

Remote Sensing in service of Ecosystems and Human Well-being

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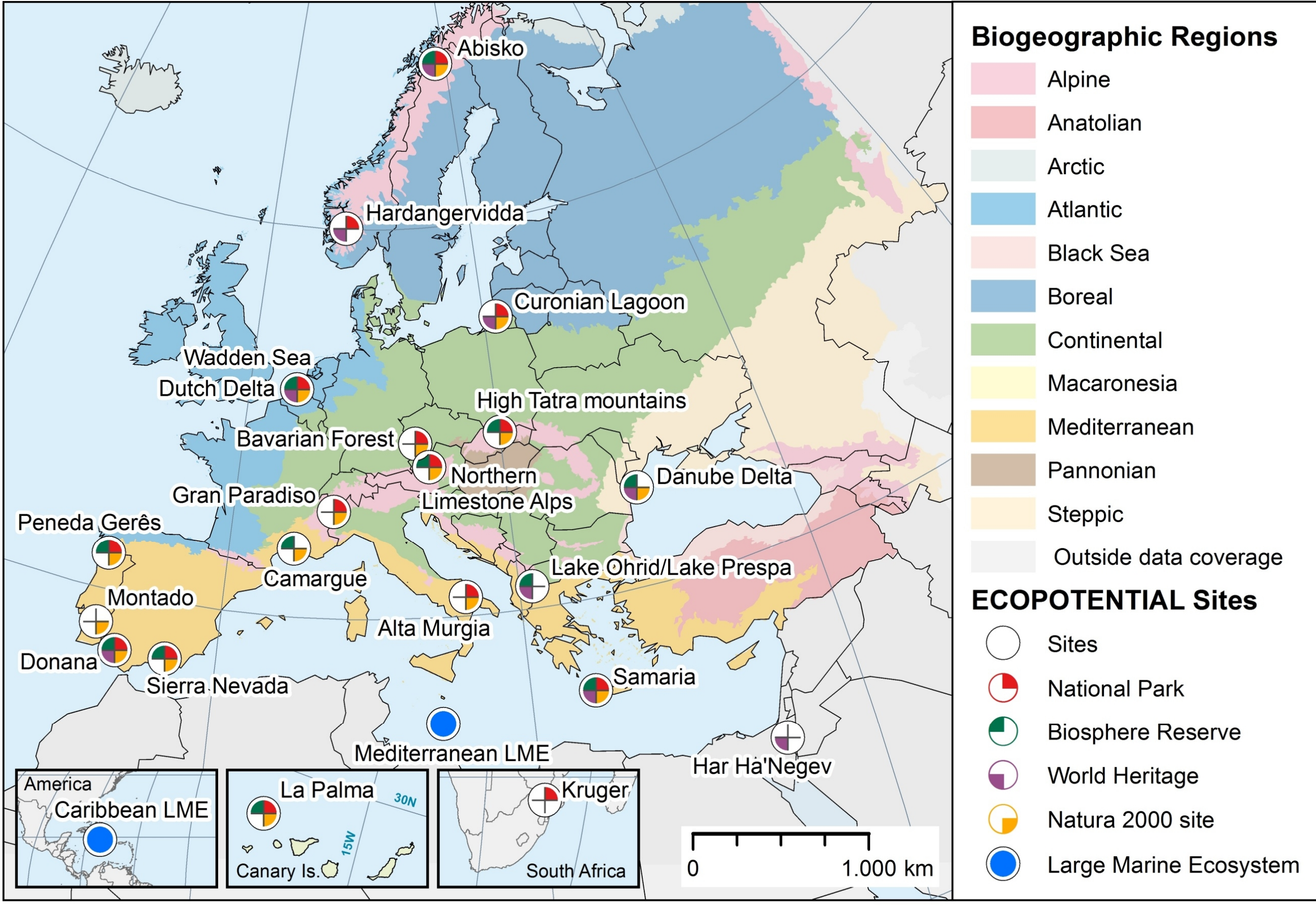


Abstract

Sustainable ecosystem services and human well-being are strongly interconnected. Anthropogenic pressures cause threats to ecosystem integrity, functions and processes, potentially leading to loss of essential ecosystem services. For these reasons, there is now an urgent requirement to monitor in real time the ‘where’, ‘why’ and ‘how’ of the changes.

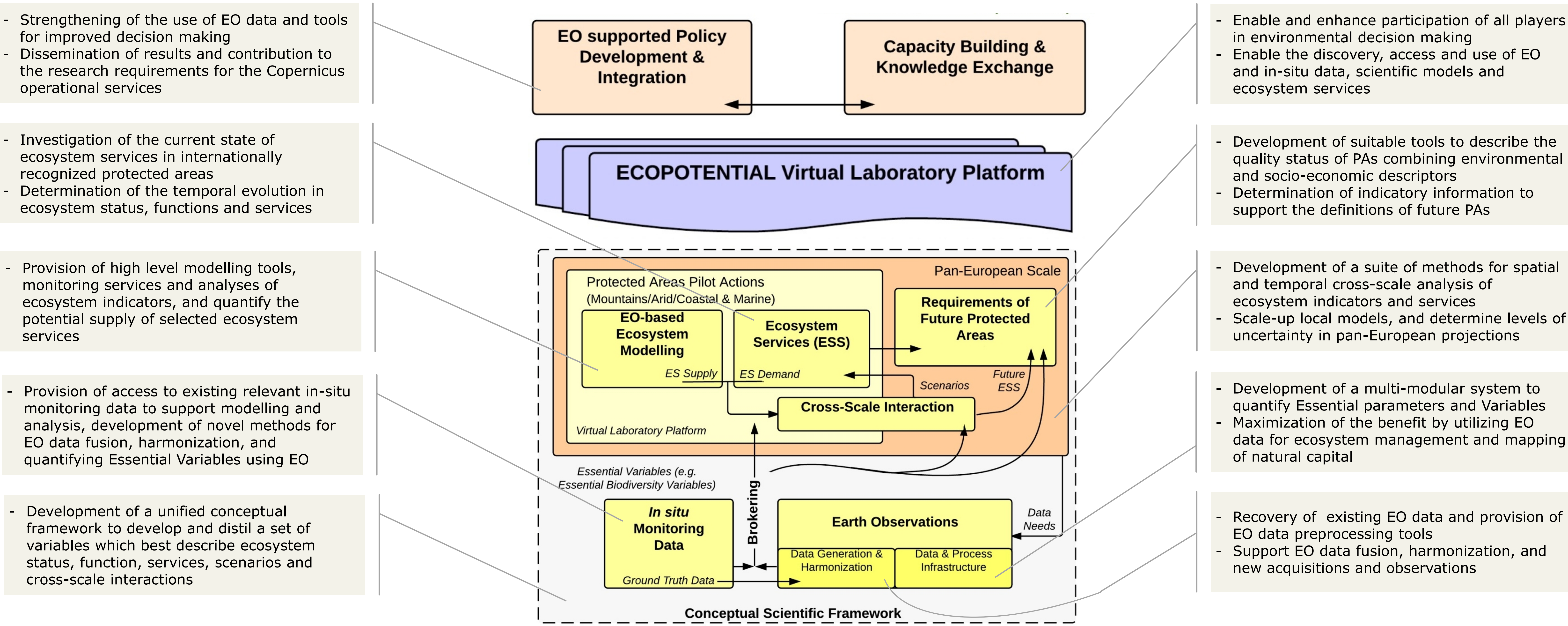
To address this challenge, the EU H2020 ECOPOTENTIAL project includes a strong trans-disciplinary team of experts and stakeholders from 47 directly-involved renowned Institutions across Europe and beyond. Core of the Project activities are i) the exploitation of Earth Observation data from existing archives and new missions, ii) the utilization of latest advancements in data mining and image processing, iii) the adjustment of process-based models to assimilate the aforementioned 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, will consider ecosystem services including supply and demand, 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 a set of more than 25 Protected Areas (PAs) for pilot actions, defines the needs of future protected areas and up-scales its results to broader regional and continental scales, to provide 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.

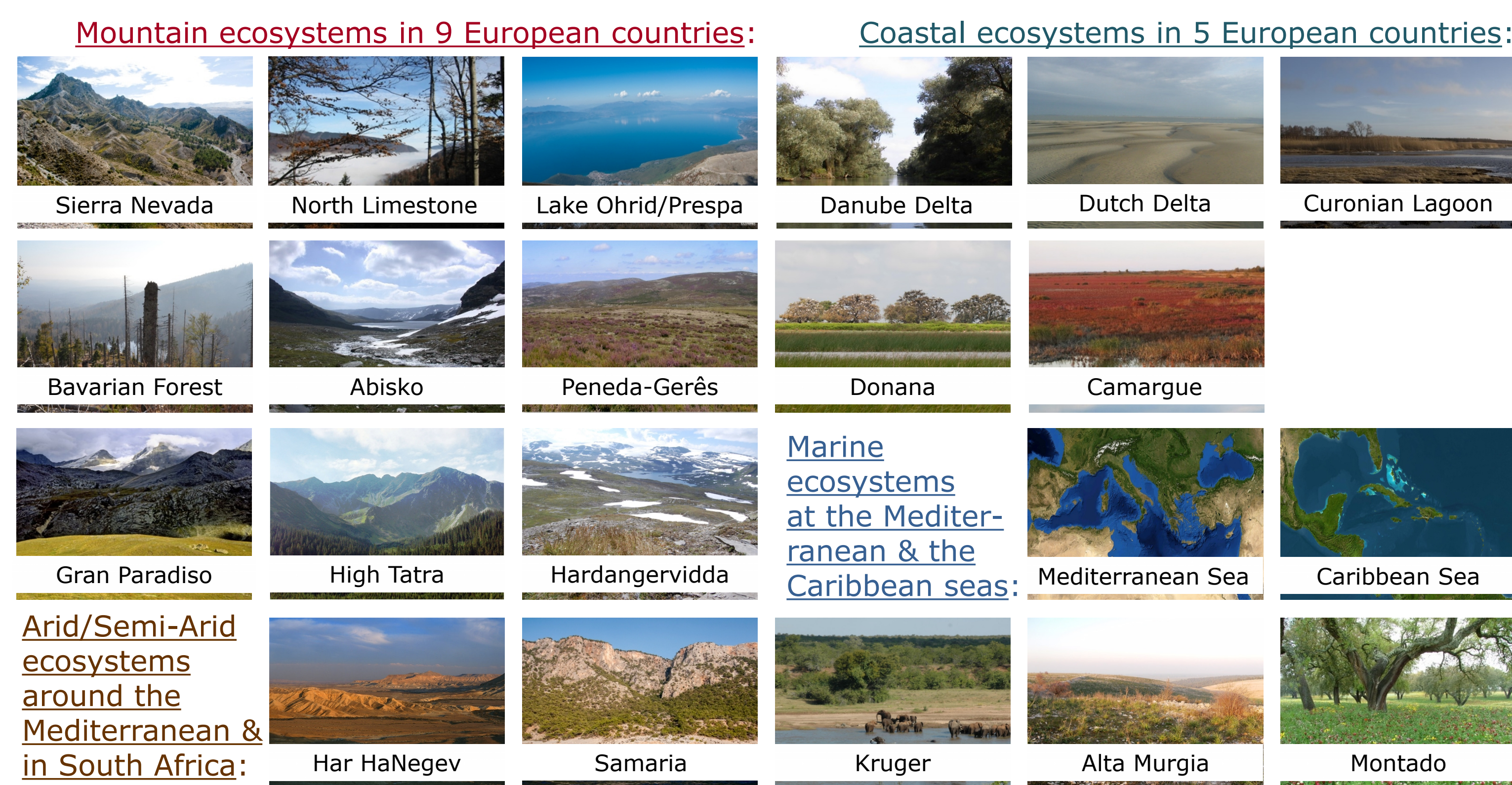


Location and protection status of the Protected Areas

Workflow



Ecosystems & Sites



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.
- Improved evidence-based environmental policy making and political decisions.
- New prototype products and ecosystem services.

