

Natural Systems track:

Natural capital / water

Preserving our natural capital –
which evaluation questions to ask?

Jan-Erik Petersen, EEA

Main themes of presentation

- 1) How to define 'natural capital' for evaluation purposes?
- 2) Which policies relate to EU policy objectives in regard to natural capital and are thus candidates for an evaluation exercise?
- 3) What are the 'knowledge systems' that we have for measuring trends in natural capital and to evaluate related policies?



Accounting for natural capital and ecosystem services

Aim of EU 'KIP INCA' project on natural capital accounting in EU:

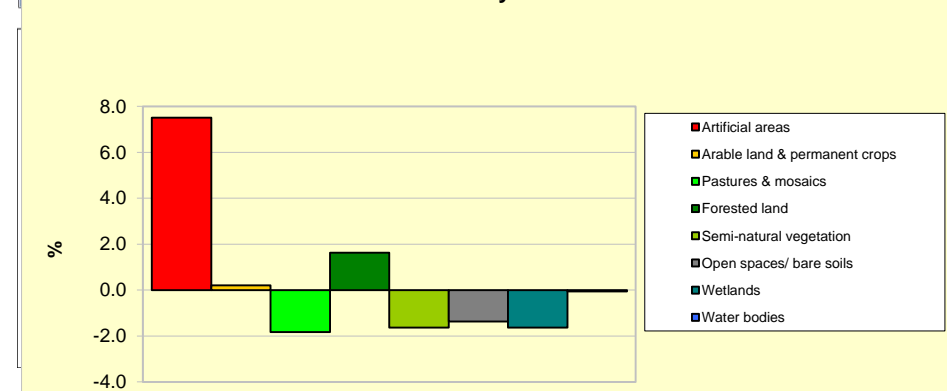
- Develop integrated EU ecosystem accounting system
- Track ecosystem assets & condition
- Track and project ecosystem service flows -> trade-offs ?
- Valuation of benefits from 'nature'

Planned outputs:

- Develop and implement EU accounts on ecosystems & their services
- Shared spatial data platform
- Information for better management of natural capital

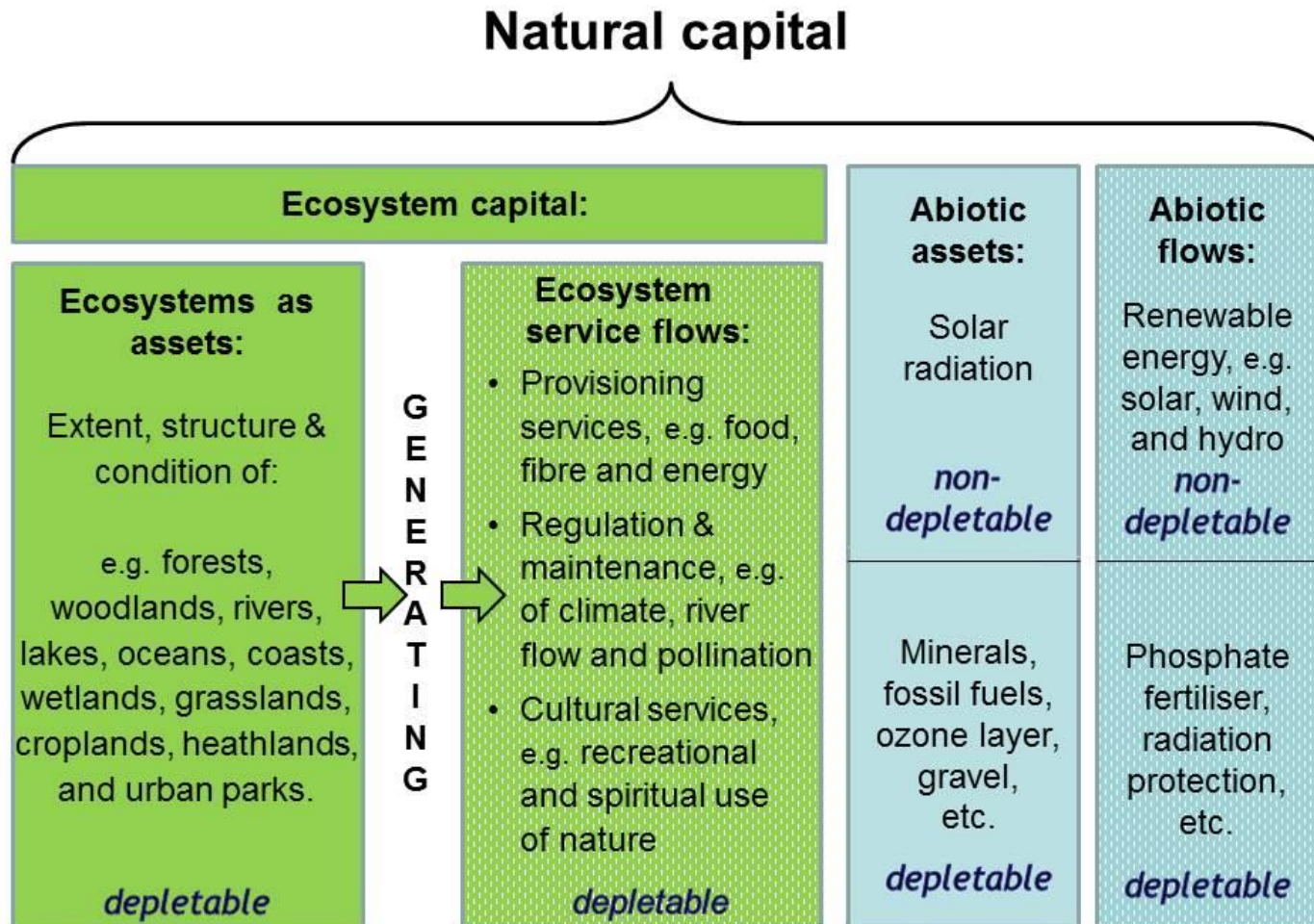


Net Change in Land Cover
% of initial year



What is 'natural capital' ?

Option 1: a science-based approach – see figure from draft EU reference document on natural capital accounting below.



What is 'natural capital' ?

Option 2: a policy-based approach – see extract from 7EAP below.

Extract from 7th EAP, paragraph 28:

(a) the loss of biodiversity and the degradation of ecosystem services, including pollination, are halted, ecosystems & their services are maintained & at least 15 % of degraded ecosystems have been restored;

(b) the impact of pressures on transitional, coastal and fresh waters (including surface and ground waters) is significantly reduced to achieve, maintain or enhance good status, as defined by the Water Framework Directive;

(c) the impact of pressures on marine waters is reduced to achieve or maintain good environmental status, as required by the Marine Strategy Framework Directive, and coastal zones are managed sustainably;

(d) air pollution and its impacts on ecosystems and biodiversity are further reduced with the long-term aim of not exceeding critical loads and levels;

(e) land is managed sustainably in the Union, soil is adequately protected and the remediation of contaminated sites is well underway;

(f) the nutrient cycle (nitrogen & phosphorus) is managed in a more sustainable and resource-efficient way;

(g) forest management is sustainable, and forests, their biodiversity and the services they provide are protected and, as far as feasible, enhanced and the resilience of forests to climate change, fires, storms, pests and diseases is improved.



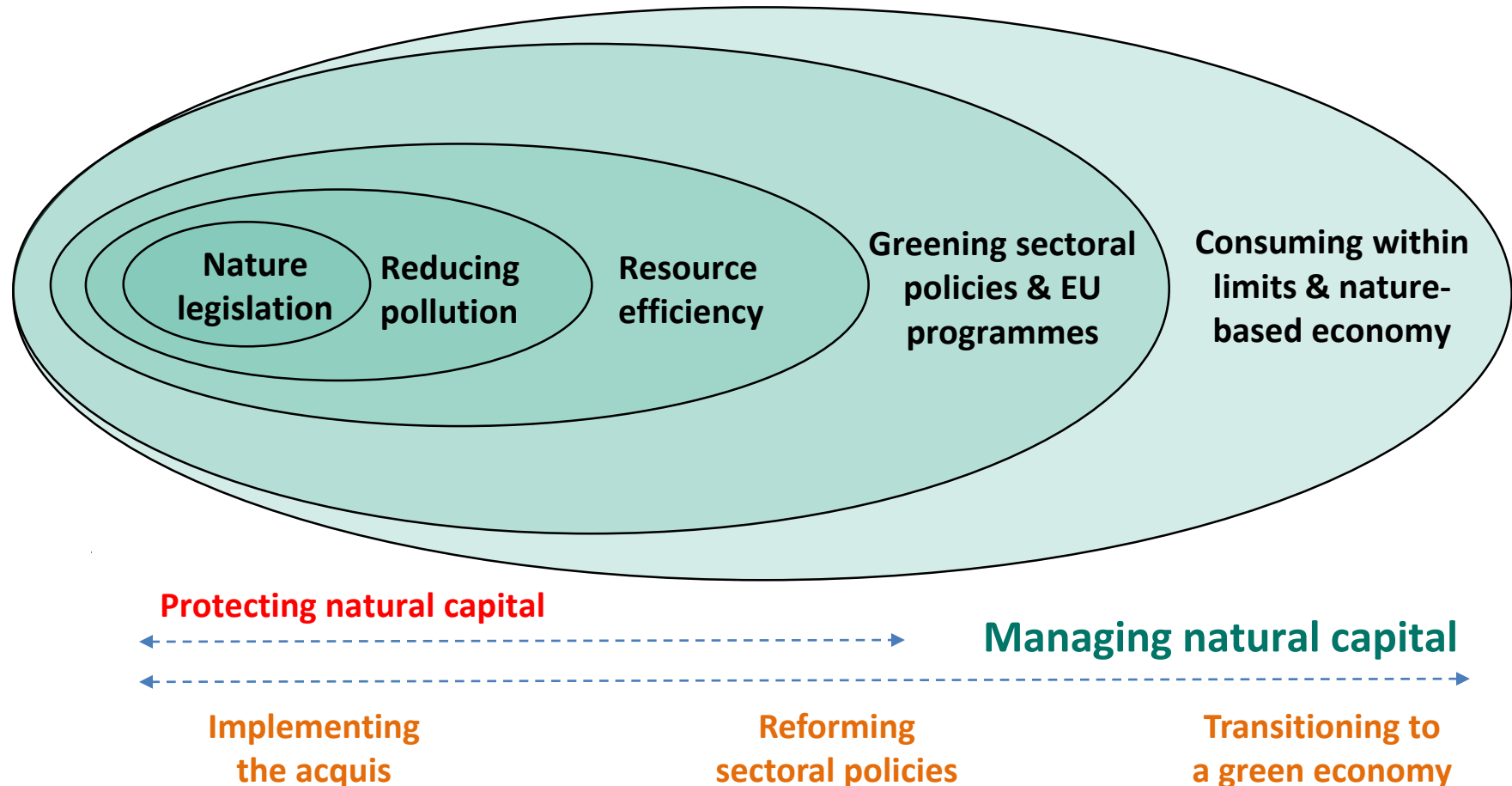
How to define 'natural capital' for evaluation?

Draft conclusions and questions:

- There are good candidates for a definition of natural capital; still some further work required to reach full consensus and to elaborate all necessary details.
- 'Natural capital' is a broad term -> can we develop an approach to home in on critical components?
- What criteria to use for that? Environmental fragility, political priority, 'evaluability' ?

Policies for managing natural capital better

Option 1: carrying out a structured review – see figure below



Policies for managing natural capital better

Option 2: building on work of EU knowledge innovation project on natural capital accounting – see some extracts below

Green Economy, Growth and Jobs, EU Annual Growth Surveys, Europe 2020 Strategy and its potential follow-up:

- Highlight the economic values of natural capital (stock and flows) such as the monetary values of the economic goods and services produced in a specific year or in a specific sector, alongside other economic information.
- Enable the identification of opportunities and trade-offs at national or EU level between key economic, social and environmental priorities.
- Evaluate investment and policy options in a way that better reflects true costs to society and directly addresses externalities, when including accounts of exchange as well as welfare values.
- Provide concrete information to contribute to the Greening of the European Semester and Europe 2020 and its potential follow-up.

Environmental policies:

- Covers the 7th EAP, the EU Biodiversity Strategy and the Birds and Habitats Directive, the WFD, The MSFD, the Soil Thematic Strategy, air quality policy, the circular economy
- Explicitly account for the range of ecosystem services and demonstrate in monetary terms the benefits of investing in nature, biodiversity, water and air quality & sustainable management [..]
- Provide a common reference basis to help assess progress towards targets related to ecosystem restoration, such as Target 2 of the EU 2020 Biodiversity Strategy to restore 15% of degraded ecosystems.



Policies for managing natural capital better

Draft conclusions and questions:

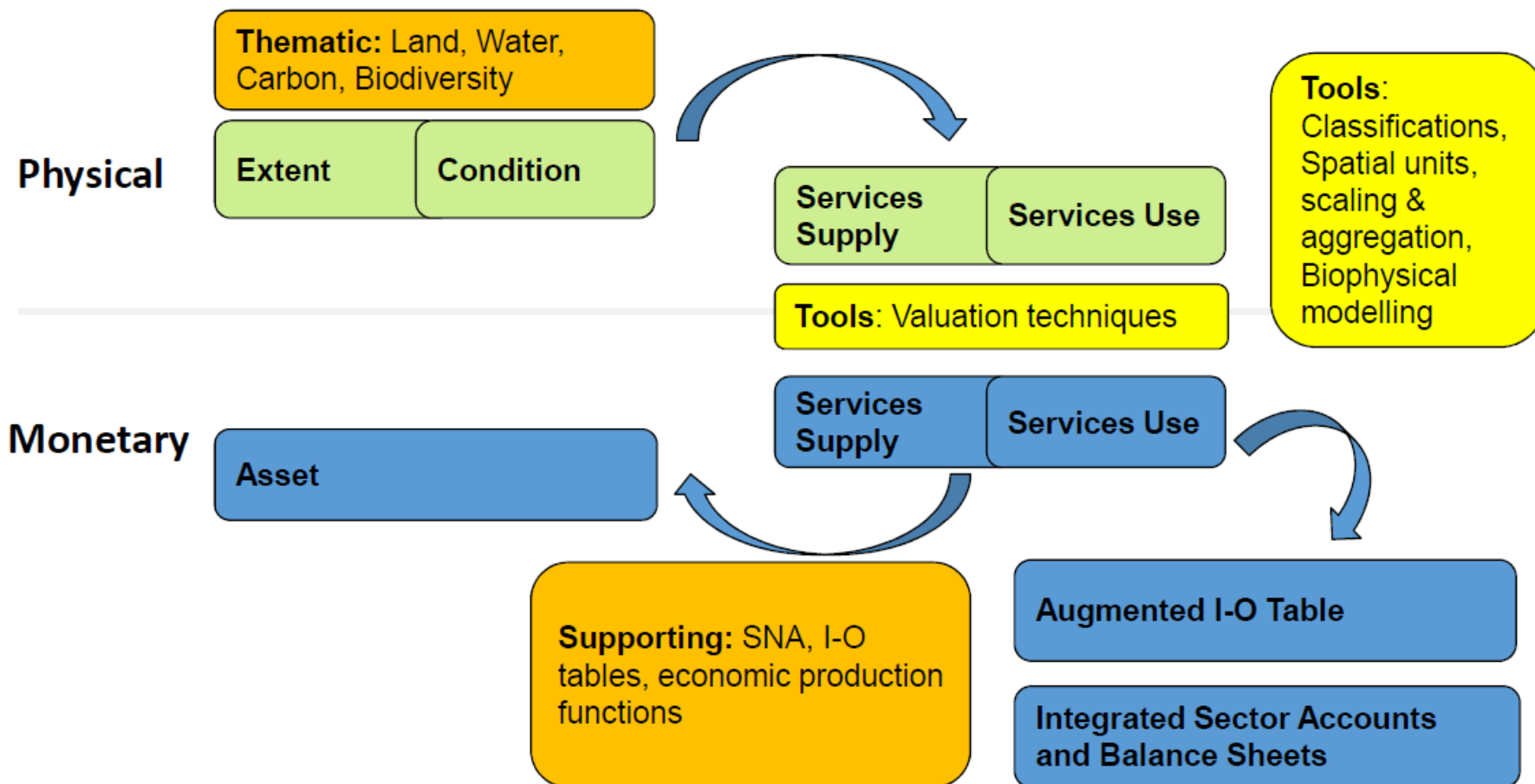
- Analytical approaches and reviews are available for identifying which policies are relevant for a sustainable management of natural capital.
- However, there are too many potentially relevant policies -> can we develop an approach to home in on the most important ones?
- What criteria to use for that? Environmental fragility, political priority, direct or indirect impacts of chosen policies? Others?

Final reflections and questions I

- ‘Natural capital’ is a very broad term and related policies are many → need to agree an evaluation focus
- For a successful evaluation we need not only a clear evaluation framework but also a ‘knowledge system’ for natural capital that delivers measurable trends (such as the UN guidelines for ‘experimental ecosystem accounting’ – SEEA EEA)
- However, existing environmental monitoring systems already provide useful trend information on certain components of natural capital, such as water quality, farmland birds and others



UN system of 'experimental ecosystem accounts'



Final reflections and questions II

Draft list of key choices for evaluation of policies related to natural capital:

- What to evaluate: components and policies
- Evaluation focus:
 - Presence/absence of policies aiming to preserve or improve natural capital? Degree of relevance?
 - Effective targeting of those policies on natural capital priorities? Related effect and effectiveness?
- How to deal with questions of required policy integration and policy coherence?
- What about direct and indirect impacts?

