

The Social Damage Caused by Shrimp Farming

The spectacular growth of shrimp farming over the past 10 to 15 years occurred because governments and international development agencies promoted it, lured by enormous profits to be made. Investors were quick to cash in on the lucrative business, but, it is largely only a relatively few investors that have received the lion's share of benefits, while large portions of society, particularly the rural poor, have become disenfranchised and marginalized into severely degraded environments.

In the Philippines, for example, there was a marked shift from extensive aqua culture for production of milk fish largely for domestic food supplies to the more lucrative export-oriented shrimp. The result has been the not only the loss of a valuable protein source (i.e., milk fish) but also of valuable riceland due to conversion into, or salinisation by, shrimp ponds, both detrimental to the goal of national self-sufficiency in food.

Competition between traditional fishermen and family (peasant) farmers, and entrepreneurial shrimp farmers for the use of good quality land, coastal fisheries habitats like mangroves, and other critical areas along the coastline increases in direct response to higher demand for both local food and export crops. Communities are often dispossessed by shrimp farms of several vital resources over which they have held traditional rights based on long-standing patterns of use - among them, ricelands and the mangrove forests. Clear cutting mangroves for shrimp ponds destroys what was once a potentially sustainable resource, so that it ceases to provide a wide range of products for local communities such as building materials, food, fire wood, charcoal and the like.

Agricultural 'modernization' like this strikes women particularly hard in affected communities, as they are among the first to be overshadowed when commercialized farming overtakes self-provisioning. The shrimp farms consume several important resources in their operation, particularly local freshwater supplies which serve human communities for drinking water supplies, other household domestic needs, and farming purposes such as crop irrigation.

Though the shrimp industry tries to promote itself as a boon to the local economies, it benefits mainly the wealthy investors, at great loss to local people. Modern shrimp farming is, like other forms of intensive agriculture, capital rather than labor intensive. Modern, intensive shrimp aqua culture provides limited employment opportunities for coastal residents and most of those are typically poorly paid seasonal and non-skilled jobs, offering no long-term job security.

An economic study conducted by researchers at Chittagong University in Bangladesh revealed that shrimp farming displaces more jobs than it creates. Cultivating 100 acres of land with rice employs 50 workers, the study found; cultivating shrimp on the same land employs just five workers. As a result, shrimp farming in Bangladesh's coastal satkhira region displaced 40 percent of the area's 300,000 inhabitants into the country's overcrowded cities, the university study found. While a one hectare salt-water fish pond might produce a profit of \$32,000 for investors in shrimp and prawn exports to Japan and North America, little trickles down to the people in neighboring communities who are being badly affected.

The environment suffers greatly as social disruptions ripple out through the society. Increasing numbers of displaced families (traditional fishers and farmers), for instance, are forced to resort to destructive fishing methods or improper methods of husbandry themselves in order to extract a livelihood from lands and coastal areas that are diminishing in area and deteriorating in quality due to the appropriation of lands and ecosystems, and the over-use and improper husbandry by shrimp farmers. Otherwise, displaced people are forced to leave their traditional homes and migrate to cities hoping to find jobs. But jobs a few, and most people are unskilled laborers anyway, so contributing to the growing urban migration crisis being confronted in the developing world, and compounding already complex urban-related environmental and social problems.

In India, where in the last few years 80,000 hectares (200,000 acres) of coastal wetlands and agricultural land have been converted to shrimp farming, thousands of subsistence farming and fishing families have suffered dispossession because of the shrimp farm explosions. Rice production has been seriously affected in some areas by seepage of saltwater and pollutants from the shrimp ponds. In the Indian state of Tamil Nadu, where 60 percent of the population is landless, thousands of hectares of land have been set aside for shrimp farms despite concerns over threats to the livelihoods of 25,000 families. In some areas there have been reports of people being forcibly evicted from their lands at gunpoint in order to allow shrimp investors to come in to construct shrimp ponds. While farmers are being run off their lands to make way for shrimp aqua culture, fishing communities are finding their access to the sea blocked from their villages by huge shrimp farm complexes. Fisher folk can no longer land their boats and spread their nets. Even their catches are declining as once abundant fish populations drop off as a result of mangrove clearance and pollution from the ponds.

In a landmark case decided in December 1996, the Supreme Court of India ruled that an estimated 100,000 acres of intensive and semi-intensive shrimp farms will have to be shut down by the end of March, 1997. The decision also asserts the precautionary principle and polluter pays principle involving compensation to people adversely affected by shrimp farming. The Supreme Court ruled that no new shrimp aqua culture operations can be situated in areas of prime agricultural land, wetlands, mangroves, estuaries, saltpans, public land and government land, nor within 500 meters of the coast, and cannot cause salinity or chemical pollution of fresh water. While an important legal victory, and the first of its kind, it remains to be seen whether the decision will be effectively implemented.

Another damaging effect that impacts local fishing communities is the capture of young shrimp by the aqua culture farms for their hatcheries. Farmers in Ecuador and Bangladesh, for example, still depend on wild shrimp post larvae to stock their shrimp ponds, and this harvesting can deplete local populations of shrimp post larvae. The harvesting of wild post larvae to stock shrimp ponds may have changed the dominant species of shrimp caught by fishermen in coastal Ecuador. In Bangladesh, and in other Asian and Latin American countries, there are numerous reports of collectors of shrimp post larvae also catching fish larvae and small invertebrates. This bycatch is left to die on the beaches. Practices such as this may adversely affect populations of other fish and invertebrates in the area, and filter through to declining catches for local people, who rely on these species for food and livelihoods; such impacts can have an extremely damaging effect on local food security.

It is not only in the construction of ponds, but also their operation that makes them an environmentally damaging and socially destructive time bomb. Impacts on human health are yet to be determined, but many toxic substances used in large-scale shrimp farming, including a wide variety of pesticides such as malathion, parathion, azodin, paraquat, endosulfan and butachlor, mix with antibiotics such as terramycin, erythromycin and oxytetracycline (used heavily to prevent shrimp diseases), shrimp excrement and other substances to form a chemical soup. This poisonous effluent from the shrimp ponds is commonly dumped onto the surrounding land and into waterways where its chemical mix can pose health risks to people in local communities.

In summing up the social impacts of export-oriented shrimp farming it can be said that its benefits accrue substantially to a minority directly involved in exploitation of coastal resource systems, while a series of direct costs are paid by the majority who reside in these areas and who make their daily living from the resources that may be found there. Neither the social nor the ecological costs of shrimp culture development are paid by the investors, who pocket the extremely high profits during the growth phase of the industry, but socialize the costs as society at large is left with the bill for the considerable environmental and social damage.