## Africa: Mangroves to Feed Shrimp Aquaculture

According to the United Nations Environment Programme, 38% of Africa's coastline and 68% of its marine protected areas are under threat from unregulated development. Of concern are poorly-planned or regulated shrimp farming operations.

Relatively little shrimp farming took place in Africa until the early 1990s, but the continent represents a potential new frontier for the industry and large mangrove areas are being targeted by developers, drawn by rich natural resources, cheap labour and low land prices. African shrimps are valuable due to their good quality, compared to the rather small Asian shrimps.

The current shrimp production in Africa is around 106,000 tons, and though 29 African countries are shrimp producers, just a few are involved in the global market: Nigeria, with 20,500 tons per year, Madagascar with 17,000 tons in large scale aquaculture farms, and Morocco, with 13,000 tons. In Mozambique, large-scale shrimp farms are reported to be planned near Maputo (7,500 ha), Beira (19,500 ha) and Quelimane (6,000 ha). Shrimp farms also operate in a variety of coastal and inland zones in Guinea, Gambia, Eritrea, Egypt, South Africa, the Seychelles and Kenya. In Gabon, the company Amerger is finalizing a shrimp farm with a potential production of 2,000 tons per year, while in Quelimane, Mozambique, the French-financed company Aquapesca built a pilot-scale shrimp hatchery and farm (20 ha).

Three biologically-rich and culturally important large river deltas are among areas that have been targeted for new aquaculture developments: the Niger Delta, the Tana Delta and the Rufiji Delta.

The Niger Delta. Nigeria's mangrove forests are the largest in Africa and the third largest in the world. Local communities rely on the forests for building materials and food, and it is estimated that 60% of fish caught between the Gulf of Guinea and Angola breed in the mangroves of the Niger Delta. Industrial shrimp farming supported by the Nigerian Government has been proposed in the delta.

The Tana Delta is the largest wetland ecosystem in Kenya, comprising riverine forests, mangroves, flood plains and grasslands. The company Coastal Aquaculture Limited (CA) was allocated land in the Tana Delta in the early 1990s in order to develop shrimp farms. However, the local communities also claimed ancestral rights to the land. Following widespread protest, the Kenyan government used a Presidential decree and stopped the project. Litigation between CA Ltd and the government was unresolved, and the company is now reportedly lobbying the new government in order to restart the project and develop shrimp farms.

The Rufiji Delta contains the largest estuarine mangrove forest on the east coast of Africa and is of considerable economic and conservation importance. In the late 1990s, the African Fishing Company (AFC, run by an Irish arms dealer, R. J. Nolan) planned the world's largest shrimp farming project in the delta. The project, a 10,000 ha shrimp farm, was to take up a 19,000 ha site, inclusive of feed plant, hatchery, processing plant, etc, in the largest continuous block of mangrove in East Africa (53,000 ha). The project was endorsed by the government in 1998 in a deal that also allowed Nolan

to import over half a million dollars worth of arms into Tanzania annually. However, a review of the Environmental Impact Assessment (EIA) found it to contain substantial errors, omissions and misrepresentations, including suppressed risks of the project. Thirty-three thousand people resided in the proposed area in 19 registered villages and scattered sub-villages – the EIA claimed that the area was virtually uninhabited. Following widespread opposition to the project by local communities, environmental organisations and academics, and as a result of legal action by villagers with support from the Lawyers Environmental Action Team and Professor Issa Shivji, this proposal was eventually rejected and the AFC went into liquidation in August 2001. A moratorium was declared on all commercial aquaculture in Tanzania until the government has established proper guidelines. It was also declared that aquaculture should not be conducted in ecologically sensitive areas such as mangroves.

The "forests of the sea" are facing hard times worldwide, harassed by vested interests and fast-profit returns. It appears that only the strong resistance of those aware of mangrove's invaluable richness—particularly the local people who depend on them-- will guarantee their survival.

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