

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

## SAINT LUCIA

### STRUCTURE AND CHARACTERISTICS OF THE FISHING INDUSTRY

#### Fleet structure

Fisheries in Saint Lucia have undergone significant changes during the past 15 years. The fleet now consists of 690<sup>1</sup> vessels operated by 2319 fishermen, of whom 40 percent operate on a part-time basis. Less than half of the larger vessels are the traditional wooden craft (canoes), with the open fibreglass *pirogue* now the dominant craft within the industry. In addition, a number of small, locally owned and operated longlining vessels (greater than 12 m in length) have recently entered the fleet. The majority of canoes and pirogues are powered by outboard engines. Most of these are in the range of 40 - 115 hp. Longliners have inboard engines. Engine capacity is increasing to reflect changes in vessel carrying capacity.

Over 65 percent of annual fish landings comprise offshore migratory pelagics such as dolphinfish, wahoo and tuna and tuna-like species, captured mainly between December and June each year. Flyingfish form an important but variable component of the catch, and a multitude of shallow reef and bank fish species and several coastal pelagic species are also key components of the catch. Pelagics are captured using surface trolling by hand and, to an increasing extent, mechanized midwater longlines. Fish traps capture reef fishes and lobsters. Gillnets are also used to capture bottom fish, and coastal pelagics are brought ashore using encircling nets (gillnets and seines). There is a traditional fishery for small cetaceans and a regulated conch and sea urchin fishery.

## Inland fisheries

There are no inland fisheries of commercial importance. A traditional fishery for local freshwater prawns remains closed at present due to resource decline.

**Location and main landing places** (Note: Include on map, Gros Islet, Banannes (part of Castries, but sampled separately, and Laborie. Anse la Raye is not one of the sampled landing sites).

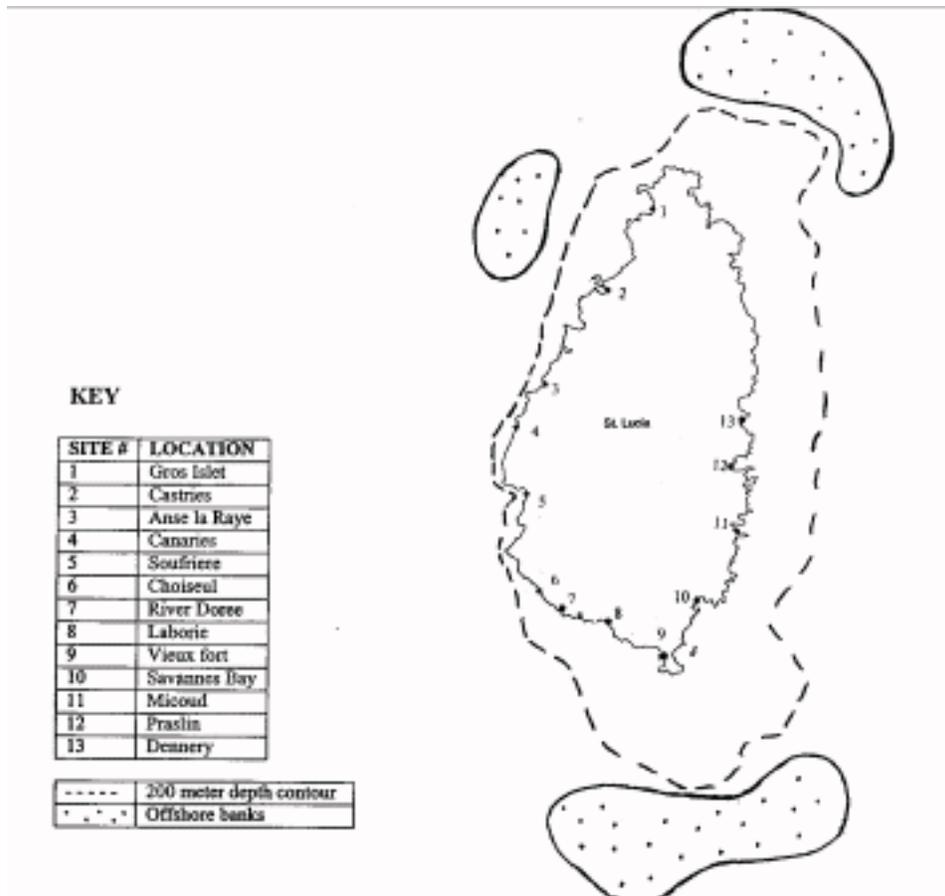


Figure 1. Fish landing sites and selected fishing grounds for Saint Lucia

Fish landings occur at 17 coastal communities, with the largest proportion of the catch being landed at the town of Vieux Fort, the village of Dennery and the town of Gros Islet, with the first two sites receiving some 44% of the total annual landings. The table indicates the relative importance of landing sites in terms of their contribution to total catch, and categorizes them as primary (1), secondary (2) or tertiary (3).

### Main landing sites, landings and relative importance (2006)

Annual landings

Landing site	Tonne	%
Banannes (3)	14.51	.0
Castries (1)	46.15	3.2
Dennerie (1)	306.98	21.3
Gros Islet (1)	109.52	7.6
Micoud(2)	83.3	5.8
Choiseul (2)	65.27	4.5
Laborie (2)	76.9	5.3
Soufriere(2)	99.48	6.9
Vieux Fort (1)	366.42	25.4
<b>Others(3) [Anse la Raye, Canaries, River Doree, Savannes Bay, Marisule, Monchy, Praslin, Roseau]</b>	<b>271.41</b>	<b>18.8</b>
<b>Total</b>	<b>1 440.03</b>	<b>–</b>
<b>Source:</b> Department of Fisheries: 2006		

## Management objectives, measures and arrangements for major fisheries

### Sector overview

According to the Draft Revised Fisheries Management Plan (awaiting endorsement), the overall objectives for the sector are to:

- develop the fishing industry in terms of modernization of fisheries infrastructure, fishing vessels and the use of improved fishing gear and methods;
- promote self sufficiency through increased marine and aquaculture production;
- advance the social and economic status of fishers and their families; and
- improve the nutrition of the nation through the provision of increased volumes of fish.

Specific fisheries management objectives are to:

- maintain or restore population of marine species;
- preserve rare or fragile ecosystems and habitats;
- protect and restore endangered marine and freshwater species;
- promote selective fishing gear and practices and prevent the use of destructive gear and methods;

- factor traditional knowledge and interests of coastal communities and artisanal fisheries into fisheries management;
- ensure effective monitoring and enforcement of fishing and other marine resource uses;
- promote relevant scientific research;
- ensure integrated planning and a collaborative approach in terms of policies for the sector, fisheries and coastal zone management; and
- cooperate with other nations in the management of shared, straddling and highly migratory stocks.

## **Offshore pelagics**

Seasonal, migratory pelagic fish species, such as dolphinfish, wahoo, tuna species and flyingfish, comprise over 65% of annual landings. Billfishes and cetaceans (pilot whale and dolphin species) are also captured. The majority of the island's fleet targets such species from November to June each year. Gears used mainly include manually operated trolling gear and longlines set from small (5-9 m) fibreglass pirogues and wooden canoes. These vessels are mainly powered with 40-115 hp outboard engines.

Offshore pelagics are shared at a level of at least the Eastern Caribbean, with the exception of yellowfin and skipjack tunas, billfishes and some whales that migrate at a level of the Western or entire Atlantic region.

This fishery is the main focus in terms of fisheries expansion, with specific fishery management objectives comprising (a) the sustainable development of the commercial and sport fisheries for large pelagics and flyingfish, (b) regional and subregional cooperation in management, and (c) maintenance of the traditional cetacean fishery. A small, locally owned and operated longlining fleet (focusing on midwater longlining for large tunas for an export market) operates within the sector and is a growing component of the fleet.

Currently, there are no specific regulations controlling the harvesting of large pelagics, with the exception of cetaceans.

Saint Lucia has actively supported regional fisheries management initiatives at the level of the Organization of the Eastern Caribbean (OECS), the Caribbean Community (CARICOM) and the Western Central Atlantic Fisheries Commission (WECAFC), and sees appropriate representation at the level of International Convention for the Conservation of Atlantic Tunas and the International Whaling Commission as critical to the advancement of this fishery.

## **Shallow shelf and reef fisheries**

The nearshore fishery targets a variety of reef species; the catch can comprise some 40-60 finfish species, in addition to lobsters and octopuses. It mainly uses hand-hauled fish traps (wire mesh or bamboo hexagonal mesh Z-traps, locally known as "fish pots"). This fishery occurs in reef and shelf areas, usually in depths of less than 50 m. Alternatively, bottom set gillnets are becoming more common, and spearguns and handlines are also used. The vessels utilized include those used for pelagic fisheries, in addition to a number of smaller wooden vessels powered by smaller capacity engines. Most pot fishing occurs during the off-season for coastal pelagics (i.e. June to December yearly), although some landing sites, such as Gros Islet, Bannanes, Anse la Raye, Canaries, Soufriere and Savannes Bay, tend to focus on this fishery throughout the year.

The lobster fishery is a high-value fishery primarily targeted at an expanding tourism sector.

Recruitment of larvae is probably operating at the level of at least the Eastern Caribbean. The resource is considered overexploited, largely due to the debilitating effects of coastal habitat degradation coupled with increasing levels of fishing effort. At present, the overall management objective is to promote the recovery of the stock and ensure sustainable resource use.

Management measures include prohibiting the use of dynamite, noxious substances, SCUBA gear, trammel nets, and mesh sizes below a specified minimum. Currently, access to the fishery remains open, although the most productive reef areas are protected as actively management marine reserves and an attempt is being made to implement a limited entry system for this fishery.

Enforcement capacity is insufficient to prevent problems of illegal dynamiting and the use of illegal gears, although fisher awareness and active involvement in co-management of coastal marine areas have increased, and are seen as an important means of resolving constraints facing coastal fishing.

## **Coastal pelagic fishery**

This fishery is particularly important to communities along the west coast of the island, where large schools of coastal pelagic species (including jacks, ballyhoo and sardines) tend to congregate at certain times of the year. These fish are captured using encircling nets (beach seine and fillet nets) operated out of one or more canoes near to shore.

Like the reef fish resource, the management unit for the coastal pelagics is also deemed to be the island shelf, except for the larvae, that are probably distributed at the level of the Eastern Caribbean. Mesh size restrictions are in place for the nets used in the fishery and the maximum length for the soak period is also restricted. Fishing Priority Areas have been

legislated for prime seine fishing bays in an effort to minimize the potential for conflict with other coastal users, such as yachting. Potential exists for formalizing the traditional system of "turns" exercised by this fishery at the community level as a form of community-based management.

This fishery appears to have been negatively affected by declining water quality in many bays due to increased agricultural runoff and sedimentation.

### **Other fisheries**

These include a small fishery for queen conch, sea turtles and sea urchins, as well as a currently moderately developed deep slope and bank fishery that targets snapper and grouper species. A well established aquaculture industry focuses on the small-scale raising of freshwater shrimp and tilapia, and cultivation of marine algae. The aquaculture industry is seen as a valuable component of the agricultural diversification thrust.

Regulations are in effect to protect conch, sea turtles and sea urchin resources, including size limits for both; a closed season and co-management arrangement for the sea urchin; a licensing arrangement is being introduced for the conch fishery; and permits are required for sea urchin harvesting.

### **Institutional arrangements**

Enforcement of fisheries legislation is carried out by the Department of Fisheries in collaboration with the Marine Police Unit and district police of the Royal Saint Lucia Police Force.

Saint Lucia has developed a variety of fruitful co-management arrangements with relevant stakeholders, and this approach is seen as an effective means of overcoming manpower constraints and engendering the commitment and sensitization of the relevant actors in marine and coastal resource management. Examples include the co-management arrangement in place for the sea urchin fishery; sustainable harvesting of a mangrove resource by a local fisheries management authority; and the implementation and active operation of self-financing marine management areas (the Soufriere Marine Management Area (SMMA), and the Canaries - Anse la Raye Marine Management Area (CAMMA)).

The Department of Fisheries, as the primary fisheries development and management agency, works closely with a number of government agencies (e.g. planning, forestry, agriculture, environment, health, community development), non-governmental organizations (e.g. the naturalist society, national trust) and regional institutions (e.g. Environment and Sustainable Development Unit of the Organization of Eastern Caribbean States (OECS/ESDU); Caribbean Natural Resources Institute; and Caribbean Community Fisheries Unit).

Fisheries management agencies throughout the region work together closely, including a

harmonized approach to management arrangements and legislative framework.

Fisheries management constraints include manpower and financial limitations for effectively undertaking the required level of sensitization, enforcement and community-based management suitable for protecting these fisheries on a national scale.

### **Main fisheries regulations**

The Fisheries Act, No. 10 of 1984, and the Fisheries Regulations, SI No. 9 of 1994, form the basis of law related to fisheries development and management. These two instruments relate to fisheries access agreements, local and foreign fishing licensing, fish processing establishments, fisheries research, prohibited fishing gears and methods, marine reserves and fishing priority areas, fisheries enforcement, and specific restrictions for certain utilized resources (conch, lobster, sea urchin, freshwater shrimp, cetaceans, turtles and marine algae). These pieces of legislation are currently being revised.

Other relevant legislation includes the Maritime Areas Act (1984), for marine space use and pollution; the Public Health Act (1975), for aspects of land-based sources of pollution; the Solid Waste Management Authority Act (1996); the Wildlife Conservation Act (1980); the Land Development Control Act (1971); and the National Conservation Act (1999), which deals with beach use, parks and protected areas. There is now a revised Physical Planning and Development Act No. 29 of 2001, which includes Environmental Impact Assessment regimes. Further, a Marine Pollution Act, a Solid Waste Management Act and a Returnable Container's Act are also underway.

### **Investments in fisheries**

During the past ten years, the industry has undergone increased commercialization, although most of the technologies used can still be considered artisanal in nature (hand hauled gear; more than 95% of the fleet are open vessels less than 11 m long, powered by outboard engines). The trend has been towards larger, more stable open craft (i.e. fibreglass pirogues) and, to a lesser extent, small longliners (11+ m) with inboard engines and using mechanized gear. The number of fishing vessels is now 690<sup>2</sup> and fisheries are operated by 2319 fishermen.

Another recent change is that more fishers are investing in their own vessels, rather than working as crew. This transition has largely been facilitated by a soft loan facility offered through the development bank. The Saint Lucia Development Bank<sup>3</sup> has granted over EC \$3.5 million (US\$ 1.4 million) in small loans to the fishing sector during the past six years.

The Government of Saint Lucia, with financial and technical assistance from the Governments of Canada and Japan, has invested substantially in fisheries infrastructure throughout the island. The largest marketing facilities are operated by the Saint Lucia Fish Marketing Corporation, a statutory body set up to promote proper processing, cold storage and marketing of fish and fish products. Increased cold storage capacity now allows for local fish to remain available to the local and rapidly expanding tourism market throughout the year. A major fisheries facility opened in 2000 at the main fish landing base of Vieux Fort and provides cold storage and processing facilities, a fish market, fishermen's facilities

(lockers, a gear mending shed, fueling point and cooperative building) and a protected harbour for the area's expanding fleet. Fisheries complex facilities were also opened in Soufriere and Choiseul in 2003. In addition, approval has been obtained for the construction of such facilities in Anse la Raye, which is expected to commence in 2008.

## **Utilization of the catch**

Virtually all the catch is consumed locally. Fish is landed at 17 landing sites located around the island (supported by 9 data collectors at 9 of these sites), although the two main landing sites (Vieux Fort and Dennery) handle over 40 percent of total landings. There are now facilities at most of the landing sites offering changing rooms, a fish market, gear mending facilities and a cooperative facility for the fishermen. At 5 landing sites, cold storage and/or ice making facilities are also found. The main cold storage and processing facilities have been established in Vieux Fort and Castries. Together, they offer 625 t of cold storage capacity. The Governments of Japan and of Canada have provided substantial financial and technical assistance for infrastructure development. Some vessels now use ice at sea, and fish is often transported on ice. The use of ice continues to be promoted among fishermen.

## **State of the industry**

The Government of Saint Lucia has made considerable advances in developing the fishing industry. The presence of a Department of Fisheries, staffed by 20 technical staff and supported by 4 administrative staff, 6 ancillary staff and 9 data collectors, has enabled the development and maintenance of a variety of resource assessment and management programmes and the provision of extension support services to fishermen and fishing communities. Government continues to provide technical support to 9 fishermen's cooperatives, with membership ranging from 30-150 persons. These organizations benefit from duty-free concessions on all fuel used by members for fishing. Duty-free concessions are also extended to fishermen, boat owners and processors, covering all imported fishing equipment and materials. The two major fishing marketing facilities have been established and are run by the Saint Lucia Fish Marketing Corporation. This agency is a statutory body set up by the government to provide a guaranteed market to fishermen year round, to encourage the proper handling and processing of fish, and to cater to an increasing tourism demand for fresh and frozen fish. Recently, a number of smaller, privately owned marketing/processing establishments have also been established.

An important component of foreign-funded fisheries assistance packages (e.g., those of Japan, Canada and France) has been the provision of advanced gear and vessels for demonstration and experimental fishing (e.g., fibreglass *pirogues* and longlining vessels).

## **Economic role of the fishing industry**

The industry provides a major portion of the fresh and frozen fish currently consumed in Saint Lucia for the local and tourism markets. The government continues to strive for self-sufficiency in fish and at present the bulk of imports are of exotic seafood (e.g., smoked salmon, shrimp, scallops) and smoked/salted cod and herring. In a situation where underemployment and unemployment are still pressing problems, the fishing industry is seen as an important vehicle for providing income and sustenance to rural coastal communities.

## **Demand**

Fish consumption has increased considerably, due to both expansion of the tourism sector and increased local demand for fish, partly due to the adoption of healthier lifestyles by the local population. Tourism continues to be a major focus for development, particularly with constraints facing banana production on the international market. It is envisaged that, given the rate of population increase (1.6 percent) and continued growth in the tourism sector, annual demand for fish products may exceed the 4 000-ton mark within the next 5 to 10 years.

## **Development prospects**

Expansion of the industry will need to focus on offshore pelagic species and, to a lesser extent, underutilized deep slope species. Nearshore resources are limited in extent and are suffering from increasing levels of fishing pressure and coastal pollution (sewage, silt, agrochemicals). Expansion of offshore fisheries will, however, require regional and in some cases international management of these shared stocks. A new fisheries complex was open at the main fish landing base (Vieux Fort) in 2000 to ensure adequate cold storage capacity and to pave the way for considerable advances in product development, quality assurance and export potential for fishery products. Fisheries complex facilities were also opened in Soufriere and Choiseul in 2003. Further, approval has been obtained for the construction of such facilities in Anse la Raye, which is expected to commence in 2008.

Aquaculture development has been an important focus of government, with 17 acres (» 7 ha) of freshwater shrimp and tilapia ponds currently operational. Seaweed is also cultivated within small nearshore plots and used in the preparation of traditional drinks and porridges. In total, some 40 persons are actively involved in aquaculture, and the government owns and operates two hatcheries. It is estimated that Saint Lucia has the capacity to support 50 acres (» 20 ha) of ponds and that, given appropriate market development, there is considerable potential for increased shrimp and seaweed production.

Saint Lucia has not sustained any significant hurricane damage to its fishing industry in recent times. Nearby Dominica and Antigua on the other hand has had major damage caused to the fishing industry and infrastructure, three times in the last decade. Hurricanes must always be regarded as a threat in this region.

## **Research**

The Department of Fisheries has a research and resource management unit which

coordinates a variety of resource assessment, monitoring and management programmes, including fisheries data collection; coral-reef monitoring; mangrove, reef and seagrass management; lobster assessment; sea urchin co-management; marine management areas; marine reserves; and cetacean assessment. Constraints include manpower and financial limitations. The Department also has newly-equipped laboratory facilities but remains without full-time laboratory personnel.

## **Aid**

Saint Lucia has maintained a good relationship with Japan, Canada and France with regard to aid to fisheries. Many of the fisheries staff have trained in Canada, and Japan continues to offer technical expertise to Saint Lucia in the fields of fishing technology and research. Saint Lucia, along with other CARICOM territories, has benefited from an extensive regional fisheries assessment and management programme funded by the Government of Canada. Saint Lucia contributes to and benefits from support to fisheries concerns offered at the level of the Organization of Eastern Caribbean States (OECS), CARICOM, and the Western Central Atlantic Fisheries Commission.

The immediate challenge will be to cater for increasing demand while addressing resource and habitat degradation issues. Inter-agency collaboration, including governmental and non-governmental organizations, community and user organizations, is seen as a most effective means of ensuring management at the level of the island system. Despite existing staff and expertise within the Department of Fisheries, demands are high and increasing and in order to ensure continued viability of the sector, the government will need to continue to make an increasing commitment to sustainable marine and freshwater resource management, applying a precautionary approach to fisheries development.

## **Internet links**

- Ministry of Agriculture, Forestry and Fisheries: <http://www.slumaffe.org/>
- Saint Lucia Government Statistics Department: <http://www.stats.gov.lc/>

## **E-mail links** to the Department of Fisheries:

- Department of Fisheries (general, including research/resource management unit, aquaculture, extension unit and administrative unit: [deptfish@slumaffe.org](mailto:deptfish@slumaffe.org);
- Chief Fisheries Officer: [chieffish@slumaffe.org](mailto:chieffish@slumaffe.org) and [deptfish@slumaffe.org](mailto:deptfish@slumaffe.org)
- Permanent Secretary, Ministry of Agriculture, Forestry, Fisheries and the Environment: [ps@slumaffe.org](mailto:ps@slumaffe.org).

## **Organisational structure of the national fisheries authority**

## Institutional Framework

### Governmental agencies (with key involvements in fisheries and marine related areas):

- *Ministry of Agriculture, Forestry and Fisheries* is the lead governmental agency responsible for fisheries development and management. The *fisheries management (administration) unit* within the Ministry is the *Department of Fisheries*.

Key Administrators are:

*Minister* : Honourable Ezechiel Joseph

*Permanent Secretary* : Mr. Martin Satney

*Chief Fisheries Officer*: Mr. Vaughn A. Charles

The Department of Fisheries has a staff complement of approximately 40, including **20 technical staff, supported by 4 administrative staff, 6 ancillary staff and 9** data collectors. Staff members have expertise in the fields of fisheries extension, stock assessment, marine and fisheries biology, coastal zone management, fishing gear technology, fisheries management, marine protected areas and public education. The Department is equipped with a number of vessels which are used for enforcement, research and experimental fishing. Many staff members are trained as SCUBA divers.

The following figure illustrates the structure of The Department of Fisheries:

*Ministry of Agriculture, Forestry and Fisheries*

**Minister**

Permanent Secretary

*Department of Fisheries*

## **Chief Fisheries Officer**

Deputy Chief Fisheries Officer

Senior Admin. Officer (1)

Administrative staff (3)

Auxiliary staff (3)

Aquaculturist (1)

Aquaculture Officers (2)

Pond Attendants (3)

Senior Fisheries

Officer (1)

Extension Officers (7)

Fisheries Wardens (2)

Senior Fisheries Biologist (1)

Fisheries Biologists (3)

Fisheries Assistants (3)

Data Clerks (1)

Data Collectors (9)

- *The Royal St. Lucia Police Force, especially the Marine Unit* – is responsible for the enforcement of fisheries laws. Besides enforcing domestic fisheries regulations and patrolling EEZ waters to prevent illegal fishing by foreign vessels, the *Marine Unit* monitors the safety of domestic fishing vessels and participates in search and rescue.

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- [1] The Department of Fisheries conducted a verification exercise of its database on registered vessels in 2003. At the end of this exercise, it was determined that vessels that no longer exist and that are no longer engaged in the fishery be taken out of the database.
  - [2] The Department of Fisheries conducted a verification exercise of its database on registered vessels in 2003. At the end of this exercise, it was determined that vessels that no longer exist and that are no longer engaged in the fishery be taken out of the database.
  - [3] The Saint Lucia Development Bank and the National Commercial Bank have merged to form the Bank of Saint Lucia