


FISHERY COUNTRY PROFILE	Food and Agriculture Organization of the United Nations	FID/CP/LBR  April 2007
PROFIL DE LA PÊCHE PAR PAYS	Organisation des Nations Unies pour l'alimentation et l'agriculture	
RESUMEN INFORMATIVO SOBRE LA PESCA POR PAISES	Organización de las Naciones Unidas para la Agricultura y la Alimentación	

THE REPUBLIC OF LIBERIA
GENERAL ECONOMIC DATA - April 2007

Area:	111 370 km²
Water area:	15 050 km²
Population (2004):	3.3 million
GDP at purchaser's value (2005):	US\$ 548.4 million
GNI per head (2005):	\$US 130
Agricultural GDP (2005):	US\$ 348.8 million
Fisheries GDP (estimate for 2005):	12% of Agricultural GDP

2. Fisheries data (2004)

	Production	Imports	Exports	Total supply	Per capita supply
	'000 tonnes live weight				kg/year
Fish for direct human consumption	11 314	3 536	84	14 766	4.4
Fish for animal feed and other purposes	0	0	0	0	0

Estimated Employment (2004):	
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(i) Primary sector (including aquaculture):	2 950
(ii) Secondary sector:	8 300
Trade (2005):	
Value of fisheries imports:	US\$ 3 177 000
Value of fisheries exports:	US\$ 702 000

3. Fishery sector structure

Overall fishery sector

Liberia has a total area of about 111 370 km², of which 96 320 km² (86 percent) is dry land, drained by natural streams and rivers. The vegetation consists of forest and woodland (39 percent), pastures (2 percent) and arable land (36 percent). Freshwater resources cover 15 050 km² (14 percent) of the total area of Liberia, comprising rivers, lakes, lagoons, creeks and streams that drain to the Atlantic coast, bringing nutrients to sustain the primary productivity of the shelf.

With an Atlantic coastline of about 579 km and a continental shelf averaging 34 km in width, the fishing grounds cover 186 322.2 km² within the EEZ.

Fisheries are important for several reasons:

- they provide a means of employment and livelihood for about 11 250 people who are engaged on a full-time basis, and perhaps hundreds of thousands more on a part-time basis;
- they provide a cheap source of animal protein for the population; and
- they are a potential source of foreign exchange and revenue, as tuna, lobsters, shrimp, etc., abound in both fresh and marine waters.

The sector provides about 65 percent of the animal protein needs of the country at the moment, since the livestock programme is still being revitalized. Fisheries contribute about 3.2 percent to the GDP of Liberia, and create job and income earning opportunities, thus generating revenue for government.

National fisheries has three main subcomponents:

- marine fisheries, involving industrial and artisanal activities;
- inland fisheries, mainly artisanal; and
- aquaculture, through subsistence fish farming.

The coastal (marine) fishery comprises both industrial and artisanal. This subsector is

more mechanized than the other subsectors, in that it utilizes improved methods of fishing, equipment and gear. It is also the sector most relevant for implementation of the Code of Conduct for Responsible Fisheries in the Liberian context.

The inland fishery subsector is primitive, but contributes 25 percent of the fish consumed by rural dwellers. The development of this subsector is a focus for supplementing all other sectors of the fisheries.

Aquaculture is largely subsistence. Two fish hatcheries, established at Klay and Douyee Town with assistance from the EU, were left in ruins by the recent hostilities. Culture techniques involve mainly pond-based hatchery and pond management of tilapia.

Fish processing and preservation methods include salting, smoke drying and fermenting, usually involving the use of choker smokers and kilns by artisanal fishers, and freezing by the industrial companies.

There are about 11 250 persons involved in fisheries, including full-time and part-time, sport fishers and fish dealers. There are currently 1050 fish farmers.

About 60 percent of the total domestic fish catch is landed by the artisanal subsector, with landing sites distributed throughout the country, especially along the coastline.

The pre-war estimate of the sustainable yield of the continental shelf of Liberia was about 180 000 t/year, and 40 000 t/year for freshwater. Catch has however ranged between 10 300 and 11 700 t/yr from 2000 to 2004. A research survey in 1986 estimated the total biomass of both pelagic and demersal species at 800 000 t.

2. Inland subsector

Liberia has two kinds of river systems: major basins that drain 97 percent of the territory and originate from the Fouta Djallon highlands in Guinea, and short coastal watercourses, which drain about 3 percent of the country. There is a total of 1800 km of river, most of which is shallow, rocky and with cataracts and fallen logs that render them innavigable. There are also large areas of inland valley swamps and numerous coastal lagoons, including Lake Piso, one of West Africa's largest lagoons. Inland fishery is underdeveloped and traditional in the methods of exploitation, and not monitored. As such, there is no information on its level of production.

Catch profile

Table 1. Annual fisheries production of Liberia, 1995–2004 (tonnes)

Year	Artisanal	Industrial	Inland	Aquaculture	Total
1995	3460	1675	n.a.	n.a	5135
1996	2036	1104	n.a.	n.a.	3140
1997	2519	2061	n.a.	n.a.	4580

1998	3757	3071	n.a.	n.a.	6830
1999	7078	4394	n.a.	n.a.	11471
2000	6995	4731	n.a.	22	11748
2001	8089	3197	n.a.	14	11300
2002	6890	4110	n.a.	14	11014
2003	6721	3979	n.a.	14	10714
2004	5646	4713	n.a.	38	10397

Sources: Regulatory and Statistics section, Bureau of Fisheries, 2004; FAO, 2006.

Fishery areas

Liberia is situated within the East Central Atlantic region of the Gulf of Guinea, and has a fishery area of 186 322.2 km² within the EEZ. The fishing area extends from the shrimp rich shebro grounds bordering Sierra Leone in the west, to the Cavalla River Basin bordering Côte d'Ivoire. There are also 1800 km of rivers endowed with a rich aquatic fauna.

Fishing production means

The Liberian fisheries comprise both industrial and artisanal sectors, which deploy various vessels, gear types and fishing methods. In 2004, there were 8 industrial companies operating some 28 trawlers, which included for the first time 8 Chinese paired trawlers. There are about 20 rigged side and stern trawlers registered with the industrial fleet, involved in both fishing and shrimping operations.

The artisanal fleet comprises the indigenous *Kru* canoe (1–3 person crew), operated by *Kru* fishermen using oars or sail. These are small dugout canoes of about 7 m, some of which are also powered by 7 hp outboard engines, deploying mainly hook and long lines and gillnets.

The *Fanti* canoes are larger (12–15 m) and powered by 25–45 hp engines, with a crew of 15. Their gears are ring and purse nets used for small pelagic species, with larger gillnets specifically adapted for different species and seasons. These account for about 40 percent of the artisanal landings.

The *Popohs* operate beach seines (200–800 m long) using dugout canoes (5–7 m), usually with a 1- or 2-person crew.

4. Main resources

There is a somewhat diverse pelagic fishery resource. The coastal pelagic fish species exploited by the artisanal fleets include *Caranx*, *Sphyraena*, *Cybium*, *Trichiurus*,

Sardinella, *Ethmalosa*, *Chloroscombrus*, *Vomer*, *Ilisha africana*, *Pseudotolithus*, *Dentex*, *Cyanoglossus*, *Galeoides decadactylus* and *Pentanemus quinquarius* (Polynemidae), *Drepane africana* (Drepanidae), *Arius* spp. (Ariidae), *Cynoglossus* spp. (Cynoglossidae), *Ilisha africana*, *Ethmalosa fimbriata* (Clupeidae) and *Parapenaeus atlantica* and *Lutjanus* spp.

The industrial subsector exploits the shrimp resources, mainly *Penaeus duorarum notialis* and *Parapenaeopsis atlantica*. This sector also exploits pelagic and demersal resources, including *Pomadasyds jubelini* (Pomadasyidae), *Pseudotolithus senegalensis*, *P. typus* (Sciaenidae) and *Lutjanus* spp.

5. Management applied to main fisheries

Management of the fisheries in Liberia is mainly through input control and technical measures. The objectives are to regulate fishing effort and mesh sizes through registration of vessels and the monitoring of fishing activities. Regular inspection of gear and the deployment of inspectors aboard vessels and at fish landing sites is a strategy to ensure compliance with rules and regulations governing the fishery sector.

Recreational sub-sector

Recreational fishing is not yet as developed as the industrial sector, and is less regulated, like the inland fishery. In 2004, there were only two recreational fishing permits issued by the Bureau of National Fisheries, even though it is required by law. It is practised mainly by foreigners and upper-class citizens using motorized boat on the St. Paul and Mesurado River Basins, around Monrovia. There are less than 100 persons (mainly males) involved and there is no data on production from this subsector.

Aquaculture sub-sector

Aquaculture activities begun in the mid 1970s, with fishponds developed at the Central Agriculture Experimental Station in Suakoko, for breeding experiments with common carps, Nile tilapia and catfish varieties. Extension was provided by Peace Corps Volunteers to small-scale farmers. It was promoted by the BCADP, NCRADP and LCADP in Bong, Lofa and Nimba Counties, with pre-war production reaching 29 t. Post-war production has been boosted by the EU-supported hatcheries at Klay (Bomi County), Douyee Town (Grand Gedeh County) and Salayea (Lofa County), which supplied the necessary fish fingerlings to farmers. Production rose from 22 t in 2000 to 38 t in 2004, with *Oreochromis niloticus*, *Tilapia zili*, *Clarias* sp. and *Heterobranchus* sp. as the main culture species. The number of fish farmers rose from 350 in 2000 to 1050 part-time, subsistence farmers in 2004.

6. Post harvest use

Fish utilization

All crustaceans are packaged and frozen for export to Europe (Belgium, Greece, Spain, UK) and to the United States of America. Almost all finfish is frozen whole and marketed for domestic consumption. The fishing industry lacks the infrastructure and equipment to

process export-quality fish products.

Fish markets

Shrimps are frozen for export while finfish is frozen and distributed to fish depots around Monrovia and in major cities around the country. Fish is bought from depots by women who sell them to rural dwellers in the villages and towns, usually operating on foot.

7. Fishery sector performance

Economic role of fisheries in the national economy

Fisheries are a major contributor to the economy, providing a relatively cheap source of animal protein for the population, bringing in export earnings and providing employment. The sector contributes about 12 percent of agricultural GDP, but less than 4 percent of national GDP at producer prices.

Demand

Fish currently provides about 65 percent of animal protein intake and is significantly cheaper than meat or chicken. Per capita consumption is low (4.33 kg/yr), compared to 16 kg in other parts of the world. The demand gap stands at 11.67 kg per person.

Supply

The per capita supply of fish in 2004 was 4.33 kg, far lower than the 14 kg recorded in the 1980s. The supply of fish protein to the population could be increased by improvements in transportation and in storage and distribution conditions; improved and sustainable fishing methods; and perhaps by increasing aquaculture, both marine and freshwater.

Trade

A great deal of fish, particularly sardines, snappers, groupers and grunters, is imported from the high seas of Morocco, Spain and neighbouring states.

Employment

There are about 11 250 persons involved in fisheries, including full-time and part-time, sport fishers and fish dealers. There are currently 1050 fish farmers spread around the country. Some 10 000 persons, including fishers, fish dealers and processors are involved with the artisanal sector, including inland, while about 500 persons are involved with the industrial sector, most of whom are employed as deck hands on vessels or as labourers in fish cold storage units and depots around the country.

Rural development

More than 50 percent of the population live along the coastal area, where the predominant occupation is fishing. With improved capacity of fishers to increase catch, more people are getting involved, thus contributing to the stability of most fishing communities.

8. Fishery sector development

Constraints

The fishery sector is plagued with constraints, which have hampered its development for many decades. These include:

- lack of a Fishery Policy and a National Fishery Development Plan;
- lack of comprehensive fishery regulations and operational rules;
- lack of institutional capacity in the Bureau of National Fisheries;
- absence of a fisheries harbour to facilitate the discharge of cargo (fish) and the supply of essential commodities;
- high import duties and landing charges for locally produced fish;
- lack of basic fisheries infrastructure at artisanal landing sites;
- primitive fish processing methods in artisanal fisheries, which are still traditional in nature and limited to fish smoking;
- high operational costs in artisanal fisheries because of the high costs of fishing inputs;
- high import duties on fishing gears and other inputs;
- lack of a credit scheme;
- poor road access to fishing communities;
- lack of a Monitoring, Control and Surveillance system;
- low literacy rate amongst artisanal fishers;
- lack of sufficient trained manpower in fisheries and aquaculture development;
- lack of good quality fish fingerlings for stocking;
- lack of improved fish feed;
- lack of proper irrigation schemes for sustained aquaculture production;
- limited research in aquaculture; and
- lack of budgetary allocations for the Bureau of National Fisheries.

Development prospects and strategies

There have been no in-depth and regular studies of the country's marine and freshwater resources. Though the Liberian continental shelf is not amongst the most productive in the subregion, assessments in the 1980s estimated the potential yield of demersal species to be between 2 500 and 15 000 t, and that for pelagic species to be between 20 000 and 40 000 t. Annual catch of both pelagic and demersal species has ranged between 7 000 and 15 000 tons. The potential for shrimps along the coast is about 1000 t/yr.

Research indicates that there is good potential for increasing landings, but catch per unit effort by research vessels in Liberian waters has been consistently lower than elsewhere

in the subregion.

With an irrigation potential of 600 000 ha, one strategy to ensuring adequate domestic fish supply would be a shift to aquaculture.

Research

Asur-Liberia Inc. was engaged in hydrobiological work on inland water bodies of Bong and Nimba Counties. The objectives were to carry out an inventory of fish species in these water bodies and collect baseline data on their physico-chemical properties. The aim of this project was to identify local species suitable for culture in parts of Liberia. The project was for one year and supported by the Government of France.

Education

Training in fishery is limited to short-term workshops and seminars conducted by local and international NGOs engaged in fishery-related projects. There are no institutions for training in fisheries, and related courses have not yet been introduced into tertiary educational institutions.

Foreign aid

There are currently a number of projects in the fisheries sector.

- “Emergency support to the rehabilitation of artisanal fisheries sector” TCP/LIR2905 (E) being implemented by FAO through KKG and FFDC in Montserrado, Cape Mount and Grand Bassa Counties, with 1975 target beneficiaries. The project is expected to last for a year and will provide inputs and training to fishers and processors, including construction of 20 smoke kilns to reduce post-harvest losses and improve the livelihood of fisherfolk.
- The “Integrated inland valley swamp rehabilitation and development project” being implemented by Catalyst Inc. and FFDC Inc. in Bong and Nimba Counties, with support of USAID/LCIP, has a direct beneficiary target of 800, with females constituting 25 percent. The objective of the project is to provide employment for ex-combatants as the main labour force in rehabilitating and developing fish ponds and rice paddies. The project is for six months and is being implemented in 10 communities.

9. General legal frameworks

The legal instrument for fisheries management is the ‘Revised Fisheries Rules and Regulations’ of 1973, enshrined into the ‘Natural Resources Laws’ of 1956, which empowers the Ministry of Agriculture through the Bureau of National Fisheries to impose fees and fines, and take measures to enhance the sustainable management and utilization of the fisheries resources of Liberia.

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Organigram of the Bureau of National Fisheries (BNF), Liberia

