

MAES

*Progress towards MAES (Mapping and Assessment of Ecosystems and their Services)

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Environmental Data: Priorities and Innovation

Some definitions

- * **Natural Capital** is “the world’s stocks of physical and biological resources, including air, water, minerals, soil, fossil fuels and all living things.
- * These stocks work together to deliver **ecosystem goods and services** that provide benefits to society
- * Including food, material, fuel;
- * Clear water, clean air
- * Natural decomposition, conservation of essential nutrients, medicine, flood mitigation

ECOSYSTEM SERVICES

Supporting

- NUTRIENT CYCLING
- SOIL FORMATION
- PRIMARY PRODUCTION
- ...

Provisioning

- FOOD
- FRESH WATER
- WOOD AND FIBER
- FUEL
- ...

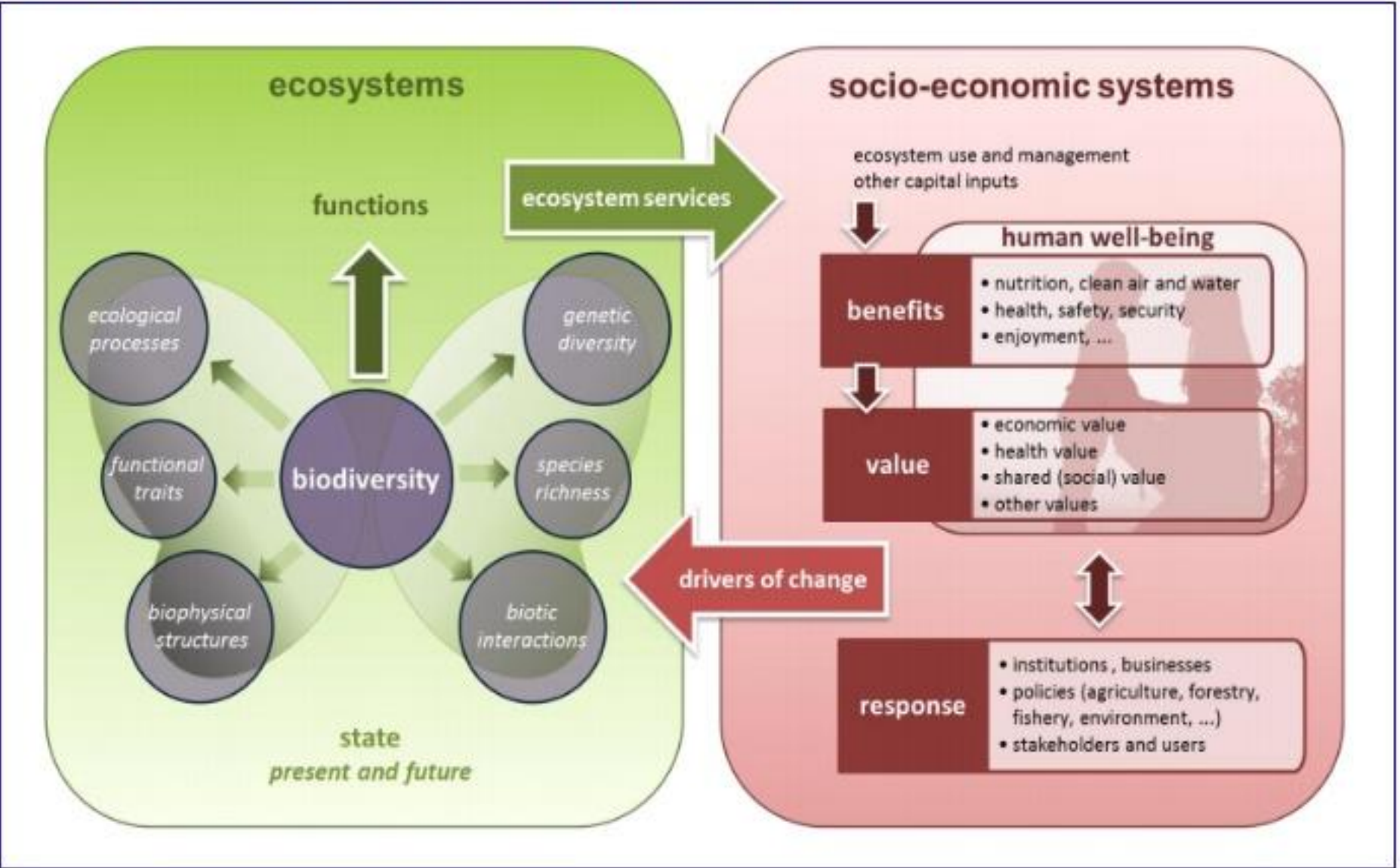
Regulating

- CLIMATE REGULATION
- FLOOD REGULATION
- DISEASE REGULATION
- WATER PURIFICATION
- ...

Cultural

- AESTHETIC
- SPIRITUAL
- EDUCATIONAL
- RECREATIONAL
- ...

Conceptual framework for EU wide ecosystem assessment



EU 2013, Maes et al. Mapping and Assessment of Ecosystems and their services. An analytical framework for ecosystems assessments under Axction 5 of the EU biodiversity strategy to 2020.

MAES Context

EU biodiversity strategy 2011-2020 Our life insurance, our natural capital:

Target 2: Maintain and restore ecosystems and their services

- * By 2020, ecosystems and their services are maintained and enhanced by establishing green infrastructure and restoring at least 15 % of degraded ecosystems.

Action 5

- calls Member States (MS) with the assistance of the European Commission to **map and assess the state of ecosystems and their services in their national territory by 2014** and to **assess the economic value of such services and promote the integration of these values into accounting and reporting systems at EU and national level by 2020.**



MAES Context

- * Ireland's National Biodiversity Plan (2011-16)
- * Action 3.3: 'Establish a working group by 2011 to progress the development of a national terrestrial and marine habitat map by 2015'
- * Sustainable Development
- * Landscape Strategy

- * **TEEB** (The Economics of Ecosystems and Biodiversity, 2010) which in turn built upon the **MA** (Millennium Ecosystem Assessments, 2005)
- * Work of IPBES (Intergovt Platform on Biodiversity and Ecosystem Services)

However, at present we don't have a national landuse/landcover/habitat map



Recent progress

- * Bullock Report on economic benefits of biodiversity
- * Emergence of **Natural Capital Forum**
- * Woodlands of Ireland publish **Natural Capital Values of Native Woodlands**
- * EPA includes natural capital in **STRIVE funding calls**; 2 projects running, on freshwater and marine
- * NBDC lead **symposium on ecosystem services**

MAES – Who?

Ireland:

- * Group already working on a national landuse/landcover/habitat map : Includes EPA, DAFM, DAHG (NPWS), Heritage Council, OSI, Teagasc
- * National Biodiversity Data Centre
- * Universities

MAES – Who?

- * Europe: Commission, Joint Research Council, Euro Environment Agency, commissioned experts, member states, stakeholder representatives and NGOs
- * Commission Working Group (2/yr)
- * Supporting actions: Commissioned research & reports, pilots (development of classifications, methods, tools, technologies)

How does MAES assist MS?

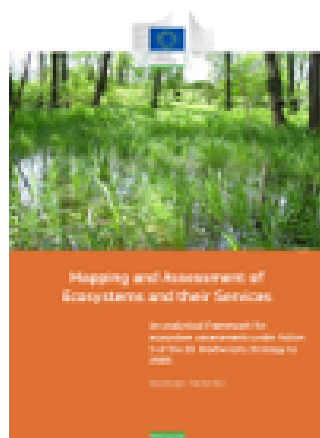
Through MAES Working Group, EC have developed **an analytical framework** for MS to use, which is comprised of

- An overall framework
- A typology of ecosystems
- A typology of ecosystem services
- Indicators to map and assess biodiversity, ecosystem condition and services

The Framework will facilitate integration of the key elements for ecosystem assessment (e.g.

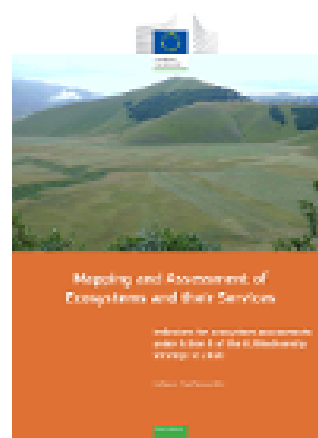
- State of biodiversity
- Flow of ecosystem services from ecosystems to society
- Value changes associated with changes in ES service supply
- Scenarios/outlooks)

Key publications



**An analytical framework for
ecosystem assessments under Action
5 of the EU Biodiversity Strategy to
2020.**

Discussion paper – Final, April 2013 



**Indicators for ecosystem assessments
under Action 5 of the EU Biodiversity
Strategy to 2020**

2nd Report – Final, February 2014 

<http://biodiversity.europa.eu/maes>

Next steps

First up: Biophysical baseline mapping and assessment of major ecosystems

NPWS will shortly issue call for tender for development of a map using available spatial data which identifies ecosystems, and ecosystem components that are important for delivery of ecosystem services at the best and most appropriate scale.

NPWS will be looking for partners and/or advice among the main relevant agencies/Departments

Early identification of who will use the maps and data, and finding out their needs, is critical

Next steps 2

Biophysical baseline mapping and assessment of defined ecosystem **services**



Thank you