ECOPOTENTIAL

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

Biogeographic Regions
- Alpine
- Anatolian
- Arctic
- Atlantic
- Black Sea
- Boreal
- Continental
- Macaronesia
- Mediterranean
- Pannonian
- Steppic

ECOPOTENTIAL Sites
- International Marine Protected Area
- Large Marine Ecosystem
- National Park
- Natura 2000 site
- World Heritage
- Biosphere Reserve

Anthropogenic pressures on ecosystems threat their integrity, functions and processes, potentially leading to loss of ecosystem services. It is urgent to monitor such changes 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 25 Protected Areas** in Europe and beyond, involving experts and stakeholders from 47 renowned European and non-European institutions. The Project exploits Earth Observation data, using the latest advancements in data processing and process-based models, while providing concrete products for improving Protected Area Management. 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 and implementing capacity building and outreach activities. ECOPOTENTIAL defines the needs of future protected areas and up-scales its results to broader scales. Science-policy interfaces will be generated to transfer scientific and technological knowledge into **citizen information and policy strategies**.

EXAMPLES
- Biodiversity data
- Soil measurements
- Tree cover density
- Surface albedo
- Chlorophyll a
- Normalized Difference Vegetation Index (NDVI)

EXAMPLES
- Impact of alien species
- Comparison of management regimes
- Biodiversity monitoring
- Influence of human activities
- Impact of climate change

RESEARCH NEEDS FROM PROTECTED AREAS

IN SITU AND REMOTE SENSING DATA

RESEARCH RESULTS

TOOLS AND OUTCOMES

MAIN RESULTS
- Data processing algorithms
- Estimating ecosystem services
- Analysis of change
- E.O based ecological models
- Future projections
- Requirements for future protected areas

MAIN OUTPUTS
- Virtual laboratory platform
- In situ and remote sensing data repositories
- Community of pratice
- Decision making support tools

Coastal and Marine ecosystems in 5 European Countries plus Mediterranean and Caribbean seas

Arid ecosystems around Mediterranean and South Africa

Mountain ecosystems in 10 European countries plus la Réunion

ECOPOTENTIAL PARTNERS