

# Ecosystem service-based mapping of Atlantic coastal dunes - FR

## 1. Policy Objective & Theme

- SUSTAINABLE USE OF RESOURCES: Preserving coastal environment (its functioning and integrity) to share space

## 2. Key Approaches

- Knowledge-based
- Socio-economic

## 3. Experiences that can be exchanged

Mapping through delimitation and classification of dune habitats for integrated management from the viewpoint of ecosystem services.

## 4. Overview of the case

The definition and monitoring of “good ecological status” of natural habitats is at the heart of protection management policies. Decision-making support tools that can be based on standardised, quantified and systemic assessment are needed for developing scenarios and making appropriate management decisions.

## 5. Context and Objectives

### a) Context

In a number of sites along the French coast periodical floristic and eco-dynamic inventories are performed along transects or at pre-determined stations. As an example, the Forest National Office (ONF) made a GIS, recapitulating all the inventories made on dunes located in the public domain. However, the disparity in the methods and standards does not allow a good continuity making comparisons in time and space very difficult for the decision-makers.

### b) Objectives

The objective was to develop an operational and reliable diagnosis method for an assessment of the status of dunes taking into account the expected services as provided by those ecosystems, mainly protection against the sea, biodiversity conservation and cultural services. The assessment focus is on the strengthening of the decision-making process in order to develop adaptive management of these specific habitats in between the land and the sea.

## 6. Implementation of the ICZM Approach (i.e. management, tools, resources)

### a) Management

There is a steering committee associating scientists and practitioners from the local managing organisations in the different regions of investigation.

## **b) ICZM tools**

The main techniques used are related to the integration of different mapping techniques through protocols including the use of remote sensing hyper-spectral and LIDAR data, and the Object Based Image Analysis method.

## **7. Cost and resources**

The initiative was funded by the LITEAU national programme for a cost of €60,000 and had a duration of 3 years (2008-2010).

## **8. Effectiveness (i.e. were the foreseen goals/objectives of the work reached?)**

Only the image analysis formalisation in the framework of a reproducible protocol that could allow the databank updating hence an adaptive management in regard to the status of the dune habitats and their ecosystem services has still to be completed.

## **9. Success and Fail factors**

None given.

## **10. Unforeseen outcomes**

None.

## **11. Prepared by**

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## **12. Verified by**

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## **13. Sources**

- MEDD LITEAU 3 Interim report. 2009 – Françoise Debaine, UMR Geolittomer, Université de Nantes, France



MULTIDUNE\_interim report (2.19 MB)

