Mapping and assessment of ecosystems and their services: Developing a knowledge base for mainstreaming ecosystem services into EU policies

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Joachim Maes
EU Habitats Directive and the Biodiversity Strategy to 2020

**Target HD:** Threatened habitats and species in favourable conservation status (FV)

**Art.17 assessments:** 17% of habitats and 17% of species are in FV

**Target 1 BS:** In 2020 34% of habitats and 25% of species in FV
34% target for habitats

inclusive definition of green infrastructure (62% green)

narrow definition of green infrastructure (Natura 2000)
17% green

3.6 million ha

3.0 million ha
Green infrastructure

- Return on investment in terms of jobs and growth
- Support sustainable agriculture and forestry through ecological intensification
- Support action in climate adaptation
- Provides essential services and supports biodiversity targets (including NNL and 15% restoration)
Green infrastructure and ecosystem services/benefits
The importance of Action 5

Member States, with the assistance of the Commission, will map and assess the state of ecosystems and their services in their national territory by 2014, 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.
Priorities for Horizon 2020: Landscape scale restoration


How to scale up restoration from patch size to landscape scales and beyond.
Priorities for Horizon 2020: Green growth


Integrated assessments with more emphasis on green growth, public health, monetary and social values of ecosystem services and green infrastructure

<table>
<thead>
<tr>
<th>Industry</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reforestation, land and watershed restoration and sustainable forest management</td>
<td>39.7</td>
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<tr>
<td>Crop agriculture</td>
<td>22.8</td>
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<tr>
<td>Gas</td>
<td>21.9</td>
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<tr>
<td>Mass transit and freight rail construction</td>
<td>21.7</td>
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<tr>
<td>Livestock</td>
<td>21.7</td>
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<tr>
<td>Roads and bridges: repair</td>
<td>20.3</td>
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<tr>
<td>Conservation (parks land and water conservation fund)</td>
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<td>Water infrastructure</td>
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<tr>
<td>Aviation</td>
<td>19.3</td>
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<tr>
<td>School buildings</td>
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<tr>
<td>Building retrofits</td>
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<tr>
<td>Biomass</td>
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<tr>
<td>Electricity generation, transmission, distribution</td>
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<tr>
<td>Roads and bridges: new</td>
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<tr>
<td>Solar</td>
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<td>Wind</td>
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<td>Smart grid</td>
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<td>Financial industry</td>
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<td>Coal</td>
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<td>Oil and gas</td>
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<td>Nuclear</td>
<td>4.2</td>
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</tbody>
</table>

Comparison of job creation per $1 Million investment for various industries.
Priorities for Horizon 2020: Ecosystem services and resource efficiency

- Land cover / land use
- Ecological integrity
  - Ecosystem structures & processes

Ecosystem services
- Regulating services
- Provisioning services
- Cultural services

Human benefits
- Social, economic & personal well-being
- Population, economy

Supply

Demand

- green infrastructure
- restoration
- Conservation

regulation
- taxation
- changing the default option

Picture from Benjamin Burkhard, Kiel University
Changing the default choice

Do you have any special diet requirements (vegetarian, gluten-free,...)

Please tick this box if you want green energy from renewable sources

....
Conclusions

Ambitious biodiversity targets require an ambitious plan on GI.

At EU scale, this also require mobilizing funds under the CAP and structural/cohesion funds.

This needs demonstrating that such investments serve the many different interests and that ecosystem-based solutions work.

This needs dedicated support under Horizon 2020.