Brazil: Mangrove Ecosystems Turned into Shrimp Aquaculture Ponds

For many years, the mangrove forests were seen and actually often officially designated as wastelands, not fit for anything but mosquitoes and smelly swamp. Fortunately, this view of the tidal forests is changing, influenced by recent scientific studies and public awareness campaigns. Mangroves are now seen for their unique natural characteristics supporting high levels of biodiversity, immensely important for the health of wild fisheries and marine ecology. Mangroves are comprised of salt-tolerant trees and other plant species which thrive in inter-tidal zones of sheltered tropical shores, “overwash” islands, and estuaries which support an immense variety of marine, plant, and bird life. Not only hundreds of bird species utilize the mangrove wetlands as prime nesting and migratory sites, but also they serve local populations meet their needs.

These unique coastal tropical forests are among the most threatened habitats in the world. Urban expansion, oil development, the charcoal industry, roadways, and tourism have all taken their toll on large stretches of mangrove forests. Now these damaged ecosystems are facing further ruination due to shrimp aquaculture. And the threat goes beyond the continued loss of the forests to the related loss of associated tidal wetlands.

Unfortunately, very often the intricacies of this quite complex and interconnected ecosystem are not recognized, and the mangrove forests are viewed by some as somehow separate or isolated from their associate wetlands found on the tidal flats--the mud and salt flats, the salinas and salt marshes which are themselves really part of a greater, integrated tidal ecosystem. These are not really separate ecosystems, but are instead variations on a common theme--the tidal wetlands. Where there is now a mangrove forest, in the future there could be a salt marsh or salina, depending on changes in hydrology, sea level, or other factors. The mud flat of today may well become the mangrove forest of tomorrow. In fact, with the rising sea levels reportedly caused by global warming, existing mud flats and salinas may offer the only place of refuge for the natural progression of the mangroves. If the tidal wetland areas directly behind the mangrove are lost to development, this natural progression of mangrove forest will be thwarted or stymied.

The shrimp industry has increasingly taken the approach that the mud flats and salt flats are NOT valuable coastal wetlands, and in places such as Brazil, are rapidly converting these wetlands to shrimp aquaculture ponds with immunity from laws meant to protect the mangrove forest zones.

Brazil contains the second largest mangrove area in the world --more than one million hectares of mangrove forests are found along Brazil's long and curving coastline. Shrimp aquaculture has existed on a small scale in Brazil since the 1970s. Until recently, the industry has grown slowly, increasing production at a steady yet manageable pace. In 2000, there were approximately 5,000 hectares of shrimp ponds in Brazil, many of which were built directly in mangrove areas. Most of the ponds, however, were built in salinas, or salt flats, which were former mangrove lands cleared many years ago to establish shallow salt pans. Many of these salinas have since been abandoned, and were naturally returning to mangroves.

Now, entrepreneurs interested in shrimp farming ventures are targeting these areas. The industry is

currently being primed for a rapid spurt of growth, possibly leading Brazil to take a place among the other aquaculture giants such as Thailand, Ecuador, and China. In 2000, the Brazilian government released an ambitious three-year plan to expand its shrimp aquaculture industry's area of production six fold --from 5,000 ha to 30,000 ha. In 2002, Brazil had over 10,000 ha of shrimp farms that produced about 60,000 tons of farmed shrimp; ponds are expected to cover 25,000 ha of important coastal wetlands with a production anticipated to exceed 160,000 tons by 2005.

Brazil's shrimp industry would thus lead to the same environmental problems it has caused elsewhere, including overuse of pesticides and antibiotics in the shrimp ponds themselves, excessive water pollution, devastating viral disease spread between shrimp farms, loss of important coastal marine habitat such as mangroves, mudflats, and salt flats - all resulting in wild fish declines, loss of vital migratory bird habitat and loss of traditional livelihoods for coastal communities.

The shrimp aquaculture industry takes a great toll not only in terms of natural resource loss but in some cases even of violence and death. In April 2002, a fisherman in Piaui, state of Brazil, Sebastian Marques de Souza was murdered at his workplace by two men. According to the "pastoral of the Fishermen" (groups of fishermen working together and supported by the Catholic Church) the assassination was connected to the shrimp aquaculture industry. Marques de Souza was one of the main leaders that had been fighting against the uncontrolled expansion of shrimp aquaculture which had been buying, or appropriating, the lands within or surrounding mangrove forest zones in order to build there shrimp ponds. Those lands, in the majority of the cases, were public lands and local people had been using them for many years collecting all the products they needed to survive and to maintain local economies.

Meanwhile, a multitude of national and multinational investors is vying for space along the Brazilian coast to establish new shrimp ventures. Shrimp farmers from Ecuador's and Taiwan's own beleaguered coasts are coming to Brazil to restart their once-lucrative ventures anew. As is so often the case, the enticement of enormous capital gains is unfortunately blinkering the Brazilian government and citizens to the dangers shrimp farming will pose.

Article based on information from: “Brazil's Shrimp Farm Industry: Not For The Birds”, Alfredo Quarto, MAP, sent by the author, E-mail: mangroveap@olympus.net , “Protest Assassination of Anti-Aquaculture Activist in Brazil”, http://www.earthisland.org/takeaction/new_action.cfm?aaID=114