



World Wide Fund For Nature, Mexico (WWF)

Dzilam de Bravo; Reserva de la Biosfera (Ría Lagartos); Área de Protección de Flora y Fauna Yum Balam (Chiquilá) Yucatán, Mexico

Smart Coasts: Protected Areas, Climate Change and Coastal Management

The project team will use sand dunes to protect local communities from flood and erosion. It will engage with the communities motivating them to protect sand dunes.



Left: Restoration work by UNAM students.
Above: Conserved dune in Yucatan, Mexico.

Coastal sand dunes provide many benefits to human communities, including flood and erosion control. These benefits are particularly important in the context of a changing climate, where sea levels are already rising and extreme weather events such as hurricanes are increasingly intense. However, dunes have traditionally been undervalued and removed to give way to infrastructure, such as homes and hotels.

As part of its Smart Coasts Project, WWF has identified a set of ecosystem-based adaptation options to reduce the vulnerability of local populations to climate change. These options were selected based on 1) climate change projections, 2) ecosystem service models, and 3) a participatory process. The adaptation options included the restoration of degraded coastal sand dunes.

Working with the National Autonomous University of Mexico (UNAM), the project aims to restore 20 km² of degraded coastal dunes in specific locations of the Yucatan Peninsula in Mexico.

The restoration consists of: i) a floristic analysis; ii) a collection of seeds and cuttings, iii) sprouting and growth in a greenhouse, iv) plantings in priority sites; and v) monitoring.

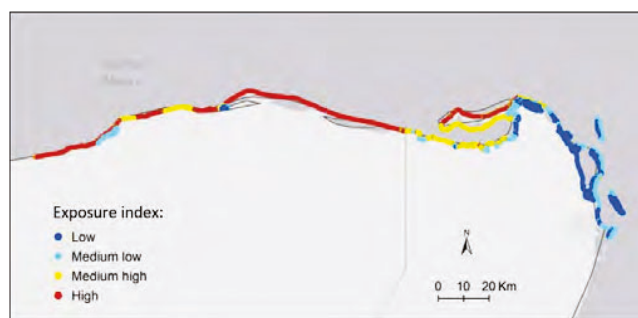
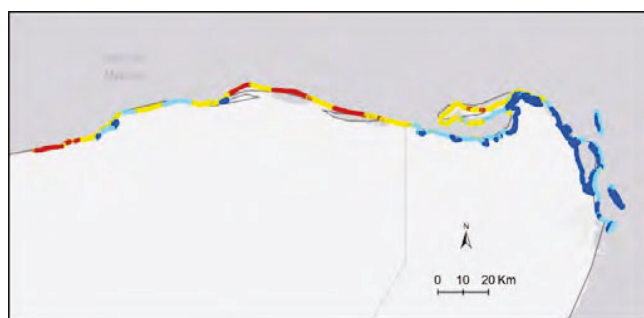
Acknowledging the importance of raising the awareness of local populations about the importance of conserving dunes, the project engages communities, particularly youths. To this end, the project also includes conducting beach cleanings, awareness-raising campaigns, and environmental education workshops.



"If we continue to deteriorate coastal dunes, we will no longer be able to enjoy our beaches and their biodiversity, and we will be at greater risk of flood and destruction from hurricanes."

Patricia Guadarrama
Team member of the Smart Coasts project

Below: Models of the current level of exposure to coastal hazards – erosion and flood – (left) in the northeastern portion of the Yucatan Peninsula, Mexico, and potential level of exposure under a scenario of lost coastal habitats (right).



Submitting organisation



WWF Mexico
wwwf.org.mx