Enhancing ecoSysteM sERvices mApping for poLyCvy and Decision mAKing

ESMERALDA

Mapping and assessment of ecosystems and their services (ES) are core to the EU Biodiversity (BD) Strategy. They are essential if we are to make informed decisions. Action 5 sets the requirement for an EU-wide knowledge base designed to be: a primary data source for developing Europe’s green infrastructure; resource to identify areas for ecosystem restoration; and, a baseline against which the goal of ‘no net loss of BD and ES’ can be evaluated. In response to these requirements, ESMERALDA aims to deliver a flexible methodology to provide the building blocks for pan-European and regional assessments. The work will ensure the timely delivery to EU member states in relation to Action 5 of the BD Strategy, supporting the needs of assessments in relation to the requirements for planning, agriculture, climate, water and nature policy. This methodology will build on existing ES projects and databases (e.g. MAES, OpenNESS, OPERAs, national studies), the Millennium Assessment (MA) and TEEB. ESMERALDA will identify relevant stakeholders and take stock of their requirements at EU, national and regional levels. The objective of ESMERALDA is to share experience through an active process of dialogue and knowledge co-creation that will enable participants to achieve the Action 5 aims. The mapping approach proposed will integrate biophysical, social and economic assessment techniques. Flexibility will be achieved by the creation of a tiered methodology that will encompass both simple (Tier 1) and more complex (Tier 3) approaches. The work will exploit expert- and land cover-based methods, existing ES indicator data and more complex ES models. As a result the outcomes will be applicable in different contexts. The strength of the ESMERALDA consortium lies in its ability to make solutions for mapping and assessment problems available to stakeholders from the start of the project, because our expertise allows us to build on existing research projects and data sharing systems.

Start: 1 February 2015 (duration: 42 months)

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Enhancing ecoSysteM sERvices mApping for poLicy and Decision mAking

ESMERALDA

EU Horizon 2020 Coordination and support action

Benjamin Burkhard (Project coordinator)

Kiel University, Germany
Institute for Natural Resource Conservation
Department of Ecosystem Management
EU Horizon 2020 topic addressed:
Enhancing mapping ecosystems and their services

ESMERALDA targets:

• Create **ES mapping and assessment strategies** in the EU member states
• Deliver a ‘**flexible methodology**’ for pan-European, national and regional ES mapping and assessment

→ **Multi-tiered ES mapping** methodology to integrate the three value domains of ES (biophysical, economic and social) at different spatial and temporal scales.

→ Incudes simple *(Tier 1)* to complex *(Tier 3)* ES mapping and assessment methods.

→ Tier 1 shall enable ES mapping also on larger *(national)* scales and in **data-poor areas**.
EU Horizon 2020 topic addressed:
Enhancing mapping ecosystems and their services

ESMERALDA targets:

- Create **ES mapping and assessment strategies** in the EU member states
- Deliver a ‘**flexible methodology**’ for pan-European, national and regional ES mapping and assessment
- Support the timely **delivery by all EU member states of Action 5** by supporting EU MS stakeholders (i.e. authorities responsible for Action 5)
- Promote **local assessments** required for spatial planning, agriculture, climate, water and nature policy
- **Transmit experience** through active dialogues and co-creation of knowledge
- Mobilise all **relevant actors**, increase **participation** of citizens in science and decision making
- Develop a **Strategic Research Agenda** (SRA) for ES mapping and assessment throughout and beyond Horizon 2020
Relation to other projects and ongoing activities:

- ESMERALDA is an **additional project** (Support & coordination action funded by EC DG Research & Innovation) to support EU member states in Action 5 tasks
- Builds on/co-operates with MAES, OpenNESS, OPERAs, MESEU, BEST, TEEB, ...
- National and regional **studies** (UK NEA, TEEB-DE)
- **Coordination** and streamlining existing European ES research
- Exchange of **information, data and methods**
- Strengthen existing **networks** and create new European **collaborations** between ES scientists, practitioners and policy makers
- Improve the **science-policy-society interface**
- Link European and national research and funding activities with **international activities** (such as ESP) - create **synergies**
- ES mapping and assessment **methods** for all EU member states (incl. the outermost regions and marine areas)
- Enhance **methods**, integrating biophysical, social and economic techniques
- Enable **long-term ES-based management** strategies throughout and beyond Horizon 2020
ESMERALDA consortium:

- 25 project partners
- 20 European countries
- 2 linked Baltic countries
- Linked western Balkan countries
- 44% university partners
- 28% state or other superior organisations
- 16% from other academia
- 12% SMEs
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<tr>
<th>No</th>
<th>Participant organisation name</th>
<th>Lead contact</th>
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ESMERALDA timeplan:

- Project start: 01.02.2015
- Project duration: 42 months

Timeline showing the integration of ESMERALDA in related EU and global activities.
ESMERALDA working phases

1\textsuperscript{st} phase: Identification of relevant \textbf{stakeholders} and stocktaking, collecting and linking \textbf{existing approaches} for ES mapping and assessment, creating links to existing \textbf{related projects} and \textbf{databases};

2\textsuperscript{nd} phase: Development of the \textbf{multi-tiered ES mapping and assessment methodology};

3\textsuperscript{rd} phase: \textbf{Testing} the developed methodology in representative thematic and biome-oriented \textbf{Workshops} and \textbf{Case studies} across EU member states;

4\textsuperscript{th} phase: Feedbacks from ESMERALDA stakeholders and other relevant user groups, \textbf{methodology improvement};

5\textsuperscript{th} phase: Producing \textbf{tailored and flexible solutions} for ES mapping and assessment for policy and decision making;

6\textsuperscript{th} phase: Safeguarding the \textbf{implementation} of project results in the context of the BD Strategy and Horizon 2020, including strategies for long-term implementation beyond ESMERALDA
ESMERALDA political relevance:

- Bringing ES into application at the science-policy-society interface is not only dependent on raising awareness.
- ESMERALDA will provide tools to demonstrate how ES approaches can make a difference.
- Creating a network of stakeholders, practitioners, researchers and policy makers.
- ESMERALDA will substantially enhance and support work under Action 5 in EU.
- Increase ES approach’s applicability in EU and national policies having impact on natural resources.
ESMERALDA relevance for Germany:

- Interaction with existing initiatives (NEA-DE, TEEB-De, ... ) and Action 5 key players (BfN, UFZ, IÖR, ... )
- Synergy creation with existing research and development project (MAES-DE)
- Harnessing existing experience, methods, data (CAU, UFZ, IÖR, ifuplan, IOW, HZG, Uni Hannover, Uni Vechta, Uni Bayreuth, IALE-DE, GfÖ, ... )
- Fostering the development of a **German National Ecosystem Assessment**!
Thanks for your attention!
We look forward for co-operation!

Contact: bburkhard@ecology.uni-kiel.de

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