

Status of the Conch Fishery of Antigua – Barbuda

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The Queen conch (*Strombus gigas*) is considered one of the most valuable and important fishery resources in the CARICOM region. This is due to export earnings, consumption within the tourism sector, employment, and income generated from local sales. Throughout the CARICOM region management measures for the Queen conch include various minimum size restrictions, close seasons, closures, harvest quotas, gear/vessel restrictions, and limited entry. Despite these measures, fear of depleted conch resource has prompted the Queen conch to be included under Appendix II of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) in 1992. Hence international trade in Queen conch or parts thereof (meat, souvenir shells, etc.) are regulated by CITES and subject to the provisions of the Convention.

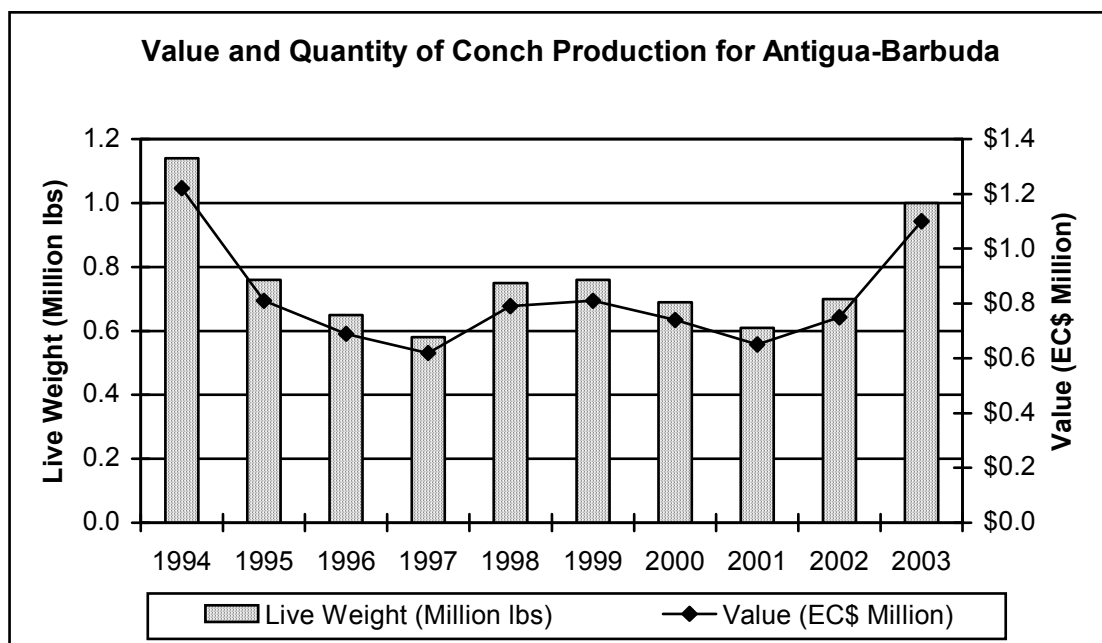
Antigua and Barbuda acceded to the Convention in 1997. The first review on Queen conch, in 1999, resulted in a recommendation to suspend imports of Queen conch from Antigua-Barbuda, Trinidad-Tobago, Barbados, Dominica and St. Lucia. This was the direct result of Parties failing to respond to the recommendations of the CITES Animals Committee (basically a committee of experts that provide advice on species subject to CITES trade controls). With respect to CITES enabling legislation, Antigua and Barbuda was cited as one of those countries whose legislation failed to meet the requirements for implementation of the Convention. Antigua and Barbuda is still under trade sanctions.

Description of Conch Fishery

There are seven vessels that target conch commercially in Antigua. Over the past decade, fishing effort has remained fairly constant ranging from four to seven vessels. Vessels are predominantly small open boats, carrying a crew of five individuals, including 2 SCUBA divers. Fishers who target conch in Antigua reside mainly in the southern villages of Urlings and Old Road and include some 30 individuals (less than 4% of the total number of active fishers). For Barbuda, the conch fishery is basically subsistent. Mainly full-time lobster divers who on occasion, target conch to satisfy the small tourism sector (i.e., two seasonal hotels). In Barbuda, the Caribbean spiny lobster is the principal species of commercial interest.

Traditionally, the main fishing area was located on the south coast of Antigua, adjacent to where most conch fishers reside. In recent years, fishers have broadened their scope to include the west coast and to a less extent Barbuda.

Estimates of the value of the conch fishery based on the catch, ranged from EC\$ 0.6 – 1.2 Million per annum, emphasising its importance to the communities of Urlings and Old Road. As is evident from the following figure, production has remained fairly constant due to no significant entrants into the fishery.



With respect to trade, conch exports in 1997 plummeted to zero due to the stringent harmonised food safety regulations for Member States of the European Union. Directive 91/492, of the European Economic Community, lays down the health conditions for the production and the placing on the market of bivalve molluscs. Despite the title, the Directive covers marine gastropods such as the Queen conch. Prior to 1997, as much as 23.5% of the conch landings were exported to the French territories in the region.

Management Efforts Implemented

The *Fisheries Regulations, No. 10 of 1990*, prohibits the harvesting of immature conch. This is conch with a shell smaller than 18 cm (7 inches) or which does not have a flared lip. For conch out of the shell, the meat weight must not be less than 225 grams (8 ounces), after removing the digestive glands or “guts”. The Regulations also makes provisions for a close season. In terms of implementation of legislation, the Fisheries Division and the local coast guard conduct routine checks of fishing vessels.

In 1999, the Fisheries Division, with assistance from CARICOM Fisheries Unit and the Antigua and Barbuda Defence Force Coast Guard, conducted a conch abundance survey of the main area of commercial exploitation (i.e., the south-west coast of Antigua). The results of the survey indicated that present overall densities of adults (3.7 conch/hectare) were well below that which is required for effective reproductive encounters (i.e., 50 conch/hectare). A study of the morphology of two stocks from the west coast was conducted the same year.

In response to fishing pressures and the need to protect critical habitats, the Cades Bay Marine Reserve was established in 1999. The area includes Cades Reef and extends

landward to include critical nursery areas ranging from mangroves to sea-grass beds. The Fisheries Division is presently working with the OECS Natural Resources Management Unit as well as the various stakeholders in developing a management plan for the area. The Fisheries Division is also seeking to protect similar sites on the northern coast.

Status of Resource

In order to assess the status of the resource, a data collection programme was initiated in 1995. This includes monitoring the catch of fishing vessels as well as measuring samples of the catch. The data obtained from this process allows fishery managers to track the changes in the fishery (whether stocks are decreasing or increasing in the relative sense) and assess the effectiveness of management measures.

Estimates of the non-compliance rate ranged from as low as 1.3% to as high as 20.7%. In all cases, the average meat weight was significantly greater than the minimum legal weight (225 grams), indicating that most fishers were targeting adult conch. Conch normally matures at about 3 years, when the shell outer pink lip is completely formed. Based on the data collected, the majority of samples appear to be older than 3 years. Stocks are though to be relatively healthy and sustainable at the current level of fishing, although certain areas are considered overexploited based on the abundance survey.

Summary of biological data for Queen conch collected from SCUBA-fishing vessels in Antigua.

Year	Sample Size	Meat Weight (grams)		Minimum Legal Weight (grams)	Percentage of Sample Below Legal Weight
		Average	Standard Deviation		
1999	155	348.3	60.7	225	1.3%
2001	73	294.8	73.2	225	16.4%
2002	176	309.2	80.0	225	11.9%
2003	246	288.6	72.0	225	20.7%
Oct. 2004	434	317.6	74.9	225	8.5%

In terms of meeting its obligations under CITES, the Government has embarked upon an exercise to improve upon the institutional and legislative framework and enforcement capabilities necessary for CITES. This process is spearheaded by the Environment Division, the local CITES Management Authority, through collaborative efforts with stakeholder agencies such as the Fisheries Division. The Environment Division has drafted an integrated environmental management bill that should address the legislative requirements of the Convention.

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