Duration and Funding

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Action duration:	36 months

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EO4wildlife

Protection and conservation of wildlife

PLATFORM FOR WILDLIFE MONITORING INTEGRATING COPERNICUS AND ARGOS DATA

www.eo4wildlife.eu

Objectives

EO4wildlife main objective is to bring large communities of multidisciplinary research scientists such as biologists, ecologists and ornithologists around the world to collaborate closely together while using European Sentinel Copernicus Earth Observation more extensively and efficiently.

EO4wildlife research specialises in the big data intelligent management, processing, fusion and advanced analytics with a Knowledge Base for wildlife migratory behaviour trends. The research will lead to the development of web-enabled open services using OGC standards for sensor observation and measurements and data processing of heterogeneous geospatial observation data and uncertainties.

In order to reach such important objective, an open service platform with an interoperable toolbox will be designed and implemented. The platform will offer high level big data services that can be accessed by scientists to perform their respective research on species behaviour linked to environmental conditions and change of those conditions under certain threats.

Also, the platform front end will be intuitive to use and access by scientists. It will reduce barriers to accessing dedicated big data services for processing geospatial environmental simulations using Sentinel Earth Observation data which are intelligently fused with in-situ observations data from other sources.

Reference Scenarios

Predicting seabird distributions

Seabird tracking data and oceanographic variables can be combined to develop predictive habitat utilisation and species distribution models. Authorities could use these as dynamic management tools (e.g. fisheries, shipping, Marine Protected Areas) to help them make real-time decisions to protect seabirds.

Better Knowledge of pelagic fish´s migrations routes and habitat use

The first objective of this scenario enables fish scientists to track pelagic species with light based geo localization devices and to get a state of the art estimation of the fish trajectory. A second objective is to enable analysing and understanding blue fin tuna behaviour or appearance correlated to environmental data of salinity, primary production and sea surface temperature during spawning season in the Mediterranean Sea (summer season).

Identifying marine turtle behaviours

The final objective of this scenario is to support scientists involved in marine turtle studies to predict turtles' distributions (through defined habitat preferences and environmental niches) using environmental data, to inform dynamic management scenarios.

Copernicus data for marine mammals and MPAs managers

This scenario will focus on setting up tools for Marine Protected Areas managers, to help them predicting the distribution of protected species such as marine mammals. This scenario takes place in some MPAs in the French Exclusive Economic zone.