

Environmental and Socio-economic Assessments

At the start of Green Coast, in September 2005, Wetlands International Indonesia Programme (WIIP) conducted several assessments in Aceh.

The scientists of the WIIP assessment team went to Aceh taking the following routes: Medan-Simeulue Island - Nagan Raya - Aceh Barat - Banda Aceh - Aceh Besar and Nias Island. After this assessment tour WIIP local partners, including the local university and NGOs, conducted follow-up assessments in other parts of Aceh.

Tsunami impacts

The purpose of the assessments was to figure out the tsunami impacts on the coastal environment and to identify the potential for rehabilitation, combined with community livelihoods development in the tsunami-affected areas.

Damaged villages

Assessments were done in villages on Simeulue island, in Aceh Barat and Nagan Raya districts, in Aceh Besar and Banda Aceh districts and on Nias island. Each site was damaged in specific ways by the tsunami. On Simeulue for instance, the tsunami lifted the island and the coastline has been broadened. In Aceh Barat agricultural lands were damaged, partly due to salt water.

Assessed issues

The assessments covered several issues in the coastal areas:

- wetlands ecology
- vegetation and the potential for rehabilitation
- soil and agricultural development
- fisheries
- biodiversity
- social economic development

Coastal Ecosystem Rehabilitation through Fisherfolks' Livelihoods Development

On Simeulue Island, assessments were done in the villages Alus-alus and Labuhan Bakti. Here the tsunami and earthquake have changed the morphological form of the coastal area. Because the island was lifted, its coastal area has broadened and dried out. This killed the coral reefs and the island's mangrove trees, but no damage was found on the agricultural lands.

Good condition

The main conclusions of the assessment were that in Simeulue, the agricultural lands were still in good condition. Agriculture and captured fisheries could be developed in this area. The potential for rehabilitation could be implemented in the sandy beach area and in the damaged mangrove habitat.

Coastal Beach Rehabilitation through Agriculture Based Livelihoods Development

In Aceh Barat and Nagan Raya the tsunami has damaged the agricultural lands

In Aceh Barat and Nagan Raya assessments have been done in the villages Cot Rambong, Kuala Trang, Pucok Lueng and Lok Bubon. Agricultural lands here suffered damage from the tsunami, possibly from the influx of salt water, but also as a result of being silted up by tsunami mud. The land is now covered by shrubs and bushes.

Drainage canals

The main conclusions of the assessments were that in Aceh Barat and Nagan Raya districts the drainage canals were damaged by the tsunami. Agricultural lands were contaminated by sea water. Restoration of the canals and agriculture lands was required and captured fisheries and vegetation rehabilitation could be implemented in this coastal area.

Coastal ecosystem rehabilitation through coastal resources based livelihoods development

In Aceh Besar and Banda Aceh the tsunami had silted up the aquaculture ponds

In Aceh Besar and Banda Aceh assessments were been done in the villages Tibang, Lam Dingin, Neuhun and Lamnga. Here the tsunami has silted up the aquaculture ponds. Some ponds have even disappeared due to land subsidence: they were inundated by sea water.

Ponds

For the Aceh Besar and Banda Aceh districts, the main conclusions of the assessments were that ponds restoration are likely to be made in Neuhun and Lamnga. But for the severely damaged ponds in Tibang and Lam Dingin this will be too costly. The disappeared ponds can potentially be planted with mangroves, but this needs further approval from the owners.

Mangrove Ecosystem Rehabilitation through Silvofishery

On Nias Island land was both lifted and subsided

On Nias island assessments were done in the villages Moafe, Lafau and Onolimbu. In Lafau and Moafe the earthquake in March 2005 has caused land to be lifted and many mangrove trees were found dead. But in Onolimbu Village the land subsided in a band one-hundred meters wide stretching inland from the former coast line. Here a number of coconut trees were inundated by sea water and died.