

Operationalisation of Natural Capital and Ecosystem Services

From concepts to real-world applications



Despite improved understanding of the links between ecosystem health, provision of ecosystem services and human well-being, the concepts of ecosystem services and natural capital are still hard to apply operationally to policy and management problems.

OpenNESS is a European research project that translates both concepts into operational frameworks that provide tested, practical and tailored solutions for integration into land, water and urban management and decision-making. It examines how the concepts link to, and support, EU sectoral and cross-sectoral policy initiatives and scrutinizes its potential and limitations.

Central to **OpenNESS** is a multi-scale case study approach, designed to ground ideas and theories on real-world observations and analysis. To do this, we work with public and private decision-makers and stakeholders to better understand the range of problems faced in these different case study contexts.

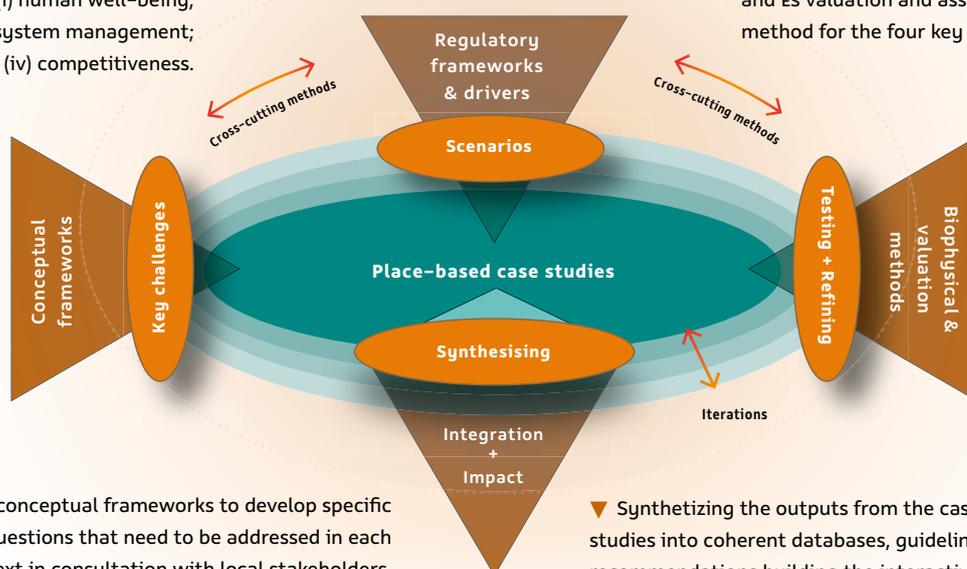
The work will amongst others deliver an interactive online application to be used in real-life situations, by providing practical tools, approaches and best practices that are fit-for-purpose and sensitive to the plurality of decision-making contexts.

The **OpenNESS** consortium consists of 35 partners, including 10 SMEs, from 14 European and four non-European countries.

The **OpenNESS** approach is based on an iterative cycle of methodological development and refinement linked to application in a set of real-world case studies.

► Increasing conceptual understanding in relation to the four key ecosystem services (ES) challenges: (i) human well-being; (ii) sustainable ecosystem management; (iii) governance; and (iv) competitiveness.

▼ ◀ Undertaking reviews of existing methods for policy and scenario analysis, biophysical ES assessment and ES valuation and assessing the relevance of each method for the four key challenges.



● Using the conceptual frameworks to develop specific research questions that need to be addressed in each **case study** context in consultation with local stakeholders. The problems defined in the case studies will be matched to the methods, which will continue to be developed and refined along the project. Guidelines for the application of methods in the case studies will be created.

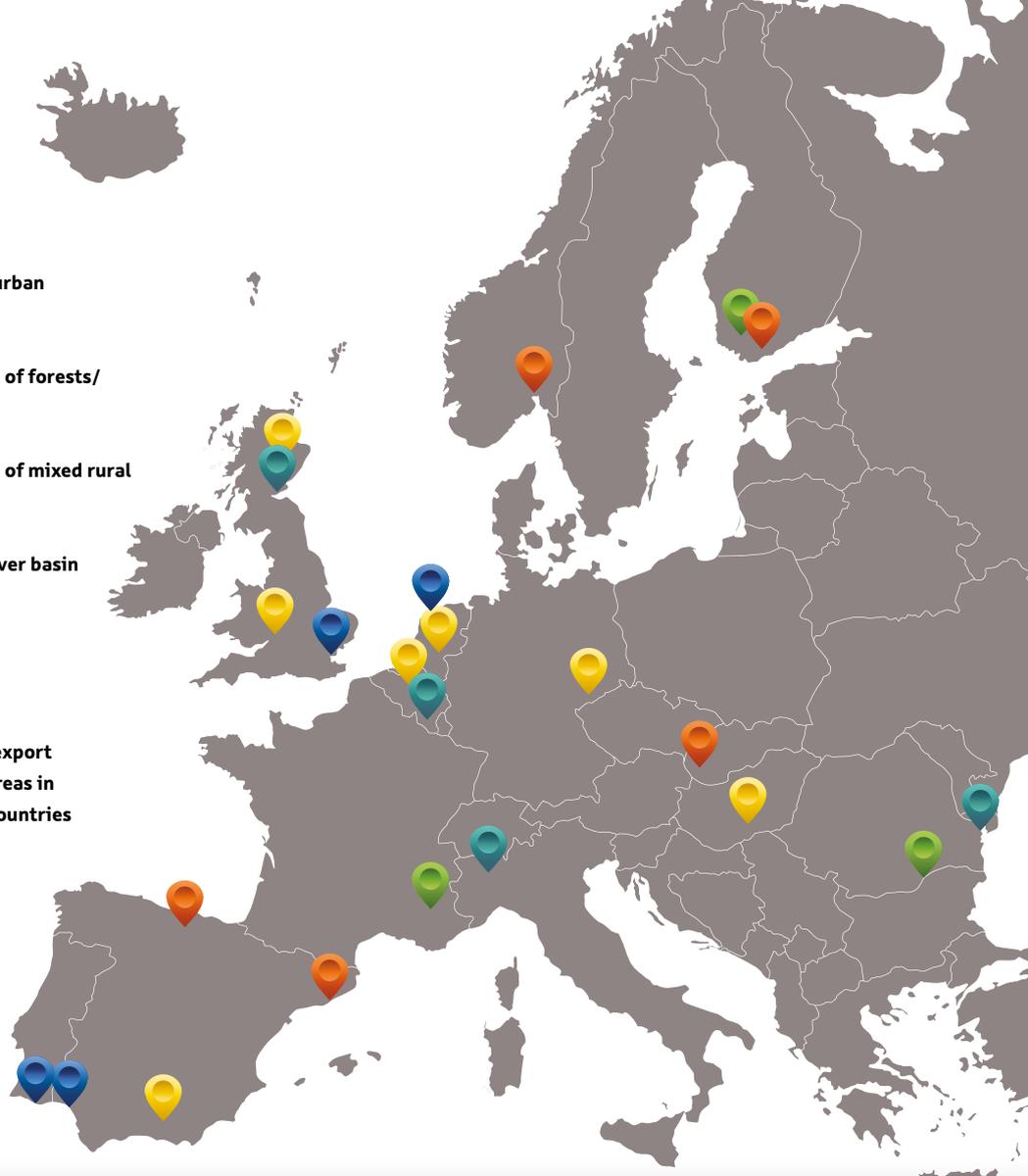
▼ Synthesizing the outputs from the case studies into coherent databases, guidelines and recommendations building the interactive online application and ensuring that outputs from the research are disseminated to a wide audience.



Case studies

The OpenNESS case studies cover a range of socio-ecological systems and are clustered according to the policy and management focus for ecosystem service operationalisation.

-  Sustainable urban management
-  Management of forests/woodlands
-  Management of mixed rural landscapes
-  Integrated river basin management
-  Coastal area management
-  Commodity export dominated areas in developing countries



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Partners

- ▶ Finnish Environment Institute (SYKE) · Finland (coordination)
- ▶ Helmholtz-Centre for Environmental Research (UFZ) · Germany
- ▶ Wageningen University and Research Centre (Alterra) · Netherlands
- ▶ Netherlands Environmental Assessment Agency (PBL) · Netherlands
- ▶ Centre for Ecology and Hydrology (CEH-NERC) · United Kingdom
- ▶ University of Oxford (UOXF-ECI) · United Kingdom
- ▶ University of Nottingham (UNOTT-CEM) · United Kingdom
- ▶ Norwegian Institute for Nature Research (NINA) · Norway
- ▶ Research Institute for Nature and Forest (INBO) · Belgium
- ▶ Joint Research Centre (JRC-IES) · Italy
- ▶ University of Helsinki (UH) · Finland
- ▶ European Centre for Nature Conservation (ECNC) · Netherlands
- ▶ National Research Institute of Science and Technology for Environment and Agriculture (IRSTEA) · France
- ▶ Centre for Ecological Research of the Hungarian Academy of Sciences (MTA ÖK) · Hungary
- ▶ University of Bucharest (UB-DSES) · Romania
- ▶ Forest Research and Management Institute (ICAS) · Romania
- ▶ Institute of Landscape Ecology of the Slovak Academy of Sciences (ILE SAS) · Slovakia
- ▶ Centre for Environmental and Sustainability Research, University of Lisbon (CENSE FFCT-UNL) · Portugal
- ▶ Fundación Tecnalia Research & Innovation · Spain
- ▶ Autonomous University of Madrid (UAM) · Spain
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- ▶ Environmental Social Science Research Group Ltd (ESSRG) · Hungary
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- ▶ Kenya Forestry Research Institute (KEFRI) · Kenya