



JONATHAN

THE DEVELOPMENT OF MRE ACTIVITIES, INCLUDING WIND POWER, AT SEA AND THE CREATION OF MARINE PROTECTED AREAS (MPA) ARE INCREASING THE DEMAND FOR KNOWLEDGE OF THE MARINE ENVIRONMENT AND FOR MONITORING SPECIES OVER VAST DISTANCES

The development of MRE activities, including wind power, at sea and the creation of Marine Protected Areas (MPA) are increasing the demand for knowledge of the marine environment and for monitoring species over vast distances.

The JONATHAN project is aimed at perfecting a numerical technique for large-scale monitoring of marine fauna – birds, marine mammals, turtles, etc., by flying over maritime zones and deploying on-board, high-resolution photographic equipment. Images will be taken based on a previously defined statistical plan and will be subsequently processed. The JONATHAN project will also focus on human activity, notably ships but also micro-waste, oil slicks, etc.

The principle involves taking daytime HD digital photographs, followed by computer analysis, to locate potential targets, quantify them and facilitate their description using semi-automated classification. The main technological barriers lie in detecting the targets in a challenging environment – swell, luminosity and the mobility and size of the objects – as well as in devising a strategy for how to process the considerable volume of data which comes into play in the form of the series of high spatial and temporal resolution images.

The programme may in the future be complemented by the development of a system for capturing images from a drone or from a mast fixed to a 360° buoy, depending on the requirements of the mission.

The project partners envisage a market launch at the end of 2015 before the first offshore wind farms are installed in France.

Partners

COM_PROJECTS_CATEGORIE_PARTNER_ENTREPRISES

Setec in vivo, La Forêt-Fouesnant [[Project Developer](#)]

Research center

IMT Atlantique Bretagne-Pays de la Loire, Brest

Other partners

Agence des Aires Marines Protégées, Brest
Airborne Solution, Concarneau
Ligue de Protection des Oiseaux (LPO), île-Grande
PixAir Survey, Rouen

Funder

Ademe

Labelisation

12/12/2014

Overall budget

468 K€