

## FISHING AND AQUACULTURE IN MOZAMBIQUE

### Marine Fishing Industry

Most of the fishing in Mozambique is from the ocean. A lot of the ocean fishing is happening along the central coast of the country.

- **Industrial fishing** with large ships: Mozambique works together with fishing companies from other countries like Japan and Spain. A lot of the fish that these boats catch is shipped out of Mozambique for people to eat in other countries.
- **Semi-industrial fishing** with medium sized boats (between 10m and 20m long): Many of these boats are for catching shrimp by trawling, or they are catching fish with lines. The fishing companies that catch fish for people in Mozambique usually don't have new boats and equipment so it's more difficult to have a fishing business.
- **Artesanal fishing** with small boats: There are many communities in Mozambique where people are fishing in small groups or by themselves. Some of the fish they catch is for their own food, and some of it is for sale. Some of the boats have a motor on their boat and some don't. Many people fishing by themselves or in small groups don't have very much money.

You have to have a license for commercial fishing in Mozambique, except if you are fishing. For artesanal fishing, there is a fee for your license, but you don't need a license if you are fishing for your subsistence

### Mozambique Fisheries Sectors

	<b>Artisanal</b>	<b>Semi-industrial</b>	<b>Industrial</b>
<b>Length of the boat</b>	Up to 10 m	between 10-20 m	vessels over 20m
<b>Gear</b>	Hand lines, beach seines, gillnet and traps fishing.	Lines, gillnet and trawl.	Lines, gillnet and trawl.
<b>Fishing</b>	beach seines are most common and are used for catching mainly affordable small fish. Some catches are with hook-and-line for larger fish.	Larger, deep water fish	Larger, deep water fish
<b>Boat technology</b>	Most of them use oars. Few boats have an engine, and many use sails. About 40% operate by foot either as fishers or collectors.	Boat equipped with ice or a freezer	Boat equipped with a freezer and cold facilities. It can stay 20-30 days at sea.
<b>Process</b>	Sold fresh, or preserved by sun drying, and smoking.	Land-based fish processing plants.	Most of the catch is processed and packaged at sea
<b>Market</b>	Local consumption.	Locally consumed and exported	Exported to other countries
<b>Annual catches</b>	80,000 -100,000 tons (estimate)	14,100 tons, in 2003 (1,100 tons were shrimp )	10,000 tons, in 2002 (7,700 tons were shrimp)
<b>Location</b>	Present in all territories along the coastal area, bay and estuaries as well in inland waters.	Main coastal cities or in areas that can easily access the city. Shrimp is processed in small plants and exported through buyers.	Quelimane, Beira and Maputo are the major ports for the industrial fleet.
<b>Jobs</b>	Generates the largest number of direct jobs. (50,000 estimate)	1550 workers (80% from Mozambique)	
<b>Age and gender</b>	Women and children constitute the majority of collectors and substantial part of the fisheries without boat.	Men	Men

## Artisanal Fisheries

<b>Length of the boat</b>	Up to 10 m
<b>Fishing gear</b>	Line, gillnet and traps
<b>Fishing Methods</b>	The most common type of artisanal fishing is with <b>beach seines</b> for small fish. These fish are affordable and sold to people in rural or suburban towns. A less common type of artisanal fishing is with <b>hook and line</b> for larger fish. Usually these fish are brought to larger cities to be frozen or stored with ice.
<b>Boat technology</b>	About 3% of boats have engines, but most boats use oars and/or sails. Also, 40% of this fishing is by people without a boat.
<b>Marketing</b>	Local consumption. Sold fresh and preserved by sun, drying, smoked.
<b>Area of fishing</b>	Present in all territories along the coastal area, bay and estuaries as well in inland waters.
<b>Jobs</b>	Generates the largest number of direct jobs in Mozambique fisheries.
<b>Age and gender</b>	<p>Women and children are generally “collectors” without a boat.</p> <p>In the <u>central and northern regions</u>, women work as collectors and in the market and very rarely are they allowed to work commercially in fishing. <u>In the southern region</u>, some women are involved in commercial fishing, and also work in the markets.</p>
<b>Overall problems</b>	<ul style="list-style-type: none"> <li>- Not enough technology, equipment, and access to loans.</li> <li>- Poor roads: it is difficult to get to markets.</li> <li>- Many small fishing communities don't have the knowledge and resources to organize their businesses</li> </ul>
<b>Regional differences</b>	<p>Zambezia and Nampula provinces are poor, more densely populated, and in Nampula there are many artisanal fishers.</p> <p><b>North coast:</b> there are coral reefs and islands. Roads are poor. Social services are limited.</p> <p><b>Central coast:</b> Many mangroves, agricultural workers, and the artisanal fisheries in Sofala are very productive. They dry many of the fish for sale in Mozambique.</p> <p><b>Southern coast:</b> Sand dunes and tourism is stronger. Fewer artisanal fishers, and more fish traders. Better roads and infrastructure.</p>
<b>Income groups</b>	<ol style="list-style-type: none"> <li>1) <b>Boat and beach seine owners</b> involved in commercial activities and agriculture can earn more money. Some of the more successful families can make as much as \$3,300 US Dollars per year.</li> <li>2) <b>Workers for artisanal boats and beach seines</b> earn about \$120-\$400 US dollars per year.</li> <li>3) <b>Fishers and collectors without boats:</b> Poorest group among artisanal fishers.</li> </ol>

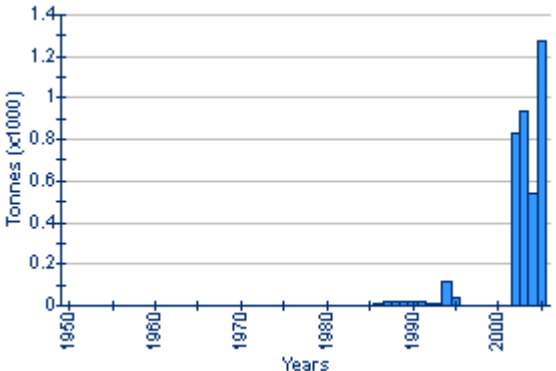
## Aquaculture

About 95,000 people work in aquaculture, and 90% of them are in the artisanal category. About 5,000 of those people are part-time and they often grow tilapia or seaweed. Much of the marine shrimp aquaculture is for export, and freshwater fish are produced

Commercial coastal aquaculture is usually for shrimp in earthen ponds. In 2004 Mozambique produced 400 tonnes of shrimp. Shrimps are produced in earthen ponds and their food is usually imported from other African countries or Asia. The shrimp ponds are located close to the mangrove forest, on the bank of estuaries

Some other aquaculture includes fish, crustaceans and aquatic macro algae. The species most cultivated are giant tiger prawn, Indian white prawn, the native freshwater fish Mozambique tilapia, common carp, silver carp, Nile tilapia and two kinds of seaweed.

In the coastal areas of Cabo Delgado and Nampula, local communities are involved in seaweed farming (*Eucheuma* and *Kappaphycus*) in a system of poles installed in shallow areas close to the shore. In 2003 production reached 523 tonnes. Local farmers are reported to earn an average of US\$ 60 per month.

<p>Aquaculture production</p>	<p>In 2002 production from aquaculture (marine shrimp and seaweed) was 757 tonnes at a value of US\$ 3 031 000. In 2003 it was 855 tonnes and worth US\$ 1 668 300 (DNEP, 2004).The graph below shows total aquaculture production in Mozambique according to FAO statistics.</p> <p style="text-align: center;"><b>Reported aquaculture production in Mozambique (from 1950)</b> (Fao Fishery Statistic)</p>  <p>(Source: FAO Fishery Statistics, Aquaculture production)</p>
<p>Market and trade</p>	<p>Fish marketing and distribution are carried out by the private sector (formally and informally). A wide range of marine fish products is available and marketed. Marine aquaculture production has served external market demands, while freshwater production is for household consumption. The domestic market for marine products is small and consumption of such products is mainly confined to marine areas. Fish consumption in the country is estimated at 7-10 kg/year. However, there are consumption imbalances between coastal and inland areas. High-value species such as prawns <i>Penaeus monodon</i> and <i>Penaeus indicus</i> are exported. Europe and the USA are the primary export destinations for aquaculture exports. Small volumes are also marketed in South Africa and Asian countries. The production of cultured tilapia from cages is all marketed locally. The Fish Inspection Department in the Ministry of Fisheries is the competent authority for inspection, testing and certification of both capture and aquaculture products.</p>