

# DELTA FOOD SECURITY PROJECT



Implemented by the Food and Agriculture Organization of the United Nations (FAO)

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**V**ast swamplands surround the mouths of the River Ayeyarwady. This is one of the world's largest and most important river deltas. Yet it is a delta under threat. Formerly covered with dense mangrove forests, most of the area has been cleared in the last 20 years to grow rice and to produce charcoal for local use and the Yangon market. Although the production of charcoal in the Delta was banned in 1993, illegal cutting by landless people desperate to earn a living continues. Little undisturbed forest now remains.

The destruction of the mangroves has had severe effects on the environment. Salt water seeps into groundwater and intrudes into creeks, making well water undrinkable, reducing crop yields, and turning valuable farmland into saline wasteland. Tidal flooding is becoming more severe, and without the absorbing effect of the mangrove trees, the coast and river-banks are being eroded. Traditional forest products, such as timber, building poles, fuelwood, charcoal and nipa-thatch roofing, are getting scarce and expensive. The mangroves acted as breeding grounds and nurseries for many important species of fish and prawns. Catches are dwindling as more and more people hunt fewer and fewer fish.

The Delta has a dense population (6 million in Ayeyarwady Division alone), and many people have no land. They live on boats, moving from village to village in search of work, and catching fish to eat. Criss-crossed by creeks and canals, the area has few roads and poor infrastructure. Over 40% of the coastal population depend on mangroves and fisheries for their livelihood (nearly 60% in the poorest parts). The overexploitation and decline of these resources trap these people in a cycle of environmental degradation and poverty.

## The HDIE Delta Food Security Project

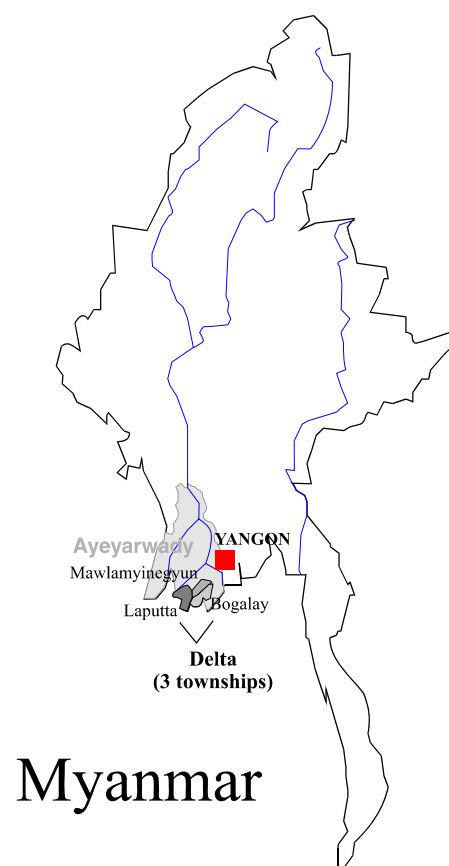
Environmentally Sustainable Income and Food Security Opportunities in the Ayeyarwady (Mangrove) Delta is one of 10 projects under the United Nations Development Programme's multisectoral Human Development Initiative Extension (HDIE) programme in Myanmar. The project focuses on three coastal townships in Ayeyarwady Division: Bogalay, Laputta and Mawlamyinegyun. A total of 750,000 people live in rural areas of these three townships. Satellite photographs show that in 1995, only about 6% of the land in Laputta and 20% in Bogalay was still forested, while Mawlamyinegyun had lost all of its forest cover.

The Food Security project collaborates closely with staff of HDIE projects working in the same three townships; these projects cover the complementary areas of education, health, water and sanitation, credit and administrative support. It also shares information and approaches with the two other Food Security projects under HDIE, working in Shan State and the Dry Zone of central Myanmar.

## Participatory approach

The Delta Food Security project aims to improve the living conditions of 17,000 of the poorer households in the three townships, and to rehabilitate the degraded environment on 26,000 acres (10,000 hectares). The project attempts to improve local people's incomes and enhance the environment through forestry, agriculture, livestock production and fisheries.

The project is based on a participatory approach that involves villagers in selecting, planning and implementing



activities. It gives priority to small-scale farmers and fisherfolk, landless people, and women. The process begins with participatory rural appraisals to identify the poor and landless groups in a village, and list the environmental and economic problems they face, and discuss possible ways of overcoming these problems. Each community then draws up a village plan, outlining what they wish to achieve in the areas of agriculture, forestry, fisheries and livestock.

Groups of villagers implement the activities they have chosen. Project staff provide training and advice in suitable technologies. The villagers can borrow small amounts of money to invest in these activities. They must repay the money (plus interest) into a "revolving fund", managed by the villagers themselves. This money becomes the property of the community; a village management committee deposits it in a bank or lends it out again to local people to be reinvested again.

## Project activities

Activities supported by the project fall into four main categories:

- Forestry.
- Fisheries.
- Livestock.
- Agriculture.

### Forestry

For villages in and around the remaining areas of forest, the project supports efforts to conserve and manage the natural resource. Together with villagers, it identifies the forested areas and develops conservation plans for them. This may include the establishment of nurseries for tree seedlings, efforts to support the natural regeneration of trees, training in the participatory management of forest land, and the production and distribution of fuel-saving stoves.

For villages outside the forest area, the project supports the development of seedling nurseries, the planting of trees on unused land, and work to protect river banks against erosion. In both areas, activities such as essay and drawing competitions for children, local study tours, and village training courses are held to promote awareness of the environment and ways to use it wisely.

### Fisheries

Although the Delta has many rivers and canals, these are not fully used for fish production. There is great potential especially for freshwater fish culture; most of the local fishing industry currently relies on brackish and saltwater capture techniques. Many people earn their living by catching crabs; but these are small and fetch low prices.

The project promotes the manufacture and supply of nets, traps and other fishing gear. It develops backyard hatcheries for fish fingerlings, and promotes aquaculture for fish and freshwater prawns. It teaches landless people and smallholders how to grow crabs, shellfish and fin fish in cages or pens, and supports efforts to set up small-scale plants to produce fish feed and to process fish for sale.

### Livestock

Efforts to improve livestock production include supplying improved breeds of pigs, chickens and ducks, and setting up feed mills where sufficient raw materials are available locally. Project staff provide veterinary services, and train local people in techniques for animal management and care.

### Agriculture

Crop yields in the Delta are low because of infertile soils and the prevalence of pests and diseases. The project ensures a supply of fertilizer to increase yields on marginal land, and encourages farmers to make compost from farm by-products. It helps provide lime to reduce soil acidity, and develops supplies of improved seeds, seedlings and cuttings for staple crops and for fruit and vegetable production. It encourages the development of private village nurseries to produce planting materials for fruit trees and vegetables. It supports the adoption of double-cropping where this is feasible, as well as rice-fish culture on suitable land.