# Global Connections' Relief and Development Forum

# 'Do No Harm'

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# CASE STUDY – Ibans Lagoon, La Misquitia, Honduras

**(Community led management and protection of shared natural water resources)**

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**Background**

Ibans lagoon is located within the Río Plátano Man and Biosphere Reserve (RPMBR) in the Mosquitia area of western Honduras. The reserve covers an area of approximately 830,000 hectares (over 8,300 km2) and, due to its exceptional diversity of marine and terrestrial ecosystems (which include coastal wetlands, tropical broadleaf forests and areas of pine savannah), has been recognised as a World Heritage Site by UNESCO since 1982.

The reserve is home to three indigenous groups – Miskito, Pech and Tawahka – as well as members of the Garífuna ethnic group (black Carib) and Ladinos from other parts of Honduras. Most people live on the coast or along the major rivers. Subsistence activities include agriculture, hunting, fishing and the gathering of useful products from the forest including firewood, timber for construction of houses and canoes and medicinal plants.

**Ibans Lagoon**

The coastal wetlands of the reserve consist of a series of lagoons, canals and swamps. Ibans is the second largest lagoon in the reserve. It covers approximately 64km2 and becomes brackish during the drier times of the year. Several Miskito communities are located on the thin strip of land between the lagoon and the sea, sharing the lagoon and its associated ecosystems (including the forests of the water catchment area).

However, rapid population growth and the immigration of landless farmers from other parts of Honduras into the zone are putting added pressure on the area's natural resources resulting in problems such as deforestation, over-fishing, over-hunting, erosion, sedimentation and soil and water pollution.

**Erosion and salinisation**

One of the most pressing concerns for the communities is the erosion of the narrow coastal strip caused by the waves of both the lagoon and the sea, particularly during bad weather. This is happening because a lot of the shore vegetation - including mangroves - has been removed for firewood, to create space to build houses, for boat landings and to provide access to the lagoon for bathing and washing clothes.

The older people tell of when they used to have a house or land in areas now covered by water. During tropical storm Michelle in 2000, in some parts of the village of Cocobila several metres of land were lost with the result that at the narrowest point there are now fewer than 100m between the lagoon and the sea. As this is an area frequently affected by tropical storms, and sometimes hurricanes (notably Mitch in 1998), this high rate of erosion increases the risk of flooding in the villages and loss of infrastructure and houses.

Also during Michelle, along the coast towards Palacios the main river that drains the lagoon broke through the sand bar into the sea in an uninhabited area where much of the vegetation had been

removed. One of the results of this has been an increase in the salinity of the lagoon as greater amounts of salt water now make their way up river during high tides or when the river is low. The effect of this on fish stocks and the general lagoon ecosystem has not been monitored but it is likely to cause quite substantial changes in flora and fauna.

**Reforestation activities**

In 2002 MOPAWI, a Honduran NGO, began to work with the communities of the coastal strip to identify the scale of the environmental problems and ways to tackle them. One of the activities identified as being of primary importance was reforestation of the lagoon shore with mangrove and associated species to reduce the rate of erosion and improve fish habitats. Other activities were also identified relating to waste management, extraction of resources, training in sustainable techniques and strengthening capacity of local organisations.

Unfortunately, although the importance of community involvement in the process had been discussed at length, some of the first activities were carried out by individuals or small groups with little wider local consultation or participation. This lack of knowledge of what was trying to be achieved meant that the reforested areas were not respected and the trees or living stakes were trampled, pulled up, damaged by having clothes hung on them or eaten by cattle and horses.

It became clear that in order to successfully re-establish mangroves and other species in the eroded areas it would be necessary to put a fence around the area to avoid damage to the trees. Village groups (including local councillors) decided where they wanted to construct the fences (bearing in mind the need for access to the lagoon for washing clothes, bathing and transport), involving the neighbours in the process, and quickly established several plots. In one village mangroves were chosen as the preferred species but in many of the others where the people live close to the lagoon shore it was decided to plant other species because mangroves tend to harbour biting insects. In some areas the people involved have also planted a few crops such as Manioc in with the trees to make the most of the protected area.

Living fences have been used which contribute to the stabilization of the area. They also last a lot longer than normal fences as the posts do not rot or suffer from termite damage. Furthermore, with some species the new growth can be sold for firewood or posts. These new, fenced in plots have so far been very successful as everyone in the vicinity knows their objective and many people have been involved in their initial establishment.

**Hurricane season 2005**

During the hurricane season of 2005, the storms that cuased most damage in the Mosquita region were Wilma, Beta and Gamma, all within a period of 3½ weeks. Heavy rain in the hills caused the rivers to rise alarmingly rapidly, washing away houses, crops and livestock in river communities and one of the rivers burst through the narrow coastal strip into the sea in a new place, taking with it 39 houses and, tragically, causing the deaths of two people. MOPAWI and the Honduran Government have been providing short-term emergency help (mainly food, fuel and water purification) through the recently formed local emergency response committees. However, as well as the longer term needs for building materials, with the loss of nearly all the local crops many communities will face food shortages for a long time to come.

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Tearfund partner MOPAWI (Mosquitia Pawisa) works in the region of La Mosquitia in eastern Honduras (isolated from the rest of the country) in a variety of areas aiming to facilitate integrated sustainable development and biodiversity conservation.