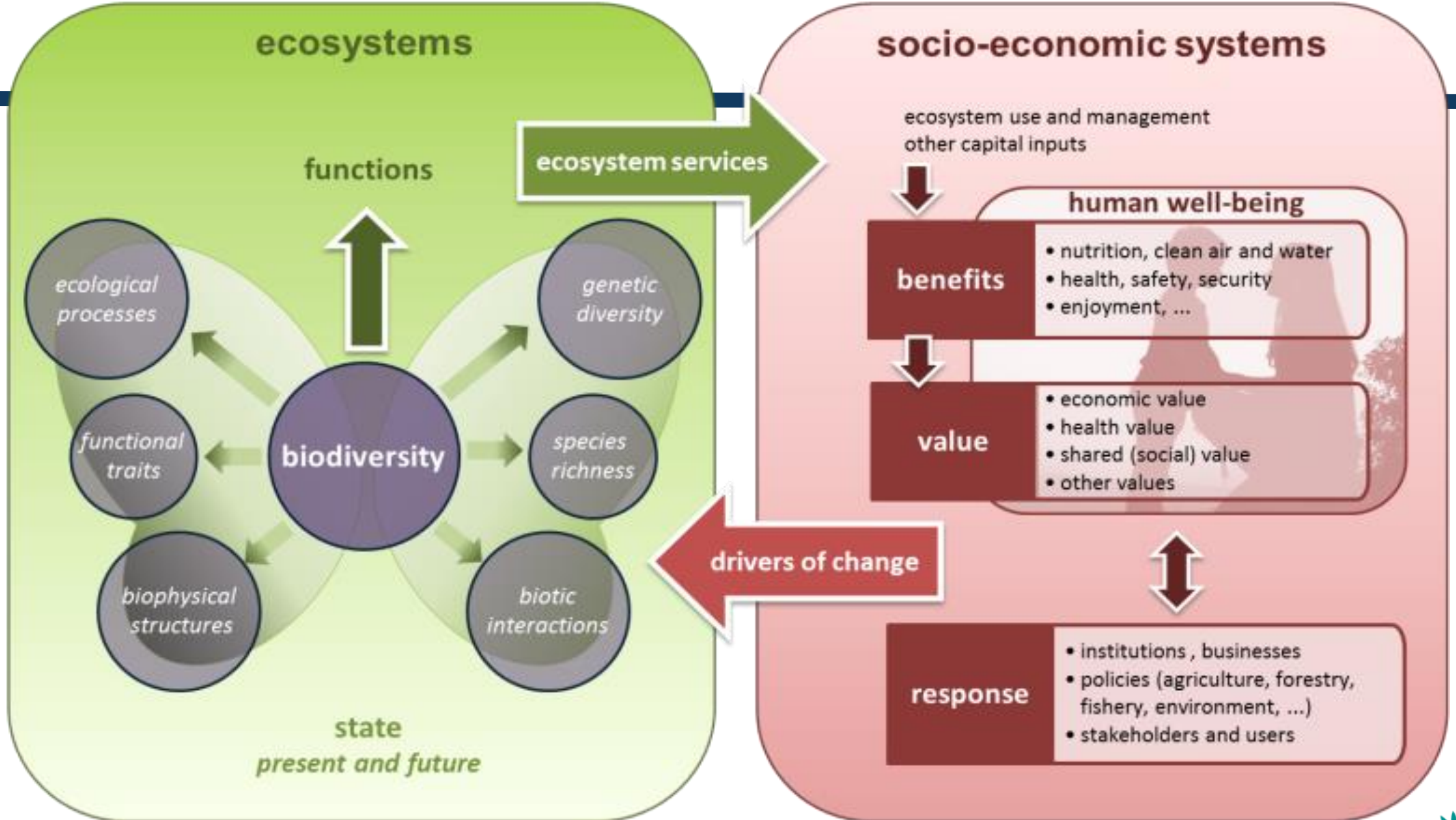   d) Feedback: natural capital measurement requires very detailed bio-physical data

2) **SEEA accounts & their integration with national accounts (de la Fuente)**

   a) Good review of historical development of SEEA & current status

   b) No explicit review of data foundation – many SEEA accounts build on re-use of existing data (whether public or private activity records)

   c) Point to consider: ecosystem accounting requires geo-spatial data

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Brief reflections on the presentations II

3) **Measurement of ecosystem services (Tamborra & La Notte)**

   a)   A very comprehensive review of work by JRC in INCA project & beyond

   b)   This is a world-leading effort – though not yet complete or perfect :)

   c)   Idea of 'ecosystem service vulnerability' a nice conceptual development

   d)   Slide 11 shows input input <u>variables</u> to modelling but actually not all input <u>data sets</u> (a wide range of mostly geo-spatial data, as far as available)

   e)   'ESS actual flow' as interesting new application – strengths & weaknesses

   f)   Conclusions presented in slides 18 – 23   -   is the data foundation good enough?
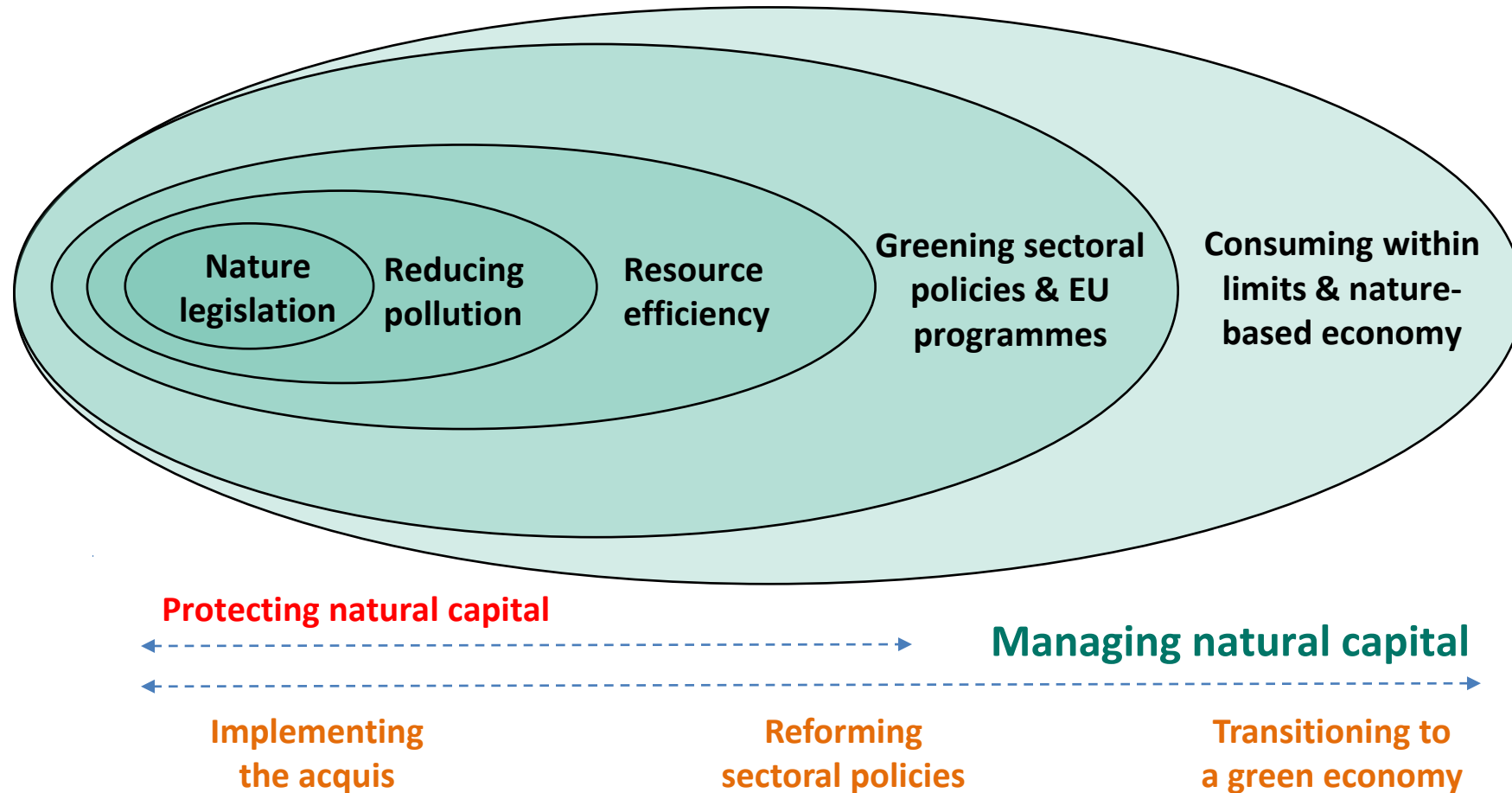
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From EU report on 'Mapping and assessment of ecosystems and their services, 2013:
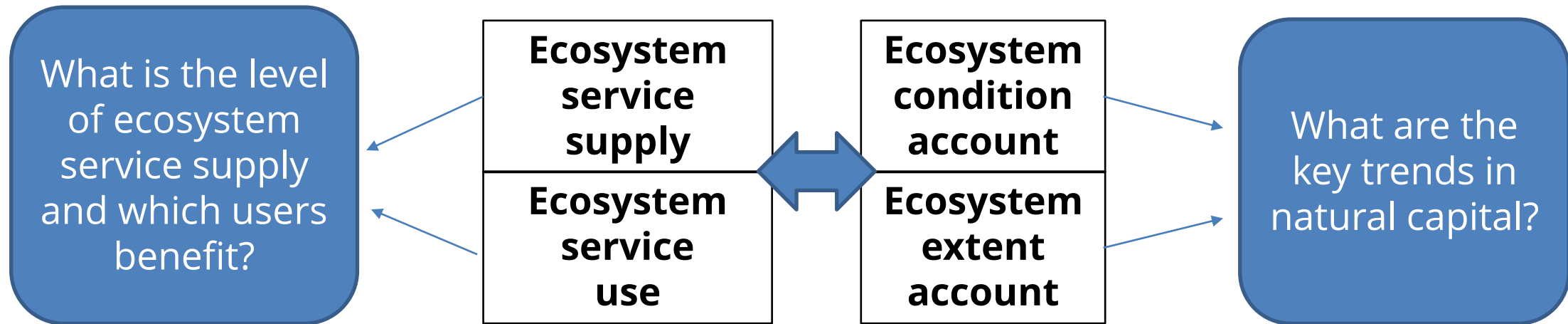Mapping and assessment of ecosystems and their services - Publications Office of the EU (europa.eu)

Different aspects of managing natural capital require different policy approaches

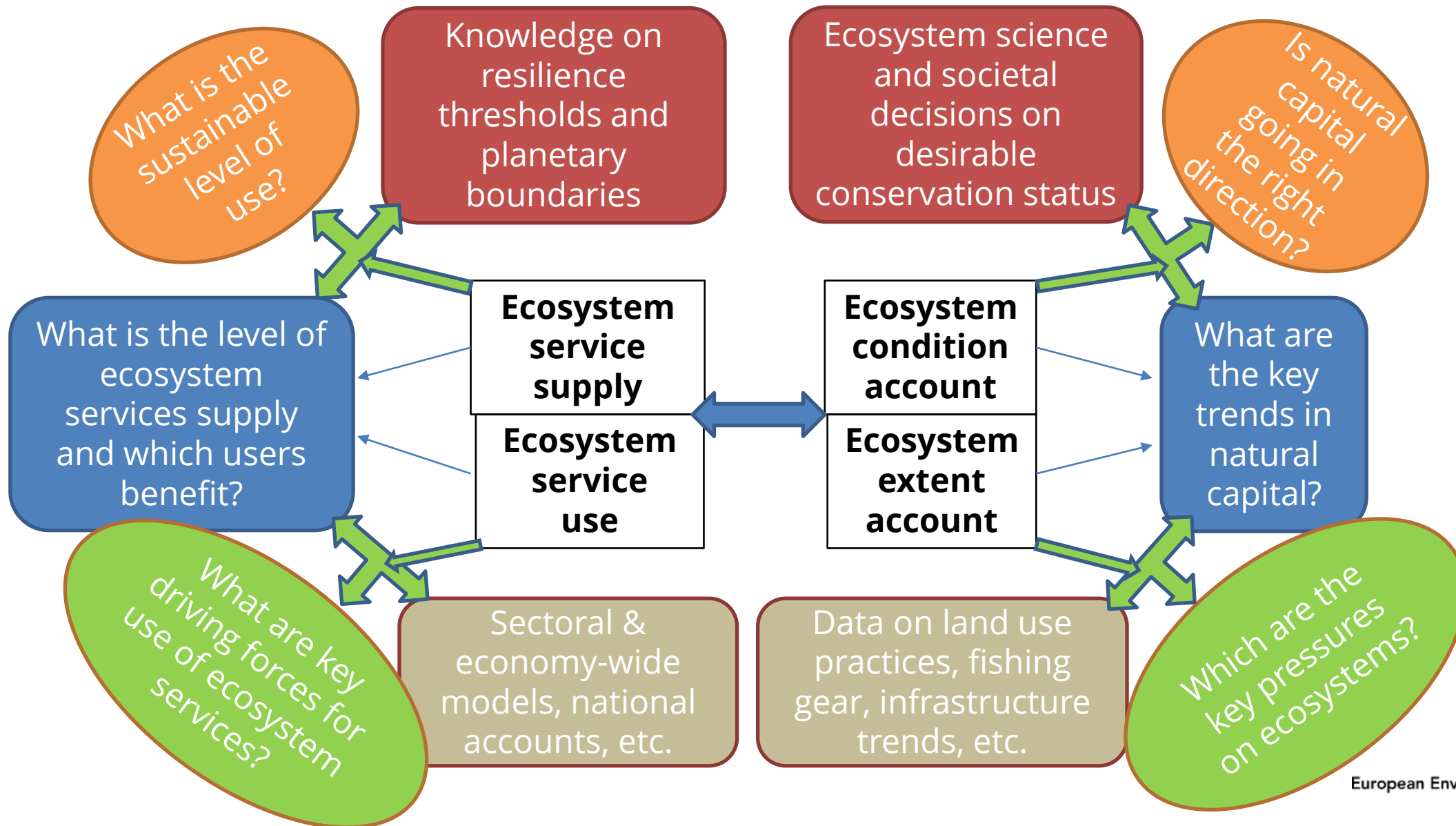# Analytical framing from EEA report on 'Natural capital accounting in support of policy-making'

| What is the level of ecosystem service supply and which users benefit? | Ecosystem service supply | ⟷ | Ecosystem condition account | What are the key trends in natural capital? |
| | Ecosystem service use | | Ecosystem extent account | |

Blue shapes represents core outputs and insights from ecosystem accounts

Reference: Natural capital accounting in support of policymaking in Europe — European Environment Agency (europa.eu)

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Knowledge framework for managing natural capital

What is the sustainable level of use?

Knowledge on resilience thresholds and planetary boundaries

Ecosystem science and societal decisions on desirable conservation status

Is natural capital going in the right direction?

What is the level of ecosystem services supply and which users benefit?

Ecosystem service supply

Ecosystem service use

Ecosystem condition account

Ecosystem extent account

What are the key trends in natural capital?

Full set of questions to be answered (round shapes)

What are key driving forces for use of ecosystem services?

Sectoral & economy-wide models, national accounts, etc.

Data on land use practices, fishing gear, infrastructure trends, etc.

Which are the key pressures on ecosystems?

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The data-to-knowledge chain

Numerical knowledge base

Analytical knowledge base

Basic input data sets:
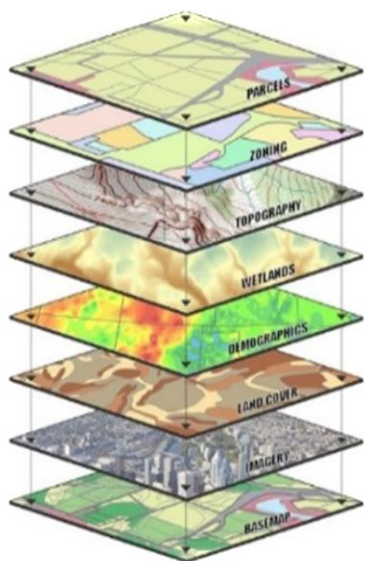
Hosting organisation/ Geospatial database:

Analytical approach:

Policy support & applications:

Ecosystem + other data sets .....

Synthetic reviews

Ecosystem accounts + MAES

Policy-focused analysis

EU Semester

BDS 2030 review

Ecosystem Extent + condition

Ecosystem service flows

Agriculture

WFD

Natura 2000

Other policies

Well-managed European ecosystems

Which ones do we need?
Which ones do we have?
At ecosystem scale, regular?
Based on stable source?
How to fill gaps?

How to structure?
Who to host?
What resources required? Etc.

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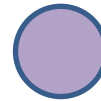
A personal view: resources in data-to-decision chain
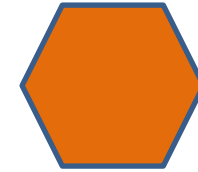
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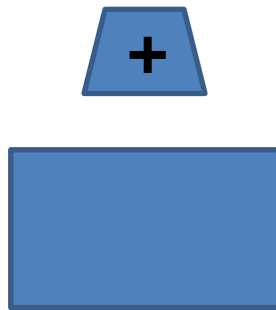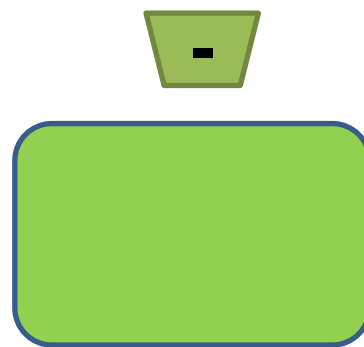monitoring

Research

Compilation
& transfer

Policy
making

Current situation: focus of resource investment is on research, outside of Copernicus there is relatively little investment in basic monitoring, the resources of environment agencies and similar bodies are often small compared to number of staff in research or policy making/implementation bodies.

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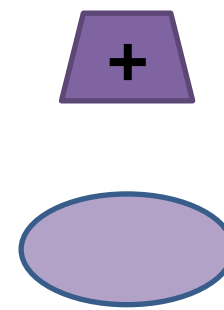# A personal view: resources in data-to-decision chain
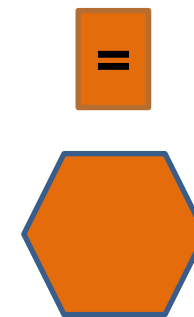
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Future situation (?): a more balanced distribution of resources in the knowledge chain; critical is to increase resources for monitoring and for the transfer capacity in environment agencies & similar bodies

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Thank you for your attention.

Jan-Erik.Petersen@eea.europa.eu

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