



Ecosystem Science
for Policy & Practice

Natural Capital Accounting and Policy

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IEEP

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Policy commitments & accounting related activities

Strategic Plan for Biodiversity 2011-2020: Target 2

Rio+20 Conference: 57 countries – call to strengthen NCA implementation

Global

'Beyond GDP' & 'Stiglitz-Sen-Fitoussi Commission' & OECD's Better Life Initiative

UN System of Environmental and Economic Accounting (SEEA)

Global Partnership for Ecosystem Valuation and Wealth Accounting (WAVES)

EU

EU Biod. Strat. : Action 5: promote integration of values in accounting by 2020

7th Environmental Action Programme (7th EAP)

Mapping and Assessment of Ecosystems and their Services (MAES) initiative

EEA Ecosystem Capital Accounts

Regulation on National Environmental Economic Accounts (Regulation (EU) 691/2011)

Practical need for accounts to help implement Water Framework Dir. (2000/60/EC)

NBSAPs – National Biodiversity Strategies and Action Plans

Member States: Range of national commitments and (experimental) accounts

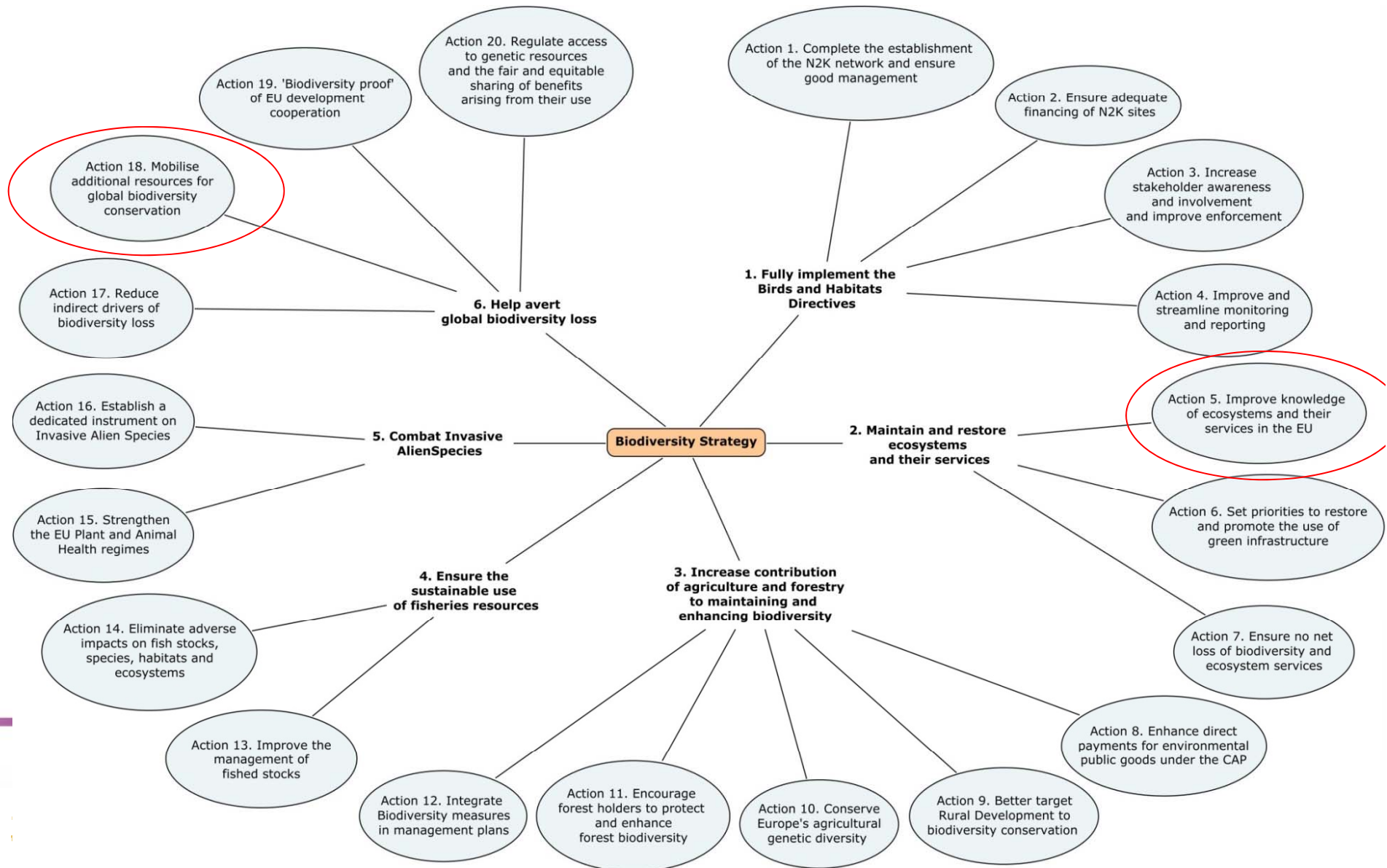
Country



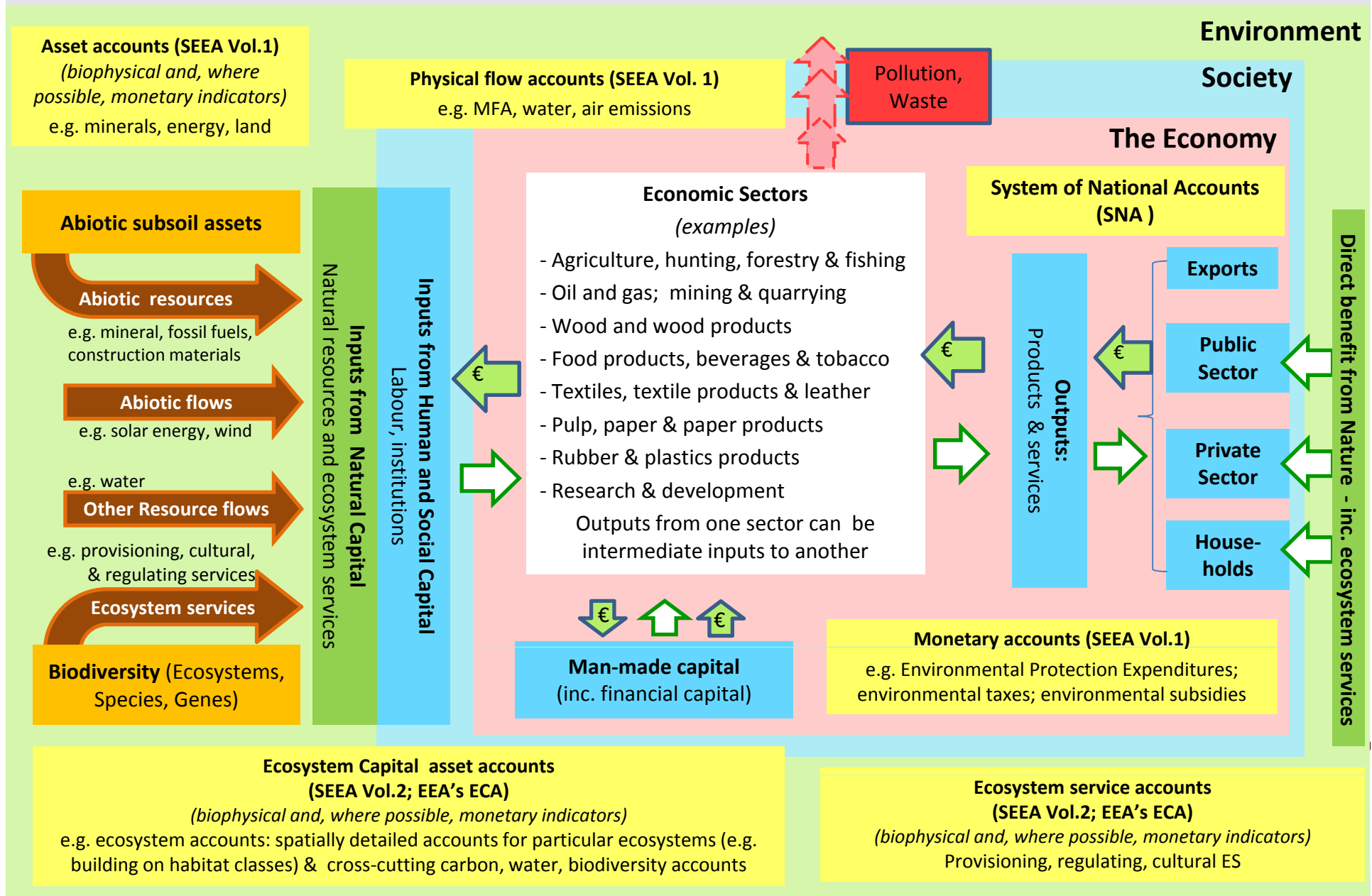
Environmental
Policy

Policy Commitments: EU Biodiversity Strategy

Action 5: promote integration of values in accounting by 2020



Accounting tools – what do they focus on?



EU's Natura 2000 network: 26,000 sites ~ 18 % of EU

Funding a challenge

Costs ~ 5.8 bnEUR/yr

Source: Gantioler et al 2010

Natura 2000 benefits

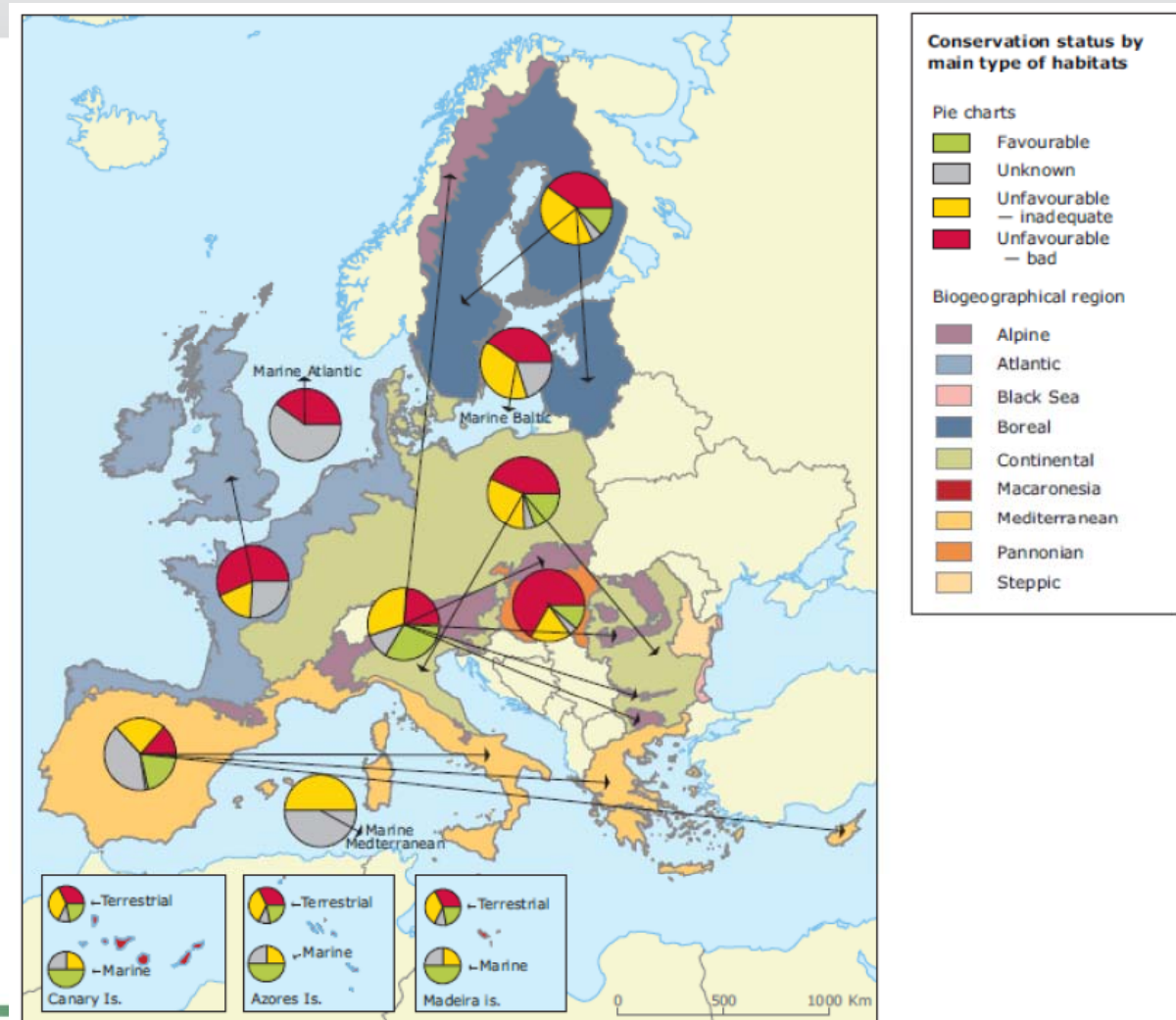
Illustrative value of
between €200-300 bn/yr

ten Brink et al. (2012)

Carbon Value:

Natura 2000 network stores
~ 9.6 btC (equiv. 35 bt CO₂),
Worth ~ €607bn-€1,130bn
(stock value in 2010)

Markandya & Ding in ten Brink et al., 2012

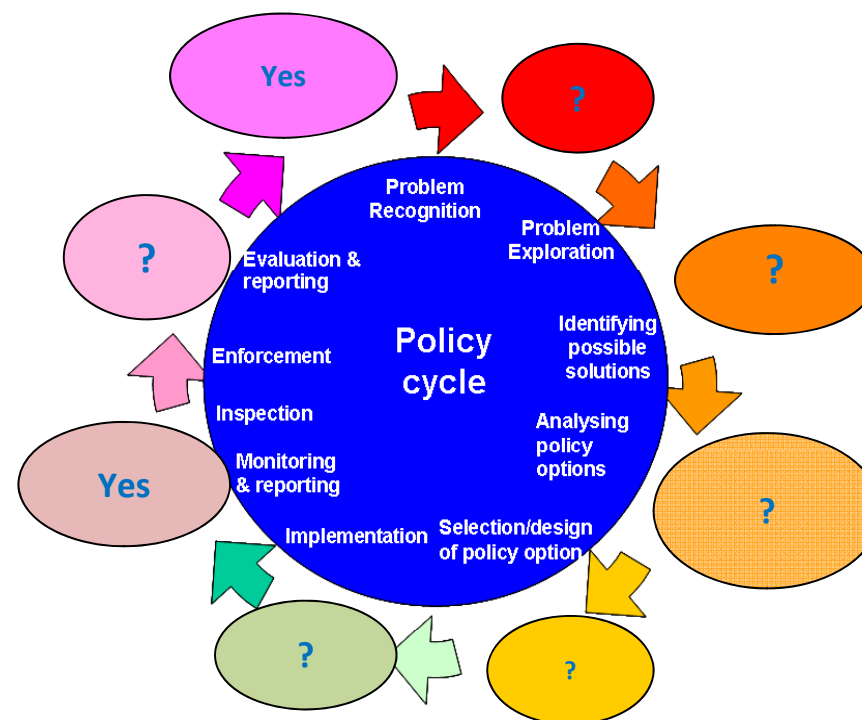


What problem / needs can NCAs address?

Policy Areas

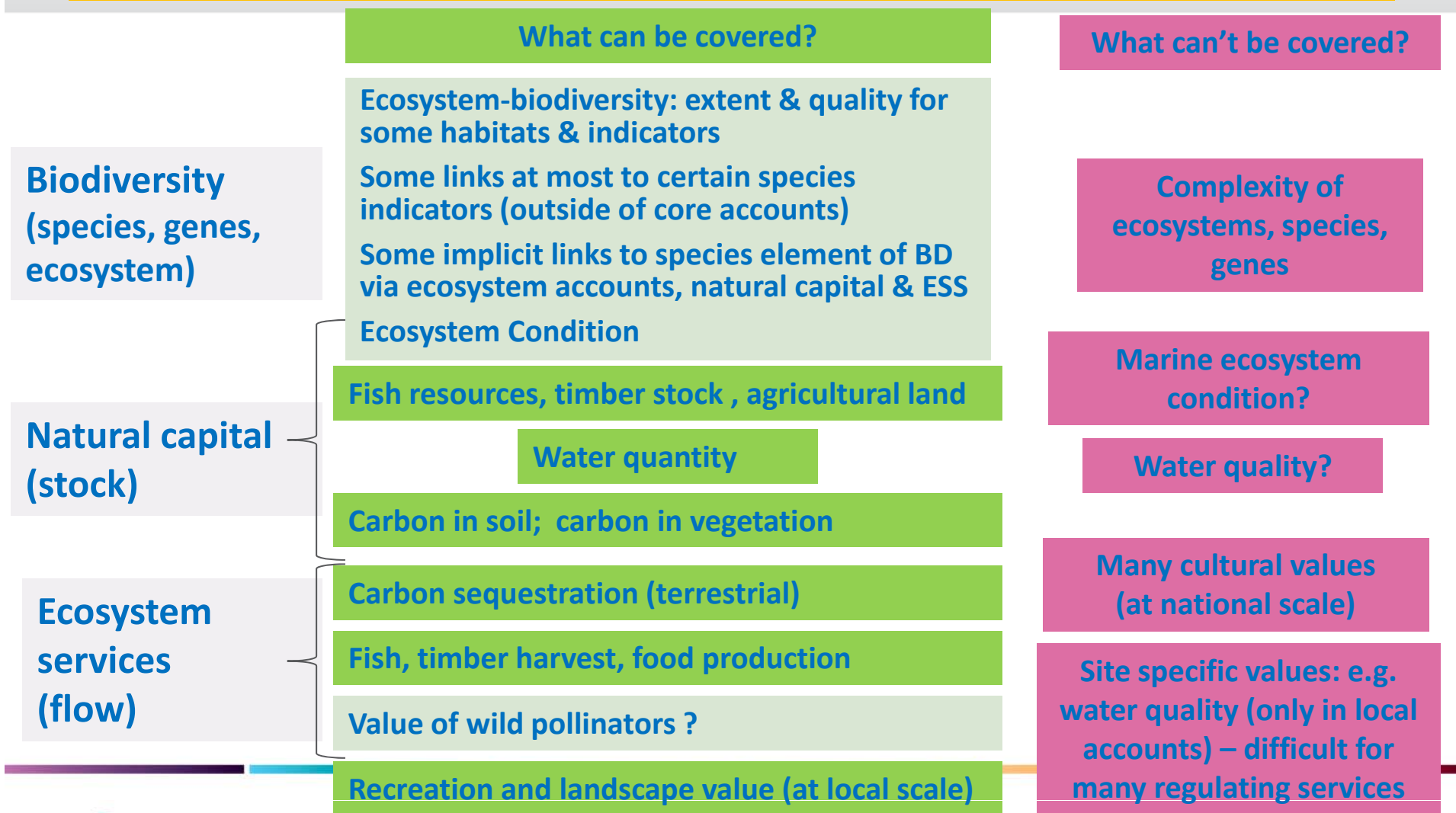
- Biodiversity
- Water
- Climate mitigation & adaptation
- Cohesion policy
- Agriculture
- Forestry
- Fisheries
- Energy
- Resource efficiency
- Green economy

Points in policy Cycle



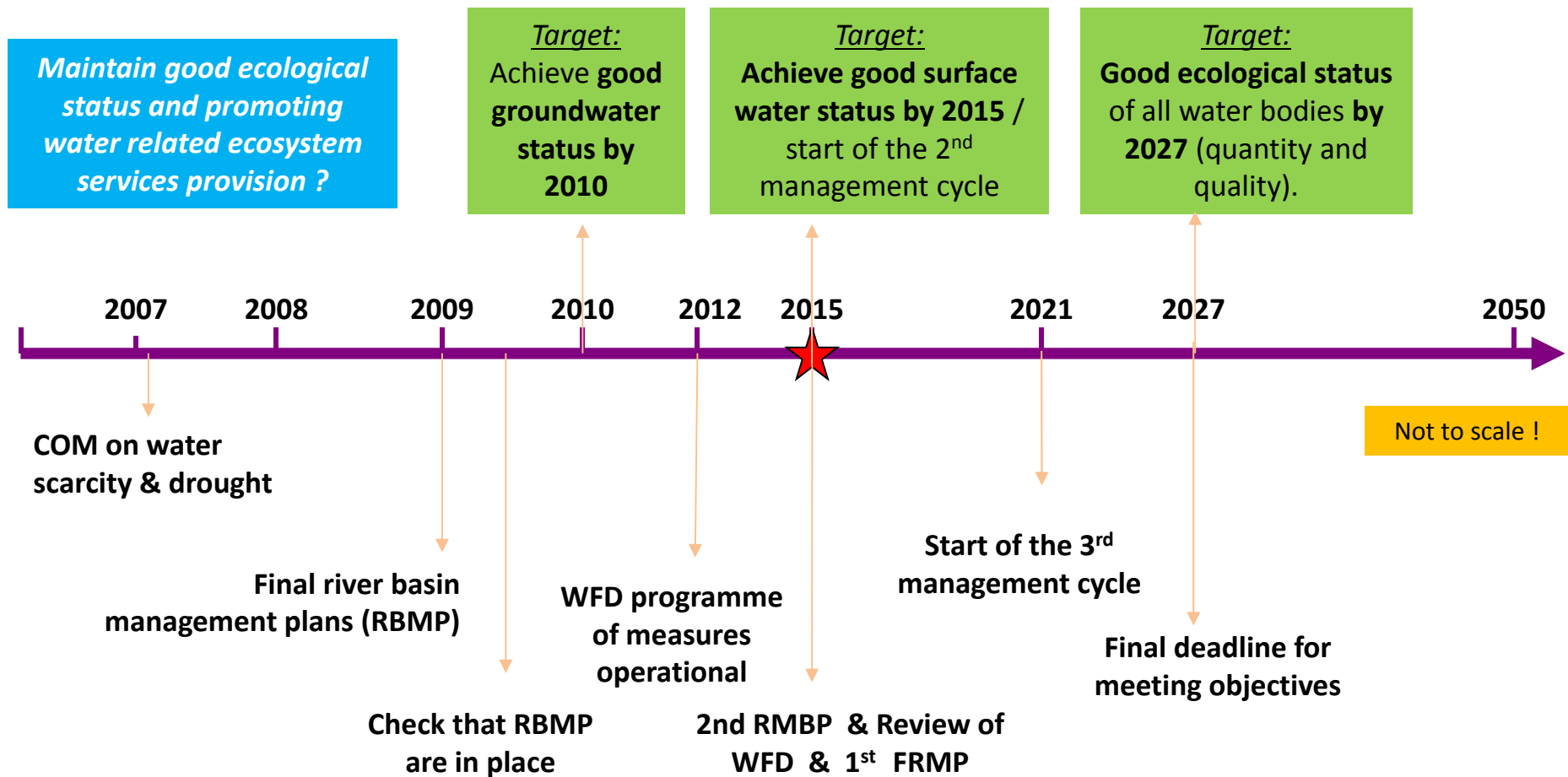
Accounts can be of use to many policy areas and across the policy cycle
Added value depends on quality of data, maturity of accounts and alternative info sources

Accounting for biodiversity, natural capital and ESS



What can and cannot be integrated depends both on data and methods.
 What are your experience / perspective? National variations? Future developments?

Water Policy

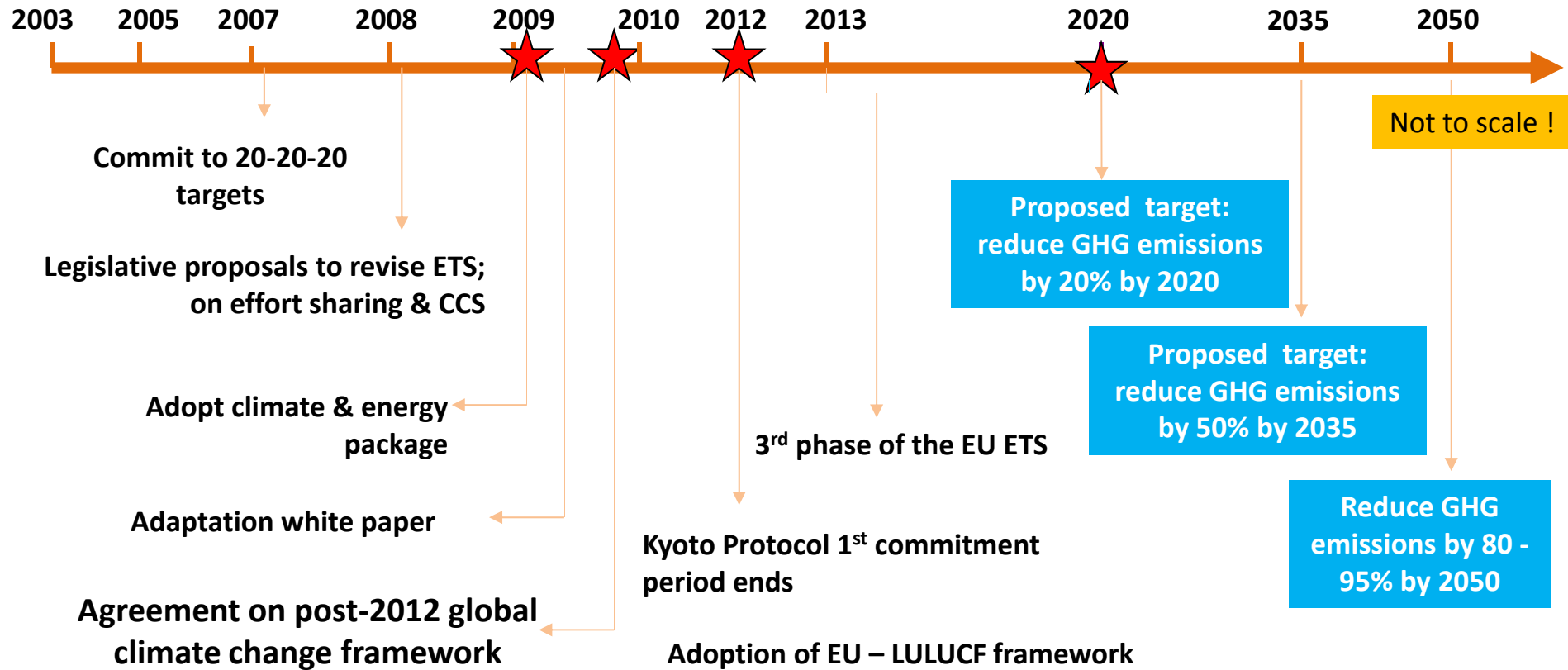


Water & Ecosystem Cap. Accounts (ecosystem/habitat accounts & integrated land, water, biomass accounts): valuable evidence base

Water stock (aquifers, soil water, rivers, lake and dams) and changes; Annual water flows, Net Ecosystem Accessible Water Surplus – at national and river basin level. Water Quality issues will require accounts development.

Climate Change

Move to ecosystem based mitigation and adaptation to climate change?



Ecosystem accounts and linked air & carbon biomass accounts: valuable evidence base.
Stock of carbon in soil, trees and shrubs and changes in stocks;
Net Ecosystem Carbon Balance; HANPP; Net Ecosystem Accessible Carbon Surplus.
Env tax, subsidies/transfers and env expenditure accounts useful: re drivers/response: ETR/EFR et al
Already int. accounting on GHG emissions and LULUCF: some areas less added-value from accounts.

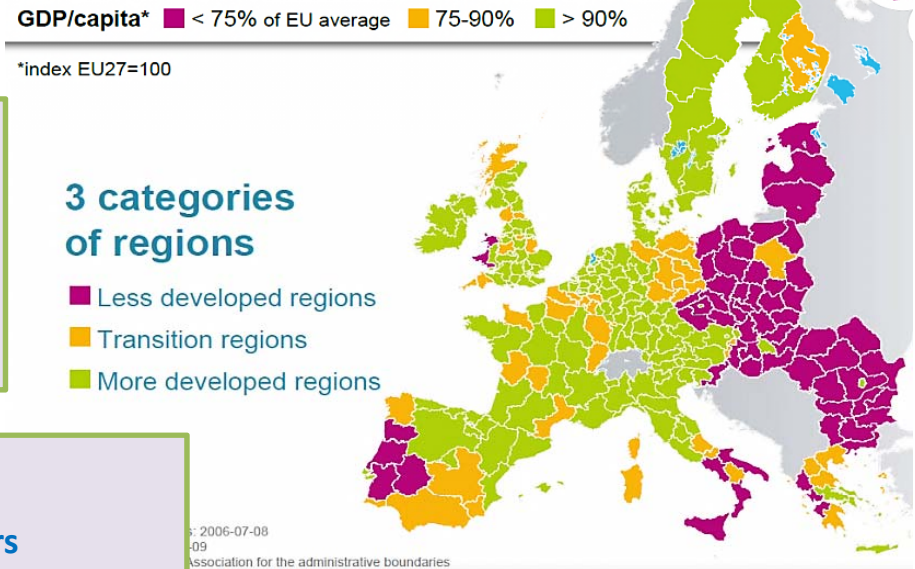
Cohesion Policy

EC proposals: 2014-2020 EU Cohesion Policy:

- Overall budget - **€336 billion** (33% of MFF) & retains main funds: **ERDF, Cohesion Fund** and **ESF**
- **EC proposal 20%+ MFF allocated to climate related activities = ~ €200 billion for 2014-2020**

11 thematic objectives, including:

- Supporting the shift towards low-carbon economy in all sectors**
- Promoting climate change adaptation, risk prevention & management**
- Protecting the environment, and promoting resource efficiency**



Potential for accounts:

- Ecosystem/habitat accounts to assess baseline of a region's natural assets/wealth and changes over time.**
- Carbon biomass accounts for commitments on GHG mitigation;**
- Land & water accounts: areas at risk from climate change - water scarcity, flooding et al.;**
- Regional accounts: carbon intensity, resource efficiency, regional planning and assessments;**
- Local accounting for decision making regarding investments.**
- Need experimentation, improved data & capacity building.**

Challenges for accounting and their development

- **Understanding what accounts can really offer**
 - Identifying and communicating added-values of accounts in light of **what can be said now**,
 - What could be said in **the future** and
 - How this **compares to other sources of evidence**.
- **Improving data availability - obtaining resources, data & political commitment**
- **Developing the different accounts (e.g. ecosystem capital accounts on ecosystem condition) and linking the accounts (integrated accounts – across env issues & to social & economic accounts) to get the whole picture / maximum realistic added value**
- **Specific challenges for ongoing development of NCA**
 - **Scale and needed granularity for utility**
 - **Data & appropriate modelling**
 - **Ground-truthing and relevance**
 - **Coverage and representativeness**
 - **Trade**
 - **Monetary valuation**

Also some important interpretation challenges:
meaning of values in light of data availability, issues covered and also meaning of value used (exchange values in accounts not same as econ. assessments of value).
Requires consideration of what is **“fit-for-purpose”**.

Summary

- Environmental and economic accounts have the potential to help in creating a **paradigm shift in evidence, awareness, policy making and impact.**
- **Increasing commitments** at global and national levels
- Range of potential **benefits across policy areas and policy cycle**
- Level of benefits depends on **type of data, quality of data & regularity of data reporting** as well as **availability of alternative information sources**
- **Policy benefits will grow** as accounts mature and **policy makers' awareness of the instrument grows – further application, method advances and investment needed**
- **Interpretation of meaning is also key (e.g. what is included/not and hence what do numbers mean, defining 'fit-for-purpose')**
- **Some major issues remain: e.g. monetisation and integration of biodiversity**



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