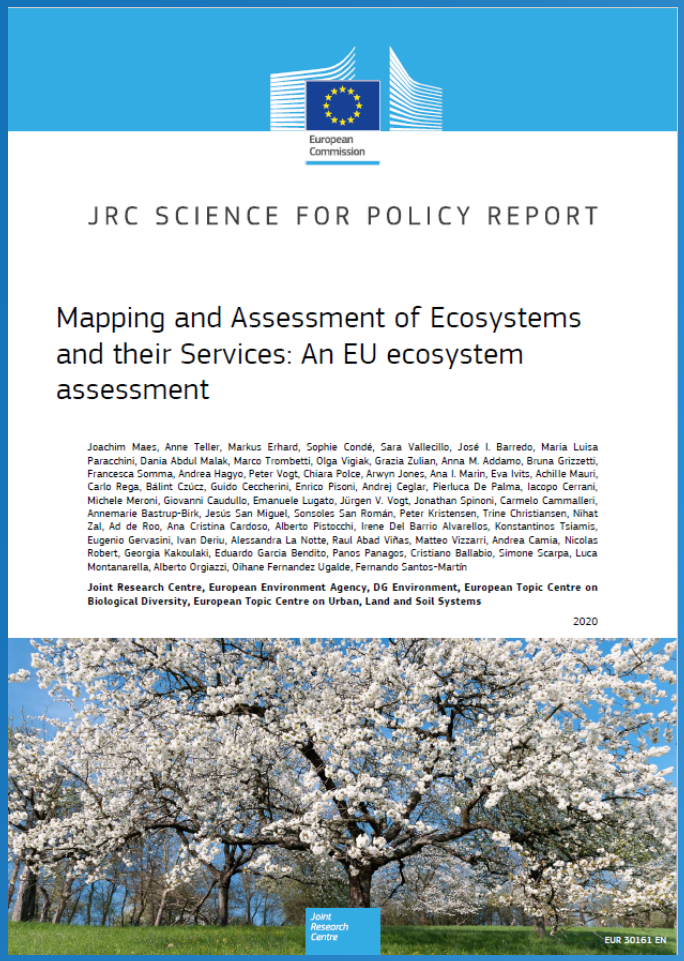
EU Ecosystem Assessment

Mapping and Assessment of Ecosystems and their Services

Joint Research Centre, European Environment Agency, DG Environment, and the European Topic Centres on Biological Diversity and on Urban, Land and Soil Systems



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What is the EU ecosystem assessment?

- Analysis of the trends in the pressures, condition and services of marine, freshwater and land ecosystems of EU+UK (EU28) based on a common method and using 2010 as policy baseline year (reference point)
- Covers total land area of the EU28 as well as the EU28 marine regions
- Evaluation of the 2020 biodiversity targets
- Baseline for the 2030 biodiversity policy and EU nature restoration plan

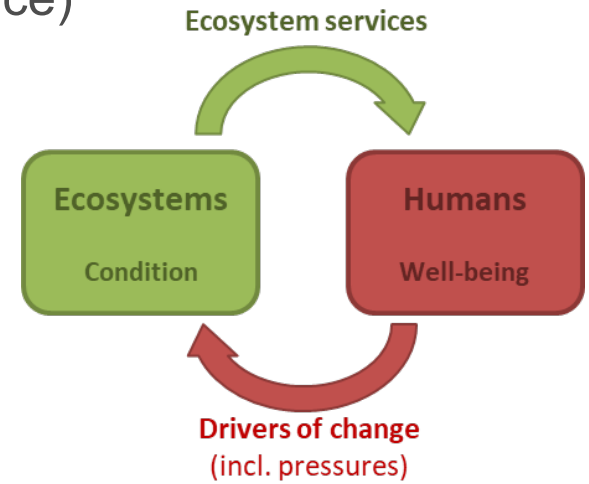
Ecosystem condition

The physical, chemical and biological condition or quality of an ecosystem at a particular point in time.

Measuring ecosystem condition

- Abiotic quality (air, water, soil quality)
- Composition (species/habitat diversity and abundance)
- Structure (biomass, tree density, …)
- Functions (productivity, …)
- Landscape (coherence)

Measuring pressures and ecosystem services



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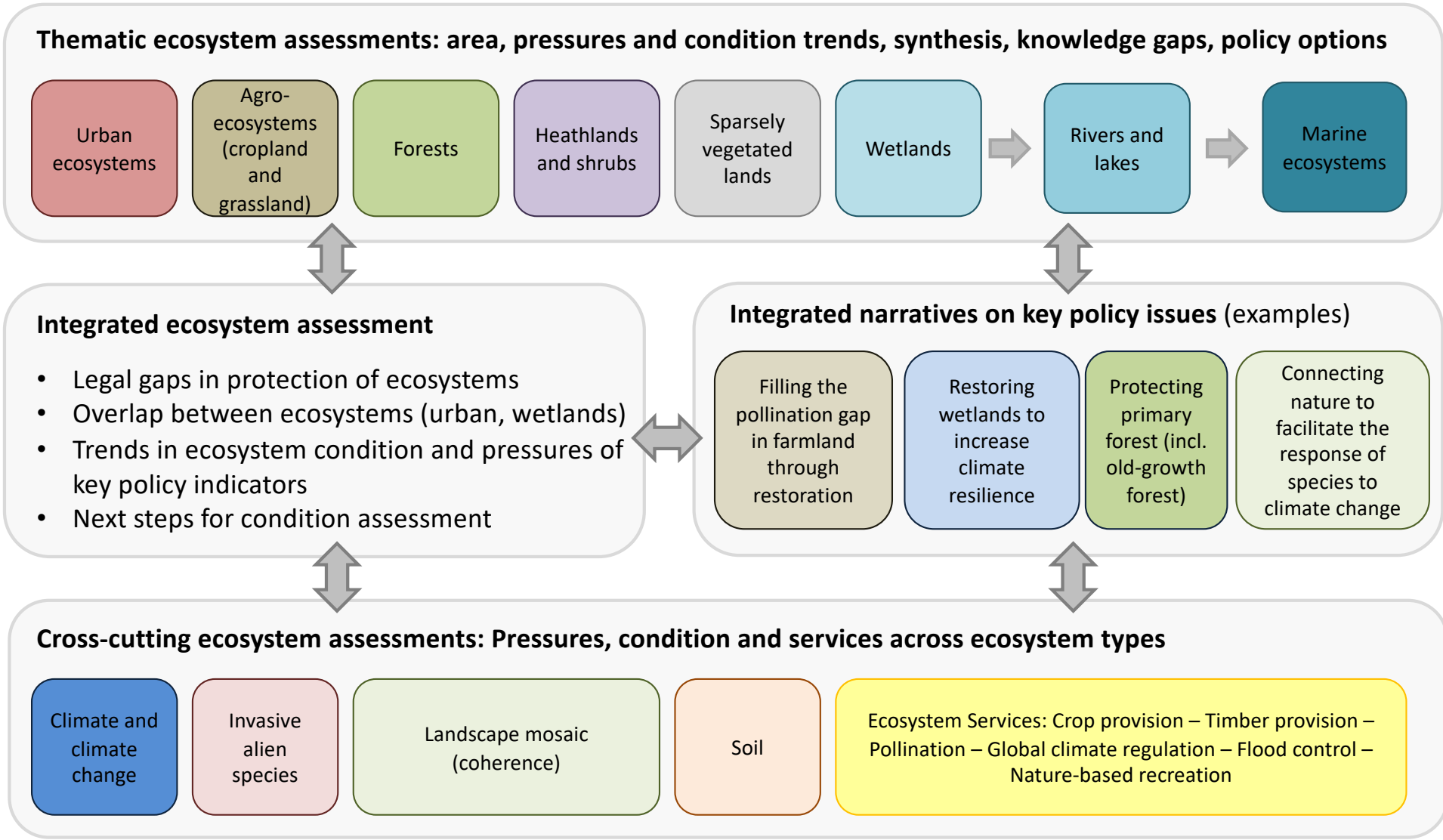

Thematic ecosystem assessments: area, pressures and condition trends, synthesis, knowledge gaps, policy options
Urban ecosystems
Agro-ecosystems (cropland and grassland)
Forests
Heathlands and shrubs
Sparsely vegetated lands
Wetlands
Rivers and lakes
Marine ecosystems
Integrated ecosystem assessment
Legal gaps in protection of ecosystems
Overlap between ecosystems (urban, wetlands)
Trends in ecosystem condition and pressures of key policy indicators
Next steps for condition assessment
Integrated narratives on key policy issues (examples)
Filling the pollination gap in farmland through restoration
Restoring wetlands to increase climate resilience
Protecting primary forest (incl. old-growth forest)
Connecting nature to facilitate the response of species to climate change
Cross-cutting ecosystem assessments: Pressures, condition and services across ecosystem types
Climate and climate change
Invasive alien species
Landscape mosaic (coherence)
Soil
Ecosystem Services: Crop provision – Timber provision – Pollination – Global climate regulation – Flood control – Nature-based recreation

Main trends in pressures on ecosystems

- Pressures on ecosystems exhibit different trends.
- Land take, atmospheric emissions of air pollutants and critical loads of Nitrogen and Sulphur are **decreasing** but the absolute values of all these pressures remain too high.
- Impacts from climate change on ecosystems are **increasing**.
- Invasive alien species of union concern are observed in all ecosystems, but their impact is particularly high in urban ecosystems and grasslands.
- Pressures from overfishing activities and marine pollution are still high.

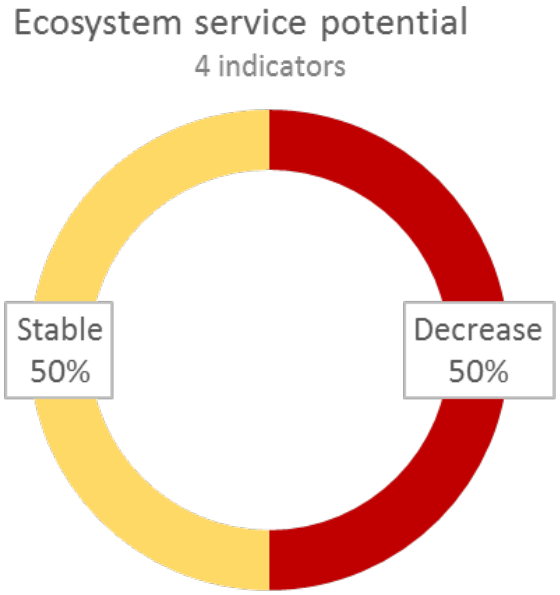
Main trends in the condition of ecosytems

- Ecosystem condition indicators exhibit different trends.
- Air quality and freshwater quality is improving.
- In forests and agroecosystems (>80% of the EU territory) improvements in structural condition indicators (biomass, deadwood, area under organic farming) but some key bio-indicators (e.g. tree-crown defoliation) continue to increase.
- Species-related indicators show no progress or further declines, particularly in agroecosystems.

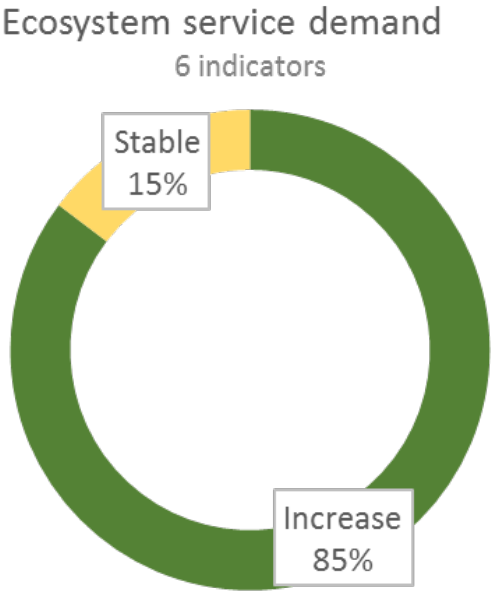
Main trends in the condition of ecosytems

- Abiotic quality: air and water quality **improving**
- Species: **stable** (in forests) or further **declines** (in agroecosystems)
- Structure: In forests and agroecosystems (>80% of the EU territory) **improvements** in structural condition indicators (biomass, deadwood, area under organic farming)
- Functions: **increased stress** signs related to climate change

Main trends in ecosystem services



How much ecosystems can give to people



How much people take from ecosystems

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Policy recomendation

The Habitats and Birds directives cover 24% of the EU's ecosystems.

➔ 3.3 million km^2 (76%) of terrestrial ecosystems has **no legal designation** (Urban ecosystems, Cropland, Forests [72%], Grassland [53%])

EU nature restoration plan (part of the 2030 biodiversity strategy)

➔ Extend the principle of the Water Framework Directive and Marine Strategy Framework Directive to all terrestrial ecosystems: Restore all terrestrial ecosystems (including their soil) to **a favourable or good condition**.

Thank you

European Commission