

Box 9.1: Case Study: Financing tropical biodiversity conservation of the transboundary transitional Chetumal Bay (Source: ARTWEI Case Study Database; http://www.balticlagoons.net/artwei/?page_id=1770)

Experiences that can be exchanged
<p>This case study provides experience on the transboundary cooperation and sustainable financing for conservation of endangered tropical aquatic mammal species and its habitat in two developing countries. The transboundary cooperation in Chetumal Bay combines the use of a vast array of organizational and financial possibilities – from designating contiguous marine sanctuaries on both sides of the border, thus covering the entire bay, to fostering transboundary governmental collaboration framework and promoting grass-root cross-border cooperation, as well as from a one-off financial support of Global Environmental Facility to more sustainable governmental and local schemes to support local sustainable economic development.</p>
Overview of the case
<p>Chetumal Bay is a shallow transitional water body in the Western Caribbean shared between Mexico and Belize. It is an estuary that covers an area of about 2450 km². Its depth ranges from 1 to 7 m with a mean of 3 m. The salinity ranges from 8 to 18 ‰ and the water temperature ranges from 24.5°C to 31°C (Morales-Vela et al. 2000). The Rio Hondo River is the major tributary to the bay. Its tri-national watershed extends 13,465 km² inland, about 57 % in Mexico, 22 % in Belize and 21 % in Guatemala.</p> <p>The bay has international importance due to its healthy population of the endangered manatee (<i>Trichechus manatus manatus</i>), which inhabit the bay (Robadue Jr. & Rubinoff 2003). Chetumal Bay supports one of the largest populations of manatees in the Caribbean (Morales-Vela et al. 2000). This led the state legislature of Quintana Roo (Mexico) to declare its habitat a Natural Protected Area-Manatee Sanctuary in 1996. The government of Belize created the Corozal Bay Wildlife Sanctuary on the Belizean side of Chetumal Bay in 1998. The protected area comprises the open water areas with seagrass beds, which are part of the manatee's forage, and important habitats for other endangered species of fauna, such as crocodiles (<i>Crocodylus moreletii</i>) and the river white turtle (<i>Dermatemys mawii</i>) (IUCN Factsheet 2011). Prior to 1990, manatee ribs were used in the handicraft industry, and figurines and bone jewelry were sold in markets. Now, fishing nets and boat traffic represent the biggest potential threats to manatees (Morales-Vela et al. 2003).</p>
ICZM tools
<p>The NGOs focus their efforts on community outreach and environmental education. In parallel, the Quintana Roo state has established a Manatee Sanctuary Committee, where municipality, NGOs, university, and other stakeholders are involved as advisors in its management (Rubinoff et al. 2001). A USAID project supported the establishment of the network of NGOs and public institutions. Management of the Manatee Sanctuary is the responsibility of the Secretariat of Urban Development and Environment, of Quintana Roo state. On the Belize side, a local NGO, the Sarteneja Alliance for Conservation and Development co-manages Corozal Bay Wildlife Sanctuary together with the Belize Forest Department. The GEF-supported Mesoamerican Barrier Reef System Project facilitated development of the transboundary cooperation in Chetumal Bay within the context of the Mesoamerican Biological Corridor Programme. Small external funding projects allowed development of education programmes supporting vocational training and imposing limitations on fishing boat speed and scuba-diving in manatee habitats (Auil 2007). These programmes are dedicated to protect manatee population and diversify the occupation of local people from fisheries towards provision of ecotourism services. Local Mexican and Belizean NGOs helped forming and running the Belize-Mexico Alliance for Management of Common Coastal Resources (BEMAMCCOR), a bi-national effort to advance biodiversity conservation in shared waters such as Chetumal Bay and the Mesoamerican Reef complex.</p>
Success and failure factors
<p>Success factors:</p> <ol style="list-style-type: none"> 1. Chetumal Bay enjoys continuous international attention regarding biodiversity conservation as a key habitat of a charismatic endangered species (manatee) and as an integral part of the Mesoamerican Barrier Reef System. 2. Local users and other stakeholders understand that the common goal is to identify and implement common actions needed to avoid further degradation of Chetumal Bay. 3. The entire transboundary transitional water area is protected as the key habitat for manatees. <p>Failure factors:</p> <ol style="list-style-type: none"> 1. Management plans for the manatee sanctuaries are slowly produced and slackly implemented. 2. The Chetumal Manatee Sanctuary has management limitations, poor implementation of manatee conservation actions, and strong pressure to develop economic activities inside and around the area. 3. Due to weak enforcement, the Manatee Sanctuary is essentially a "paper park" (Wusinich 2002).