

H2020 Project ECOPOTENTIAL: making best use of remote sensing and in-situ observations to improve future ecosystem benefits



Provenzale A.^a, Beierkuhnlein C.^b, El Serafy G.^c, Giamberini MS.^a, Imperio S.^a, Marangi C.^a
(a) CNR, Italy; (b) UBT, Germany; (c) Deltares, NL

Corresponding author: antonello.provenzale@cnr.it - www.ecopotential-project.eu

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ECOPOTENTIAL

 EcoPotentialProject

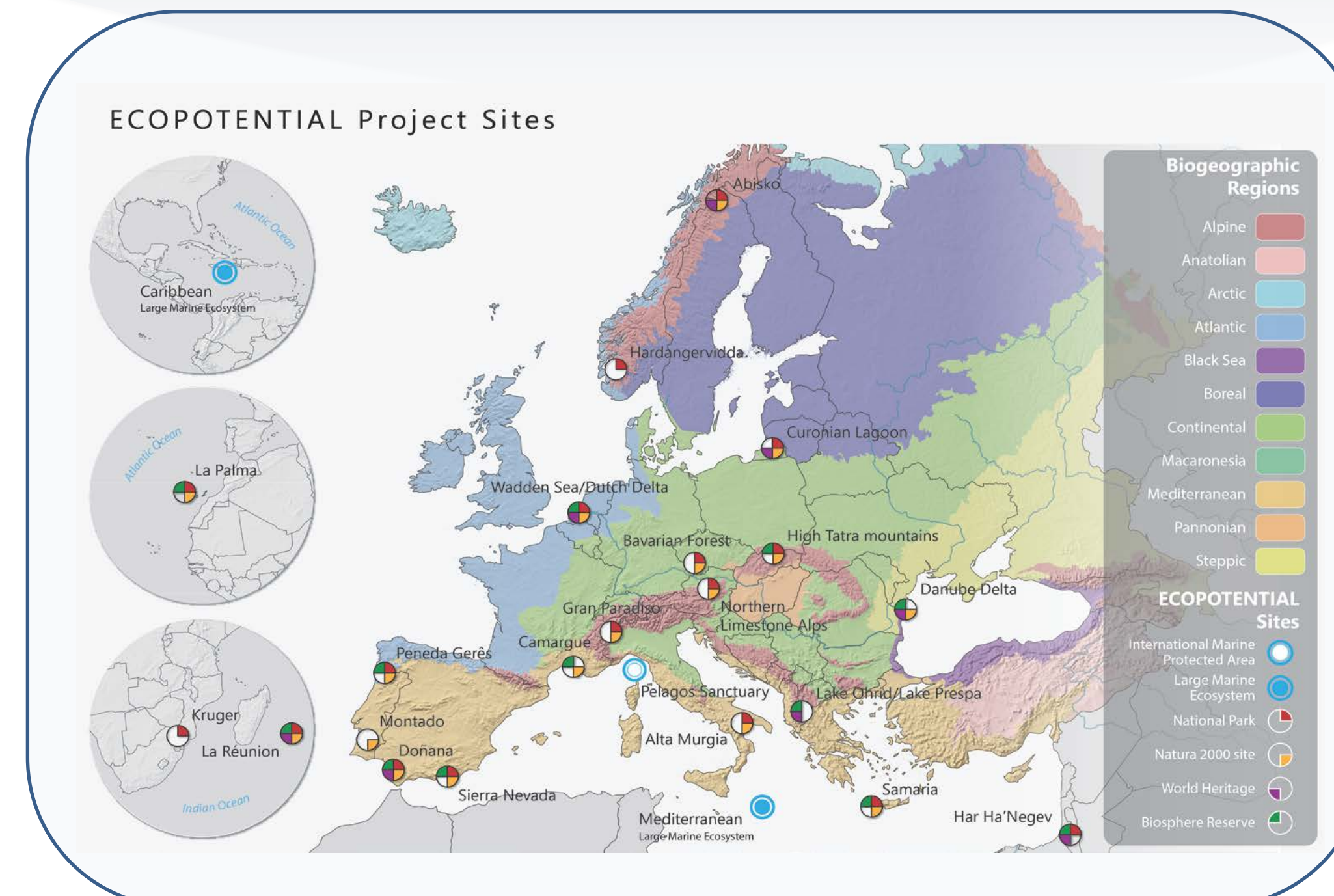
improving future ecosystem benefits through earth observations

The Project

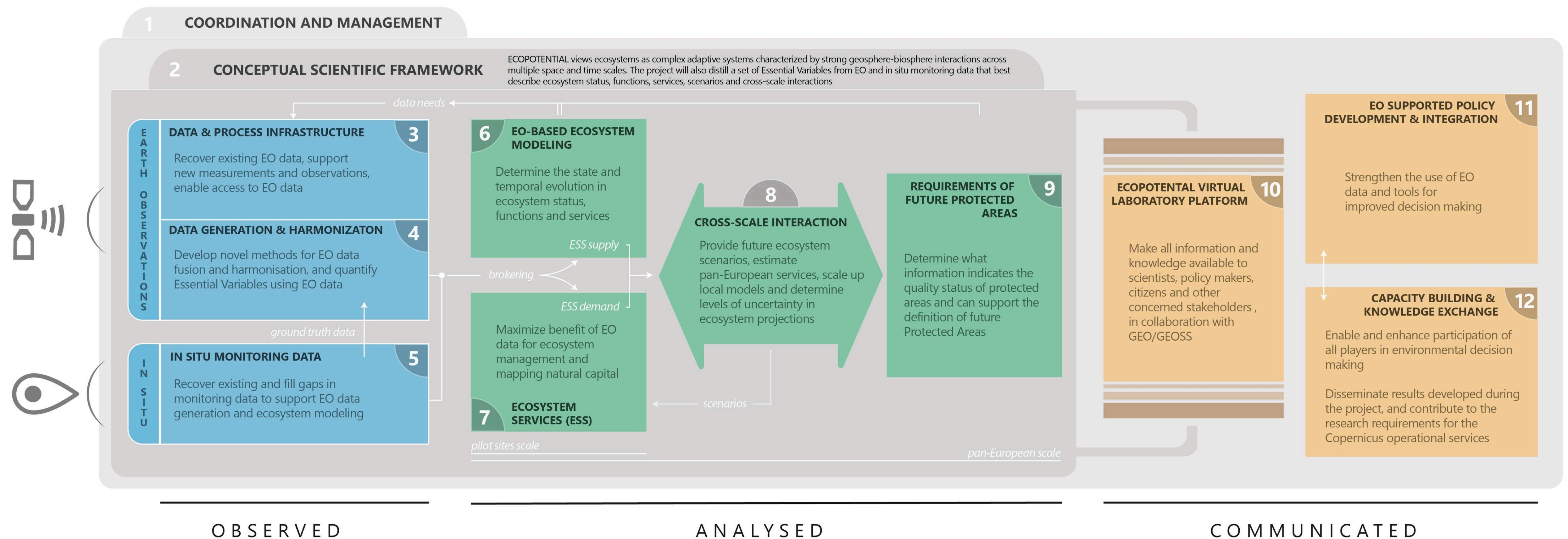
Anthropogenic pressures on ecosystems cause threats to their integrity, functions and processes, potentially leading to loss of essential ecosystem services. For these reasons, there is an urgent requirement for monitoring changes both in the short and in the long term, relating them to drivers and predicting the effects on the provision of ecosystem services.

To address this challenge, the EU H2020 ECOPOTENTIAL project focuses on making the best use of **In Situ** and **Remote Sensing** data for **monitoring and modeling ecosystems in Protected Areas**, involving a strong trans-disciplinary team of experts and stakeholders from 47 renowned European and non-European institutions. Core of the Project activities are i) the exploitation of Earth Observation data from existing archives and new missions, ii) the use of latest advancements in data mining and image processing, iii) the adjustment of process-based models to assimilate data, maximizing performance, iv) the incorporation of cross-scale interactions in the processing concept, and v) the combination and alignment of the ecosystem functions with the beneficiaries needs. ECOPOTENTIAL will assess climate change impacts combined with land cover and land use change scenarios, taking advantage of In Situ data collected in pilot sites and blending them with Remote Sensing data for **ecosystem modeling**. Moreover, the project will consider **ecosystem services**, and will provide platforms for cyber infrastructures and data interoperability, while taking into consideration policy developments, benefitting from citizen science activities, and implementing capacity building and outreach activities.

ECOPOTENTIAL builds its actions around **24 Protected Areas** (PAs) in Europe and beyond for pilot actions, among which **10 also host LTER sites**; it defines the needs of future protected areas and up-scales its results to broader scales, providing information and solutions at pan-European level. Appropriate solid science-policy interfaces will be generated to transfer scientific and technological knowledge into **citizen information** and **policy strategies**.

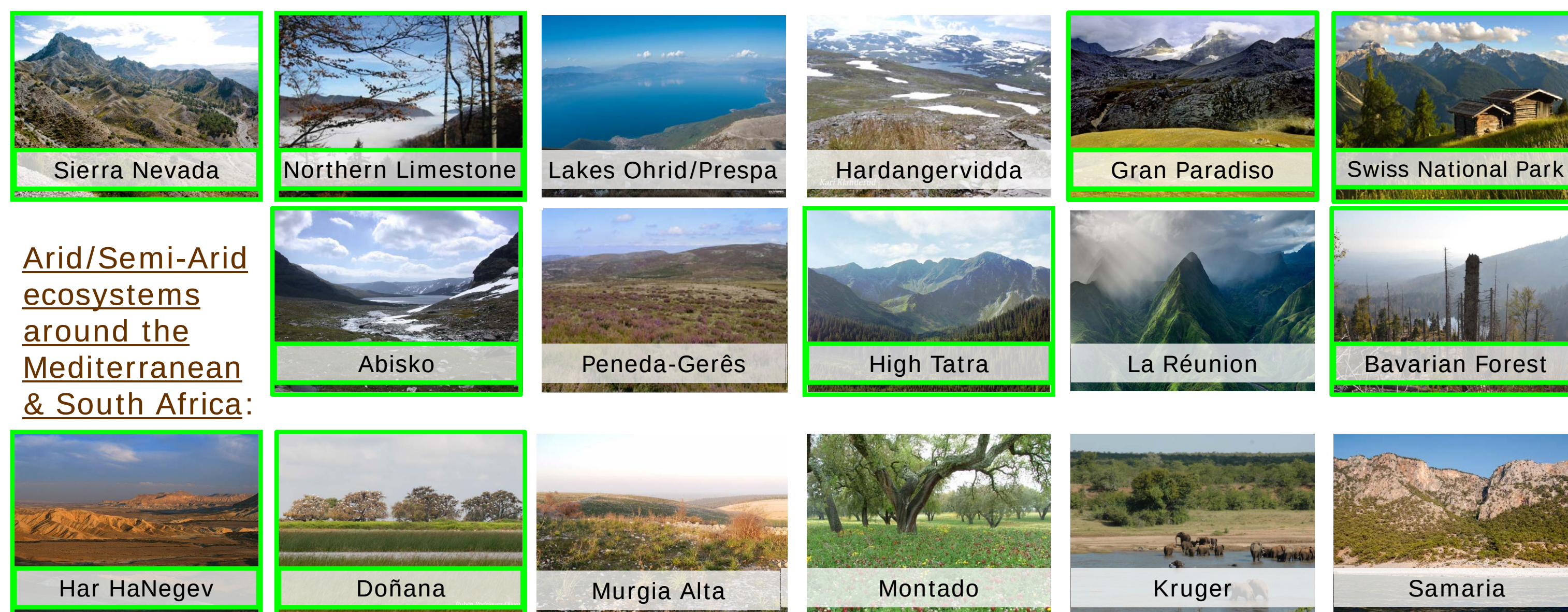


ECOPOTENTIAL Project Structure



Ecosystems & Sites (LTER Sites in green frame)

Mountain ecosystems in 10 European countries + la Réunion:



Coastal and Marine ecosystems in 5 European Countries + Mediterranean & Caribbean seas:



Outcomes

- Recovery of existing and filling gaps in monitoring data to support EO data generation and ecosystem modelling for Protected Areas.
- Documented monitoring methodology to define envisaged ecological status of future PAs.
- Significant contribution to the research requirement for the Copernicus operational services.
- Make all information and knowledge available to scientists, policy makers, citizens and other concerned stakeholders in GEO/GEOSS.
- Improved evidence-based environmental policy making and political decisions.
- New prototype products and ecosystem services.

ECOPOTENTIAL partners:

