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

ANTIGUA AND BARBUDA

III. FISHERY SECTOR STRUC

1. Overall fishery sect

The fishery sector of Antigua and Barbuda is artisanal or small-scale commercial in nature. Capture production involves mainly small fishing units targeting demersal or reef-based resources. Demersals or reef species account for at least 85% of capture production.

2. arine subsector

The marine subsector, comprised entirely of artisanal or small-scale commercial fishing units, has undergone significant modernisation over the past thirty years. Most of the traditional vessels (wooden sloops and dories) have been gradually replaced by modern GRF pirogues and launches equipped with the latest fishing equipment (global positioning system, depth sounder, trap hauler, etc).

Catch profile

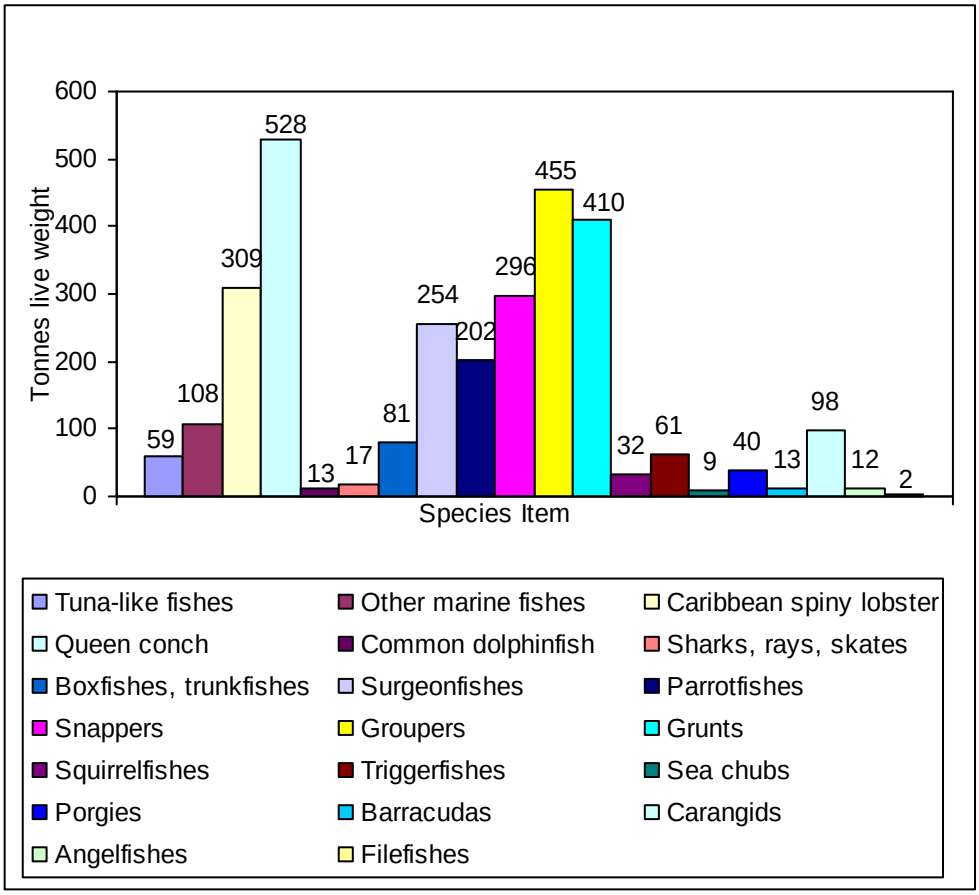
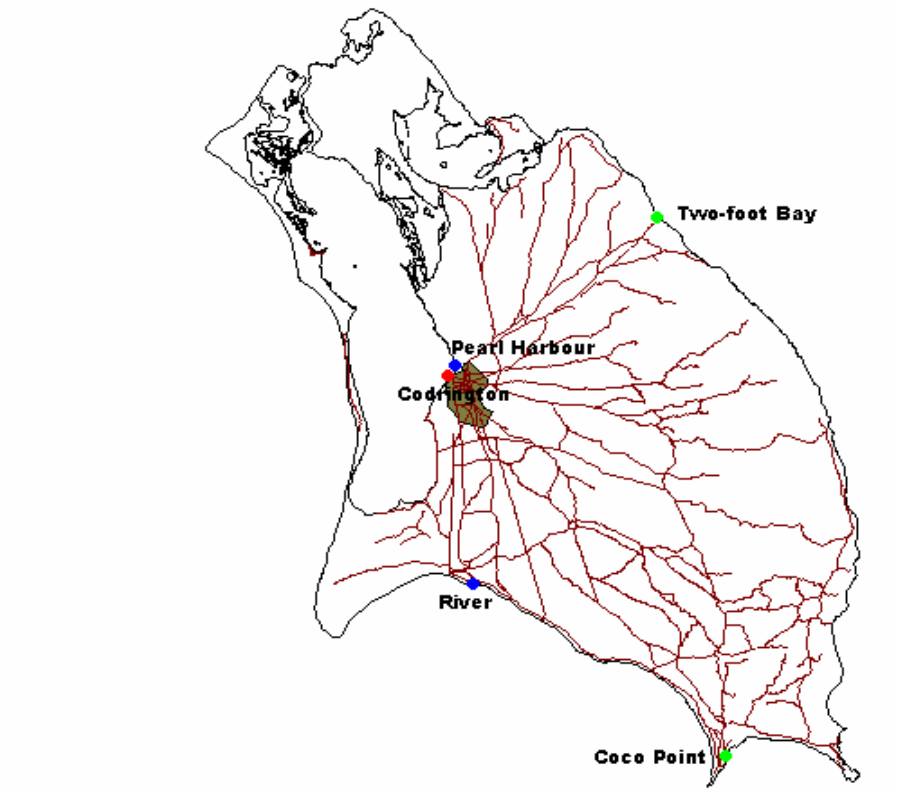


Figure 1. Capture production by fishery species item for Antigua and Barbuda in 2005 (Total: 2 999 t)

Landing sites

There are 32 fish landing sites in Antigua and Barbuda. Sites range from rural beaches (with limited or no infrastructure) to fisheries complexes (with potable water, ice-making and chill storage facilities).

FISH LANDING SITES: BARBUDA



LEGEND

Landing Sites

- Primary
- Secondary
- Tertiary

Road

Settlement

N

W E

S

3 0 3 6 9

Kilometers

Fiasheries Division ANTIGUA 2000

Fishing production means

In general, small open boats (pirogues and dories) constructed of glass-reinforced plastic (GRP) and powered by two-stoke outboard engines are the dominant design feature of the fishing fleet. The larger classes of vessels are mainly GRP launches powered by inboard diesel engines and range up to 18 m LOA. Trap fishing is the most common method of fishing, followed by hand lining and gill netting.

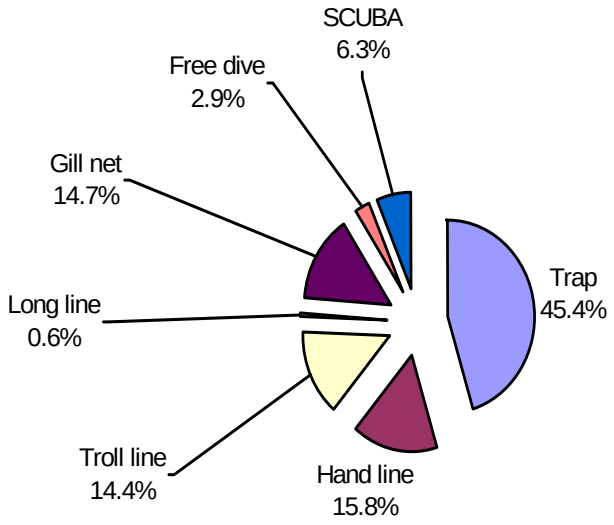


Figure 3. Composition of active fishing fleet in Antigua and Barbuda sorted by primary fishing gear in 2005 (N=348).

Main resources

In 2005, capture production of finfish, Caribbean spiny lobster and queen conch was 2 999 t and valued at US$ 15.9 million. The spiny lobster, being one of the most valuable resources, contributed 19 percent of the total production value. Queen conch accounted for 17.6 percent of the total of production in live weight due to the shell weight. In terms of the composition of the finfish landings, the grouper, grunt and snapper families were dominant. Values of production for these groups were US$ 2.6 million, US$ 2.3 million and US$ 1.9 million, respectively.

Management applied to main fisheries

The main management goal is to ensure that the fishery sector develops in a manner that is “sustainable” and capable of contributing its full potential to the overall development of the national economy.

Fisher communities

Table 1 summarizes the level of dependency on the fishery sector for selected communities in Antigua and Barbuda. Values ranged from 7 percent for the Point-Villa community to 26 percent (one in four persons) for Codrington, Barbuda.

Table 1. Level of dependency on the fishery sector for selected communities in Antigua and Barbuda.

Community	Population	Fishers residing in the community	Average no. of dependants per fisher	Est. no. of dependants residing in the community	Est. % of the pop. dependent on fishing
Codrington (Barbuda)	1200	71	3.3	235	26%

Round South (Antigua)	2021	58	3.9	113	9%
Gray-Green (Antigua)	4597	116	3.0	348	10%
Point-Villa (Antigua)	3768	60	3.4	204	7%

Inland subsector

There is currently no commercial exploitation of inland fisheries resources, although there is traditional harvest of some freshwater and estuarine species on a recreational or subsistence basis. Such activity generally occurs at salt ponds and inland dams or ponds, where the resources harvested include mullets, tarpons and tilapia. Other traditional activities include cockle digging and crab hunting at relatively small scales. Crabs are primarily hunted during the rainy season and are especially popular during festivals. Cockle is harvested year round and is marketed locally.

Recreational subsector

The Fisheries Division manages recreational marine fishers, who are subject to the same regulations as commercial fishers. These recreational fishers primarily operate from sport fishing vessels, which are equipped with trolling lines. These vessels generally operate on weekends and holidays and are rarely captured in the department's statistics.

Aquaculture subsector

Over several decades there have been a number of failed attempts to conduct aquaculture on a range of products on Antigua. These have all been land-based operations and most have failed due to the prohibitively high operational costs and limited freshwater supply. In 2003, one producer successfully undertook aquaculture of tilapia; however, following some limited success in marketing products locally, the project folded.

Seamoss (*Gracilaria* sp.) farming has achieved some measurable degree of success in Antigua, with a single small-scale operator on the northeast coast of Antigua. *Gracilaria* is used to produce a local beverage (seamoss), which is made by boiling the seamoss and flavouring it with milk, sugar and various spices.

POST HARVEST USE

Fish utilization

All fishery products landed in Antigua and Barbuda are marketed fresh for direct human consumption. There are currently only two major facilities that allow processing of fisheries products for retail (Market Wharf and Point Wharf Fisheries complexes), and both only at a preliminary level. Traditional salting and drying (corning) of some species still occurs at a subsistence level.

The lone seamoss farmer produces a number of products that are marketed both locally and are exported to regional neighbours. These products include bottled and canned concentrates, as well as dried and packaged seamoss.

Fish markets

Antigua and Barbuda has supplied the French overseas territories of Guadeloupe, Martinique and St. Barthelemy with seafood for several decades. However, with the formation of the European Union in January 1993 and the passage of Directives 91/492/EEC and 91/493/EEC (which govern the health conditions of fishery products for import into the European Community), exports to these territories plummeted. In 1989 domestic export of seafood to the EU territories stood at 214 t. This is more than double current estimates of domestic exports, which stood at approximately 103 t at the end of 2005. Despite the initial decline, there has been a steady increase in fisheries exports over the past few years. In recent years, live lobster has dominated domestic exports.

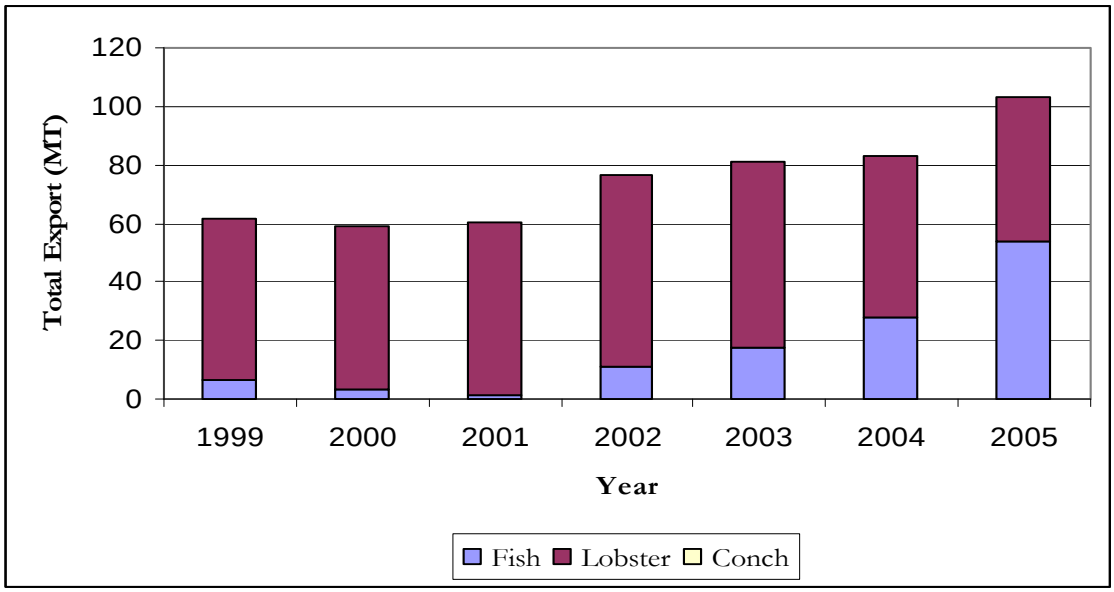


Figure 3. Domestic export (tonnes) of fisheries products for the period 1999–2005.

FISHERY SECTOR PERFORMANCE

Economic role of fisheries

The fisheries sector in Antigua and Barbuda is generally considered to be of little significance to the country's overall economy; however, in recent years, there has been increasing recognition of its potential for the general economy and the role it plays in addressing issues related to balance of trade, food security, employment and poverty alleviation. In the past decade, fisheries has contributed, on average, half of agricultural GDP, or just under 2 percent of national GDP based on current market prices.

Demand

Hotels and restaurants buy an estimated 10 percent of landed catch, while the remainder is either sold locally or exported. Domestic markets, however, have to compete with cheaper regional imports from Guyana and Trinidad. Generally speaking, there is sufficient demand and enough fish for a dynamic development of the sector; however, the development of the artisanal fishery is hindered by the rather modest social status of the trade, tough working conditions at sea, and the availability of capital for investment.

Supply

In 2003, per capita fish consumption for Antigua and Barbuda was 48.3 kg per year. While the level of consumption appears high, it has to be viewed within the context of the demands of the tourism sector, which drive imports. If the contribution of imports to food supply is ignored, per capita consumption for Antigua and Barbuda would be 13.8 kg/year, which is less than that of Europe (19.9 kg) but greater than the regional average (9.4 kg). This value is well above the 8.7 kg per year average for low-income food-deficit countries (excluding China).

Trade

Antigua and Barbuda is a net importer of fish and fishery products, although domestic export of high value species (such as the spiny lobster) is slowly narrowing the trade deficit. Import levels remain high primarily because local processors are unable to satisfy the traditional tastes for cured products (e.g. salted cod, smoked herring and pickled mackerel) as well as the demands of the tourism sector.

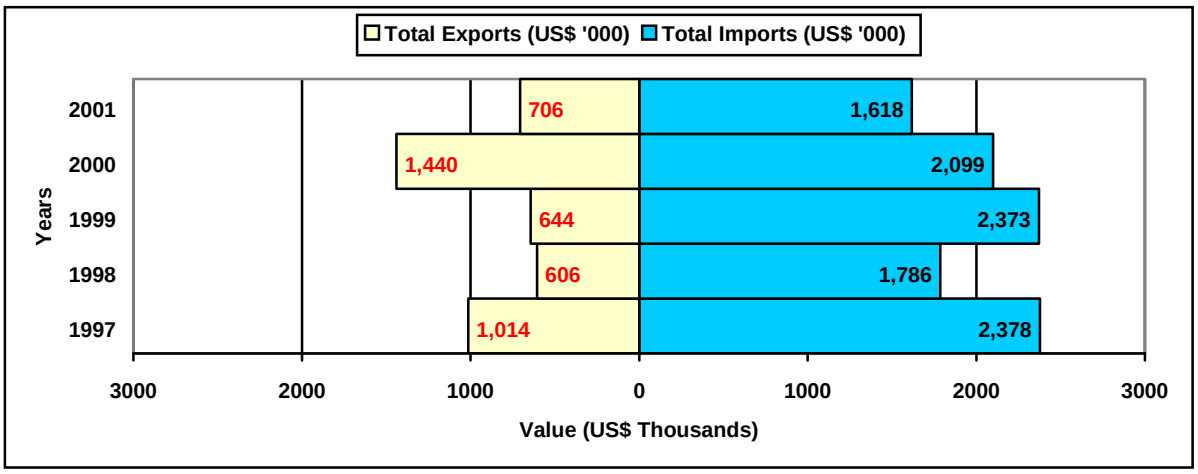


Figure 4. Balance of trade for fish and fishery products for Antigua and Barbuda (Source: FAOSTAT Data 2005).[1]

Food security

The fisheries sector plays an important role in its contribution to nutrition and food security of Antigua and Barbuda. As a vital source of animal protein, the harvest of fish is not affected by prolonged drought, from which Antigua and Barbuda occasionally suffers, and is therefore available all year round. The range of species available for harvest is sufficiently diverse to be available to fishers of various means and capabilities.

Employment

While there continues to be an apparent growth in the registration of fishing units over the past decade, employment levels in the fisheries sector appear to have been severely affected by the numerous hurricanes experienced in the 1990s. As a result, the proportion of active fishers has been found to be considerably less than the register indicates. For instance, by the end of 2005, 1143 fishers were registered in Antigua and Barbuda, but only 864 (75.6 percent of registered fishers) were estimated to be actively fishing. In Barbuda, the percentage of active fishers is considerably higher than in Antigua. The 2001 vessel frame survey revealed that as many as 98 percent of the registered fishers in Barbuda were actively fishing at that time. At least 46 percent of those registered are working full time, with only 3 percent being females. Females are mainly employed in secondary production activities (e.g. processing, marketing, vending or retailing).

Rural development

The fisheries sector is primarily seen as an "economic safety net" to complement other employment activities (e.g. in the construction and tourism sectors). While in the past the fisheries sector played a major role in the development of many rural communities (Point-Villa, Parham, Grace-Green, Round South), the country's shift to tourism in the 1970s also saw a large-scale shift away from traditional artisanal practices such as fishing and farming. This is particularly true for Antigua, where the tourism sector and civil service are the largest employers.

Barbuda's economic development, however, is intimately linked to the lobster fishing industry on that island. In 1999, commercial fishers in Barbuda accounted for 5.9 percent of the total population of 1200.

[1] Valuation of imports is based on c.i.f. value. Valuation of exports is based on f.o.b. value. Total imports consist of all imports into the country, including goods into bonded warehouses or free zones. Total exports consist of the combination of domestic exports and re-exports.

Overall, 25.5 percent of the total population was found to be directly dependent on commercial fishing. These figures are comparatively higher than for other fishing communities in Antigua. Of the four main economic activities in Barbuda—lobster export, tourism, sand mining, and employment by the Barbuda Council—lobster fishing offers the highest per capita earnings.

FISHERY SECTOR DEVELOPMENT

Constraints

Like most fisheries departments in the region, the Fisheries Division continues to be hampered by inadequate human resources and lack of technical and financial resources to allow for unhindered development of the sector. Growth of the sector is also severely hindered by the prevalence ciguatera in the Northern Antilles, including Antigua and Barbuda. The high cost of fishing has led to continued dependence on a single export market in the European Union since economic returns from these markets are considerably higher than USA markets, which yield profits comparable to prices generated by the local tourism sector. This continued dependence on a single market is of particular concern as the sector is struggling to meet the stringent trade requirements of the European Union.

Development prospects and strategies

The Fisheries Division has long considered the promotion and expansion of the pelagic fishery as a means of developing the sector in Antigua and Barbuda.

Research

The Fisheries Division routinely monitors landings of fisheries produce through its catch and effort data collection programmes. The department also collects biological data on finfish, queen conch and spiny lobster, including length and weight data, sex and spawning information in the case of the spiny lobster. The information collected aids the department in conducting stock assessment for the major commercial fisheries.

Education

The Fisheries Division provides technical support to fishers through training in GPS technology, food safety and handling, and navigation. Staff members at the department have received technical training through short-term training programmes facilitated by the Organisation of Eastern Caribbean States - Environment and Sustainable Development Unit (OECS-ESDU), and Caribbean Regional Fisheries Mechanism (CRFM).

Foreign aid

The Fisheries Division has been the recipient of several grant aids through a number of governments and international institutions. The Government of Japan (through the Japanese International Cooperation Agency – JICA) is perhaps the largest provider of grant support to the fisheries sector in Antigua and Barbuda, as it has constructed four Fisheries Complexes on the island: at Market Wharf, Urlings, Parham and most recently at the Point Wharf in St. John’s. There are plans to develop two more complexes: in Barbuda and at Keeling Point in Antigua. The Government of Japan also provides technical support through the provision of long-term experts based at the Fisheries Division. The Government of Cuba has provided technical support in the areas of food safety and handling, as well as the management of ciguatera.

The Fisheries Division has also received technical support from the CRFM (formally CFRAMP), the OECS-ESDU, and the Food and Agriculture Organization of the United Nations (FAO). FAO provided technical assistance for updating the fisheries legislation, as well as in the development of national plans of action for IUU fishing, standards for fishing vessel construction and the assessment of infrastructure requirements for fisheries trade.

Fishery sector institutions

The Fisheries Division in the Ministry of Agriculture, Lands, Marine Resources and Agro-Industries is the national agency responsible for the management and development of the fisheries sector in Antigua and Barbuda. The Division is headed by the Chief Fisheries Officer, who reports directly to the Permanent Secretary. The Division's staff complement includes several technical officers as well as supporting administrative staff.

Organization of the Fisheries Division

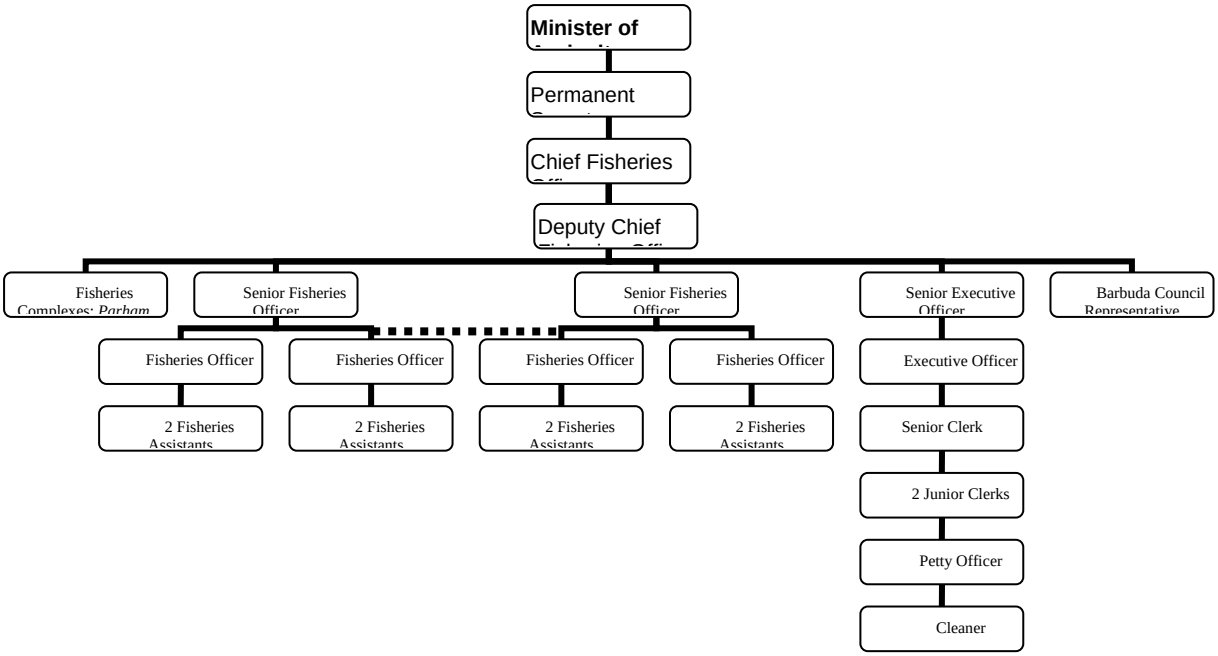
Barbuda's fisheries sector is managed by the Barbuda Council, which employs a Fisheries Administrator and other technical staff. The Fisheries Division (in Antigua) provides technical support to Barbuda through the provision of training to technical staff.

Other institutions that collaborate with the Fisheries Division include the Antigua and Barbuda Defence Force Coast Guard (which assists with monitoring and enforcement), the Central Board of Health, Government Laboratories (which is responsible for operating the laboratory facilities at the Point Fisheries Complex and assist with the conducting of routine food safety and water quality tests) and the Environment Division.

In the past, attempts to develop and strengthen fisher organizations in Antigua and Barbuda have met with limited success. This is partly due to the "independent nature" of fishers as well as a general feeling of mistrust among them. There are currently five fisher organizations functioning in Antigua and Barbuda:

- Antigua and Barbuda Fishermen's Alliance
- Antigua and Barbuda Fishermen's Cooperative Society Limited
- Barbuda Fishermen's Cooperative
- South Coast United Fisherfolk Cooperative *and*
- The Antigua and Barbuda Sports Fishing Club.

The first is an umbrella organization that largely deals with arising conflicts or issues in the fisheries sector. The South Coast Fishermen's Cooperative is a fledgling organization that represents the interests of fishers from Antigua's south coast, while the Antigua and Barbuda Fishermen's Cooperative (formally St. John's fishermen's cooperative) represents fishers from throughout the country. The oldest and most "successful" fishermen's organization is the Sport Fishing Club. This body represents Antigua's pelagic sport fishers and is responsible for the planning of several annual sport fishing tournaments.



INTERNET LINKS

Fisheries Division	http://www.fisheries.gov.ag fisheries@antigua.gov.ag
Antigua and Barbuda Fishermen Cooperative Society Ltd.	abfishercoop@candw.ag
Antigua and Barbuda Sport Fishing Club	http://www.antiguanice.com/fish/
Government of Antigua and Barbuda	http://www.antigua.gov.ag
Environment Division	http://www.environmentdivision.info mail@environmentdivision.info
Caribbean Regional Fisheries Mechanism	http://www.caricom-fisheries.com
Organisation of Eastern Caribbean States – Environment and Sustainable Development Unit	oecsnr@candw.lc http://www.oecsnrmu.org

GENERAL LEGAL FRAMEWORK

The fisheries sector is governed by the *Fisheries Act No. 22 of 2006*, which recently replaced the 1983 Act. The Act applies to an EEZ and fisheries zone of 200 nautical miles, a 12-mile territorial sea, archipelagic waters and internal waters, as defined in the Territorial Waters Act (1982). The Act and its regulations make provision for: the establishment of a fisheries advisory committee; fisheries access agreements; fishing licensing (local and foreign); fisheries research; fish processing establishments; fisheries enforcement; and the registration of fishing vessels. Technical conservation measures include: prohibition on the use of any explosive, poison or other noxious substance for the purpose of killing, stunning, disabling, or catching fish; close seasons; gear restrictions; and the creation of marine reserves. There is provision for input controls, such as special permits for the fishing of queen conch and spiny lobster.

The Fisheries Division is in the process of updating the Fisheries Regulations, which, like the current

1990 regulations set conservation measures on fishing activities, including the prohibition of destructive fishing methods, gear and size restrictions. The new regulations also place effort controls on certain fishing activities by requiring special permits for the harvesting of lobster, conch and a number of other invertebrate species. All fines have been revised under this new legislation. With the updating of the fisheries legislation, the Fisheries Division will also be introducing:

- *High Seas Fishing Act;*
- *Fisheries (Seafood) Regulations*; and
- *Seafood (Live Lobster) Standards.*

Other fisheries related legislation includes:

- The *Barbuda Local Government Act (1976)* – which gives the Barbuda Council authority over its fisheries including the right to retain taxes on exported seafood.
- The *National Parks Act (1984)* – for the designation of any land or water area as a national park.
- The *Marine Areas (Preservation and Enhancement) Act (1972)* – for the declaration of Marine Protected Areas.
- The *Beach Control Ordinance (1991)* – for the control of sand mining.