

# Social Development and Sustainable Fisheries: Antigua and Barbuda



Prepared by:

**Ian S. Horsford**



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**International Collective in Support of Fishworkers (ICSF)**  
**2021**



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**The International Collective in Support of Fishworkers (ICSF)**

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**Front Cover**

Rural fish landing site located in Mill Reef on the east coast of Antigua.

**Front Inside**

Modern fisheries complex located in Urlings Village on the south coast of Antigua

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# Contents

<b>List of Acronyms .....</b>	<b>v</b>
<b>List of Tables.....</b>	<b>viii</b>
<b>List of Figures.....</b>	<b>ix</b>
<b>Country Fact Sheet: Key Geographical, Socio-economic and Fisheries Indicators .....</b>	<b>xi</b>
<b>1. Introduction .....</b>	<b>1</b>
Purpose and Scope.....	1
Methodology.....	2
Antigua and Barbuda's Country Profile .....	2
Overview of Antigua and Barbuda's Fisheries Sector .....	3
Fishery Resources .....	3
Aquaculture .....	5
Employment and Role of the Fisheries Sector .....	5
Fishing Fleet and Gears .....	5
Fishing Communities, Landing Sites and Infrastructure.....	6
Food Security .....	9
<b>2. Situational Analysis: Legislation, Policies and Programmes .....</b>	<b>10</b>
Poverty Eradication, Food Security and Income .....	10
Social Security and Social Protection.....	13
Health and Wellness .....	15
Education, Training and the Digital Divide.....	17
Housing, Land Use and the Blue Economy.....	21
Public Utilities (Water, Electricity, ICT) .....	23
Employment, Labour Relations and Decent Work .....	25
Human Rights and Access to Justice .....	28
Social Inclusion, Domestic and Gender-based Violence..	30
Climate Change and Natural Disasters .....	33
Environment, Biodiversity and Sustainability.....	35
Fisheries Management and Governance Approach .....	37
Safety at Sea and Occupational Health and Safety .....	40

Other Challenges and Opportunities: .....	42
Vulnerability to Exogenous Economic Shocks .....	42
Coronavirus Disease (COVID-19) Pandemic .....	43
<b>3. Conclusions: Key Messages and Recommendations .....</b>	<b>49</b>
<b>4. Bibliography .....</b>	<b>52</b>

## List of acronyms

ASADAS	Administrating Associations of Communal Aqueduct and Sewer Systems in Costa Rica
ABCRE	Antiguans and Barbudans for Constitutional Reform and Education, Inc.
ABEC	Antigua and Barbuda Electoral Commission
ABSAR	Antigua and Barbuda Search and Rescue
ABSSB	Antigua and Barbuda Social Security Board
ACP	African, Caribbean and Pacific Group of States
AIS	Automatic Identification System
APUA	Antigua Public Utilities Authority
CARICOM	Caribbean Community
CSME	CARICOM Single Market and Economy
CARIFICO	Caribbean Fisheries Co-Management
CARIFORUM	Caribbean Forum
CC4Fish	Climate Change Adaptation of the Eastern Caribbean Fisheries Sector
CCCFP	Caribbean Community Common Fisheries Policy
CCJ	Caribbean Court of Justice
CCRIF SPC	Caribbean Catastrophe Risk Insurance Facility Segregated Portfolio Company
CDB	Caribbean Development Bank
CITES and Flora	Convention on International Trade in Endangered Species of Wild Fauna
CLME+	Caribbean and the North Brazil Shelf Large Marine Ecosystems
CNFO	Caribbean Network of Fisherfolk Organizations
COAST	Caribbean Ocean and Aquaculture Sustainability Facility
COVID-19	Coronavirus disease
CRFM	Caribbean Regional Fisheries Mechanism
EC\$	Eastern Caribbean Dollar (EC\$2.70 = US\$1.00)
ECCB	Eastern Caribbean Central Bank
ECCU	Eastern Caribbean Currency Union
EnGenDER	Enabling Gender-Responsive Disaster Recovery, Climate and Environmental Resilience in the Caribbean
SSF Guidelines	Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries in the Context of Food Security and Poverty Eradication



EAF	Ecosystem Approach to Fisheries
EEZ	Exclusive Economic Zone
EU	European Union
FAC	Fisheries Advisory Committee
FAD	Fish Aggregating Device
FAO	Food and Agriculture Organization of the United Nations
GDP	Gross Domestic Product
GEF	Global Environment Facility
GNI	Gross National Income
HDI	Human Development Index
HIV	Human Immunodeficiency Virus
ICSF	International Collective in Support of Fishworkers
ICT	Information and Communications Technology
ILO	International Labour Organization
IMF	International Monetary Fund
IOM	International Organization for Migration
IPOA-IUU	International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing
IUU Fishing	Illegal, Unreported and Unregulated Fishing
JICA	Japan International Cooperation Agency
JURIST	Judicial Reform And Institutional Strengthening Project
MBS	Medical Benefits Scheme
MEAs	Multilateral Environmental Agreements
NGO	Non-governmental Organization
NPOA-IUU	National Plan of Action to Prevent, Deter and Eliminate IUU Fishing
NPOA Sharks	National Plan of Action for the Conservation and Management of Sharks
OECD	Organization for Economic Co-operation and Development
OECS	Organization of Eastern Caribbean States
PAHO	Pan American Health Organization
PANCAP	Pan Caribbean Partnership Against HIV and AIDS
PDV CAB	PDV Caribe Antigua and Barbuda Ltd
SGD	St. George's Declaration of Principles for Environmental Sustainability in the OECS



SIDS	Small Islands Developing States
UIS	United Nations Educational, Scientific and Cultural Organization Institute of Statistics
UNDESA	United Nations Department of Economic and Social Affairs
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNICEF	United Nations International Children's Emergency Fund
UWI-CERMES	University of the West Indies Centre for Resource Management and Environmental Studies
WECAFC	Western Central Atlantic Fishery Commission
WHO	World Health Organization
WTO	World Trade Organization

## List of Tables

Table 1.	Social Security self-employed earnings bands (ABSSB 2020h).....	15
Table 2.	Access to drinking water for Antigua and Barbuda (Data source: UNICEF and WHO 2019). ....	24
Table 3.	Access to sanitation for Antigua and Barbuda (Data source: UNICEF and WHO 2019). ....	25

## List of Figures

Figure 1.	Shallow water reef fishes. ....	3
Figure 2.	Trend in finfish capture production for Antigua and Barbuda; US\$1:00 = EC\$2.70 (Data source: Fisheries Division). ....	2
Figure 3.	Trend in queen conch ( <i>Strombus gigas</i> ) capture production for Antigua and Barbuda; US\$1:00 = EC\$2.70 (Data source: Fisheries Division). ....	4
Figure 4.	Trend in Caribbean spiny lobster ( <i>Panulirus argus</i> ) capture production for Antigua and Barbuda; US\$1:00 = EC\$2.70 (Data source: Fisheries Division). ....	4
Figure 5.	Trend in aquaculture production of tilapia (for direct consumption) for Antigua and Barbuda; US\$1:00 = EC\$2.70 (Data source: Fisheries Division). ....	5
Figure 6.	Typical modern fishing units in Antigua and Barbuda. ....	6
Figure 7.	Traditional “wattle” fish pot (left) and modern steel frame fish pot (right). ....	6
Figure 8.	Location of fish landing sites in Antigua (Adapted from: Caribbean Conservation Association, University of Michigan and the United Nations Environment Programme 1980a). Sites marked with asterisks are currently inactive. ....	7
Figure 9.	Location of fish landing sites in Barbuda (Adapted from: Caribbean Conservation Association, University of Michigan and the United Nations Environment Programme, 1980b). Depth contours are in fathoms and elevation contours are in feet. Sites marked with asterisks are currently inactive. ....	8
Figure 10.	Trend in per capita supply of fish for Antigua and Barbuda, Latin America and the Caribbean, Europe, and the world (Data source: FAO 2020b). ....	9
Figure 11.	Annual earnings for selected individuals in the trap fishery, tourism and related sectors, and the construction industry in Antigua and Barbuda (Horsford 2007). Annual minimum wage (2005) based on EC\$6.00 per hour (8 hour-workday); EC\$2.70 = US\$1.00. ....	12
Figure 12.	Fishers' perception of their income from fishing in Antigua and Barbuda for 2011 and 2015 (Data source: Montes et al. 2017). ....	12
Figure 13.	Trends in life expectancy at birth for Antigua and Barbuda based on consistent time series data (Data source: World Bank 2020a). ....	16
Figure 14.	Highest educational level attained by sampled fishers relative to the general population of Antigua and Barbuda, 15 years and older (Data sources: Fisheries Division; Statistics Division 2014). ....	19
Figure 15.	Highest educational level attained by active fishers in selected communities in Antigua and Barbuda (Data sources: Horsford 1999; Horsford 2005). ....	20
Figure 16.	Highest educational level attained by sex for sampled fishers in Antigua and Barbuda (Data source: Fisheries Division). ....	20
Figure 17.	Trends in Internet usage for Antigua and Barbuda and selected country groupings (Data source: World Bank 2020b). ....	24

Figure 18.	Country of birth for active fishers residing in Antigua and Barbuda in 2019 (Data source: Fisheries Division).	27
Figure 19.	Other employment by industry for active fishers residing in Antigua and Barbuda in 2019 (Data source: Fisheries Division).	27
Figure 20.	Trend in the composition of active fishers in Antigua and Barbuda by sex (Data source: Fisheries Division).	32
Figure 21.	Destruction of fishing vessels and buildings in Codrington, Barbuda by Hurricane Irma, September 2017.	34
Figure 22.	View of the North East Marine Management Area from Seatons Village, Antigua.	37
Figure 23.	Contribution by the CNFO Representative, Mr. Mitchell Lay (forefront), in the review of the draft National Plan of Action for the Conservation and Management of Sharks, Point Wharf Fisheries Complex, Antigua, March 2015.	39
Figure 24.	Fisheries Division's staff and fishers from the south coast of Antigua engaging in field research on the queen conch ( <i>Strombus gigas</i> ) in 2012.	39
Figure 25.	Beaches of the fisheries legislation of Antigua and Barbuda from 1992 to May 2009 (N = 129 compounded offences) (Data source: Fisheries Division 2010).	41
Figure 26.	Major incidents relating to occupational health and safety in the fisheries sector of Antigua and Barbuda (Fisheries Division 2010).	41
Figure 27.	Relationship between annual live lobster exports and annual stayover arrivals at hotels in Antigua and Barbuda from 1989 to 2014 (Horsford 2016).	43
Figure 28.	Number of confirmed cases of COVID-19 in Antigua and Barbuda, up to December 31, 2020 (Ministry of Health, Wellness and the Environment 2020).	45
Figure 29.	Number of fishers registering and licensing for the first time or renewing their licence during the first six months of the year in Antigua (Data source: Fisheries Division).	46
Figure 30.	Guidelines for preventing the spread of the coronavirus (COVID-19) in the fisheries sector (Fisheries Division 2020b).	46
Figure 31.	Guidelines for preventing the spread of COVID-19 in small-scale fish processing facilities (Fisheries Division 2020c).	47

## Country Fact Sheet: Key Geographical, Socio-economic and Fisheries Indicators

Geographic coordinates	17° 03' N, 61° 48' W
Land area	442.6 km <sup>2</sup> (Antigua 280 km <sup>2</sup> ; Barbuda 161 km <sup>2</sup> ; Redonda 1.6 km <sup>2</sup> ) (Source: Sea Around Us 2010)
Inland water area	Negligible (Source: EarthTrends 2003)
Length of coastline	289 km (Source: EarthTrends 2003)
Shelf area (200 m contour)	3,568 km <sup>2</sup> (Source: FAO 2018)
Territorial sea (up to 12 nm)	7,147 km <sup>2</sup> (Source: EarthTrends 2003)
Claimed EEZ (up to 200 nm)	110,089 km <sup>2</sup> (Source: Sea Around Us 2010)
Population (mid-year 2019 estimate)	96,453 (males: 47.9%; females: 52.1%) (Source: Statistics Division 2018a)
Labour force participation (2018)	51,931 (males: 76.1%; females: 68.9%) (Source: Statistics Division 2020a)
Unemployment rate (2018)	8.7% (males: 7.3%; females: 9.9%; youth: 25.7%) (Source: Statistics Division 2020a)
GDP (current market prices)	EC\$4,652.47 million (2019 prelim. estimate) (Source: Statistics Division 2018b)
GNI per capita (market prices)	EC\$46,704 (US\$17,298) (Source: Statistics Division 2018b)
Life expectancy at birth	76.9 years (UNDP 2019a)
Literacy rate among the population aged 15 years and older	99% (males: 98.4%; females: 99.4%) (Source: UIS 2020)
Fisheries contribution to national GDP (current prices)	0.88% (2019 prelim. estimate) (Source: Statistics Division 2018b)
Fisheries contribution to agricultural GDP (current prices)	53.38% (2019 prelim. estimate) (Source: Statistics Division 2018b)
No. of active fishers	Antigua: 861; Barbuda: 76; Total: 937 (October 2020) (Source: Fisheries Division 2020a)
No. of active vessels	Antigua: 297; Barbuda: 40; Total: 337 (October 2020) (Source: Fisheries Division 2020a)
Fishing vessel insurance coverage	5.9% of the active fleet (2017) (Source: Fisheries Division 2017)

No. of fish landing sites	Antigua: 30 (including 4 cold storage facilities) Barbuda: 5 (including 1 cold storage facility) (Source: Fisheries Division 2020a)
No. of fish exporters	Antigua: 7; Barbuda: 4 (Source: Fisheries Division 2020a)
Domestic fishery exports (quantity; ex-vessel value)	96 metric tons (live weight); EC\$3.2 million (2018); mainly spiny lobster ( <i>Panulirus argus</i> ) to Hong Kong and the European Union via Member States Overseas Countries and Territories (e.g., Guadeloupe, St. Maarten) (Source: Fisheries Division 2020a)
Capture production (quantity; ex-vessel value)	5,499 metric tons (live weight); EC\$65.7 million (2018 estimate) (Source: Fisheries Division 2020a)
Aquaculture production (quantity; ex-vessel value)	14.7 metric tons (live weight); EC\$0.356 million (2018 estimate) (Source: Fisheries Division 2020a)
Mean no. of dependants (financial) per fisher	Antigua: 2.7; Barbuda: 3.3 (Source: Fisheries Division 2020a)

EC\$2.70 (Eastern Caribbean dollar) = US\$1.00

# 1. Introduction

In the book *Development as Freedom*, the economist Amartya Sen, defines development as “the enhancement of freedoms that allow people to lead lives that they have reason to live”. In a later collaboration Jean Dreze and Sen defined social development as the “equality of social opportunities”. Development therefore, requires the removal of major sources of “unfreedom” which include poverty, tyranny, poor economic opportunities, systemic social deprivation and intolerance. Sen proposes five types of interconnected freedoms—political freedom, economic facilities, social opportunities, transparency guarantees and protective security—and magnifies the state’s role in supporting them by providing education, health care, social safety nets, good macroeconomic policies, productivity and protecting the environment. These fundamental themes have led to the construction of the Human Development Index (HDI), a human-centred measure of development initiated by the United Nations Development Programme (UNDP).

Although the interdependence of economic development, social development, environmental protection and the need to put people at the centre of development was recognized as far back as 1995 (1995 World Summit on Social Development; United Nations 1995), it was only in 2014 that small-scale fisheries found an international instrument—the 2015 Food and Agriculture Organization of the United Nations (FAO) Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries in the Context of Food Security and Poverty Eradication (SSF Guidelines)—that explicitly advocated human rights principles in the sector. The guidelines address resource management, social development, worker compensation across the value chain, gender equality and capacity building for climate change.

## Purpose and Scope

This report hopes to provide a status report on the nature and extent of social development in the fisheries sector and within the context of the SSF Guidelines. It also looks at existing current policies and legislation for social development in fisheries and identifies strategies and programmes geared towards enhancing it. The report furthermore expands on how all of these can aid in conservation and creating responsible and sustainable small-scale fisheries.

The structure of this document is influenced by the country’s susceptibility to natural disasters and external shocks; its heavy reliance on tourism; a high human development classification coupled with emerging income inequality; the unique challenges Small Island Developing States (SIDS) face due to limited economies of scale and fragile ecosystems; the subregional and regional governance arrangements at the Organization of Eastern Caribbean States (OECS) and the Caribbean Community (CARICOM) level; and the socio-economic safety net, in terms of employment and food security, provided to the artisanal and small-scale fisheries sector.

The term ‘fishing community’ is not restricted to the narrow geographical context of a physical community substantially dependent on or engaged in the harvesting, culturing or processing of fishery resources for socio-economic needs. It includes coastal villages, towns and urban areas that have strong cultural ties to fishing or fish processing. In Antigua, fishers and their households are generally dispersed across the island. The exceptions are the coastal villages of Urlings, Old Road, Johnson Point and Crab Hill (collectively called the Round South Community), where 9 per cent of the population is directly dependent on fishing (Horsford 1999); and the coastal urban communities of Point-Villa and Grays-Green, where 7 per cent and 10 per cent of the population respectively are directly dependent on fishing (Horsford 2005). In Barbuda’s Codrington Village, one in four persons (26 per cent) of the population is directly dependent on fishing or fish exports (Horsford 1999).

The term ‘fisher’ is defined according to the Fisheries Regulations of 2013—“any person engaged in the harvesting, taking, processing, culturing or trading of fish or fishery products, to include any aquatic flora or fauna”.



## Methodology

The following research methods were applied to explore the nature and extent of social development in fishing communities and the wider society in Antigua and Barbuda:

- \* Literature review and analysis.
- \* Interview of key informants.
- \* Secondary data analysis of socio-economic data on fishers from the national fisheries authority.

## Antigua and Barbuda's Country Profile

Antigua and Barbuda is a twin-island state in the eastern Caribbean, located between the Caribbean Sea and the Atlantic Ocean, with a total land area of 443 sq km and a mid-year projected population of about 98,100 in 2020 (Statistics Division 2018). A former colony of the British Empire, the islands gained independence within the British Commonwealth of Nations in 1981. The main natural resource is its tropical climate and numerous beaches—it is nicknamed the “Land of 365 Beaches”, one for every day of the year. Perhaps the most important natural resource that holds enormous opportunities for future development is the marine environment. Antigua and Barbuda has a proposed Exclusive Economic Zone (EEZ) of 110,089 sq km (Sea Around Us 2010), which is 249 times larger than its land mass. Delimitation of maritime boundaries, especially EEZ is incomplete; however it offers huge potential for the blue economy. Periodic droughts, earthquakes and tropical storms are the main natural hazards.

Antigua and Barbuda is one of eight members of the Eastern Caribbean Currency Union (ECCU) and one of eleven members of the OECS. OECS full member states include Antigua and Barbuda, Commonwealth of Dominica, Grenada, Montserrat, St. Kitts and Nevis, Saint Lucia and St. Vincent and the Grenadines. These members are part of an Economic Union under the Revised Treaty of Basseterre and received full benefits like free movement of people and goods (OECS 2020a). The British Virgin Islands, Anguilla, Martinique and Guadeloupe are associate members of the OECS. Member states of the Economic Union adopt a common approach to trade, health, education and the environment, as well as the development of critical sectors such as agriculture, tourism and energy (OECS 2020a). The ECCU has a common central bank, the Eastern Caribbean Central Bank (ECCB), and a common currency, the Eastern Caribbean (EC) dollar, (1 US\$ = EC\$2.70).

According to the 2011 Census, 87.3 per cent of the population living in Antigua and Barbuda is of African descent (Statistics Division 2014). The second largest ethnic category consists of persons who identify themselves as of Mixed (Other) background (3.8 per cent), followed by Hispanic (2.7 per cent), Caucasian (1.6 per cent), and East Indians (1.1 per cent). Amerindian/indigenous account for only 0.4 per cent. The population of Antigua and Barbuda is predominantly Christian (87.8 per cent), with Anglican (17.6 per cent) and Adventist (12.4 per cent) being the two leading denominations. Rastafarian accounts for (1.1 per cent), Hindu (0.4 per cent) and Muslim (0.2 per cent).

Antigua and Barbuda was the first ECCU country to transition from traditional agricultural produce to tourism in the 1970s and 1980s. The switch to tourism ensured an average GDP growth of 6.8 per cent (IMF 2006) and contributed to the high levels of human and social development. In 2018, Antigua and Barbuda's human development index (HDI) was 0.776, ranked 74 among 189 countries based on life expectancy at birth (76.9), expected years of schooling (12.5), mean years of schooling (9.3), and Gross National Income (GNI) per capita of US\$22,201 (2011 purchasing power parity; United Nations Development Programme [UNDP] 2019a). Despite these numbers, there is cause for concern. Pockets of poverty and issues of inequality ranging from income to gender remain. Kairi Consultants Limited study in 2007 gave the country a GINI coefficient of 0.48 indicating a high level of income inequality.

## Overview of Antigua and Barbuda's Fisheries Sector

### Fishery Resources

Antigua and Barbuda have a total shelf area of 3,568 sq km (Food and Agriculture Organization of the United Nations [FAO] 2018). This includes the Antigua and Barbuda shelf (3,400 sq km), South Bank (40 sq km), a section of Anguilla shelf (7 sq km), Redonda shelf (98 sq km), Havers Shoal (5 sq km) and a section of St. Christopher and Nevis shelf (18 sq km). The Antigua and Barbuda shelf the islands emerge from is one of the largest in the Eastern Caribbean (Fisheries Division 2010). These relatively extensive fishing grounds support a substantial demersal resource of reef fish (Figure 1), Gastropoda (e.g., queen conch) and Crustacea (e.g., Caribbean spiny lobster). Conservative estimates from various sources including the Fisheries Division, suggest that demersal resources provide an annual sustainable yield of between 3,409 and 6,585 metric tonnes. In 2018, the resources yielded 5,499 metric tonnes worth EC\$65.7 million (US\$24.3 million) (Figures 2 to 4). For 2019, the fisheries sector contributed to 53 per cent of the agricultural GDP and 1 per cent of the national GDP—in current prices (Statistics Division 2018b).

In addition to these demersal resources, seasonal large pelagic species, (tunas, dolphinfishes, wahoos and billfishes) pass through the waters of Antigua and Barbuda. Preliminary estimates indicate that these migratory fish could yield an additional 3,000 to 4,000 metric tons annually (Fisheries Division 2010). Even though the extent of these resources is not fully known, the consensus is that most are not fully utilised. Large pelagics not only offer great potential for expansion of the capture fishery, but also sports fishing and recreational fishery. There are about 65 private sports fishing vessels operating in Antigua and Barbuda, including 10 commercial charters (Fisheries Division 2010). The Antigua and Barbuda Sport Fishing Association sponsors an annual international billfish tournament, which attracts about 30 to 40 entrants from neighbouring islands. To-date no valuation of the contribution of the sport fishery has been conducted.



Figure 1. Shallow water reef fishes.

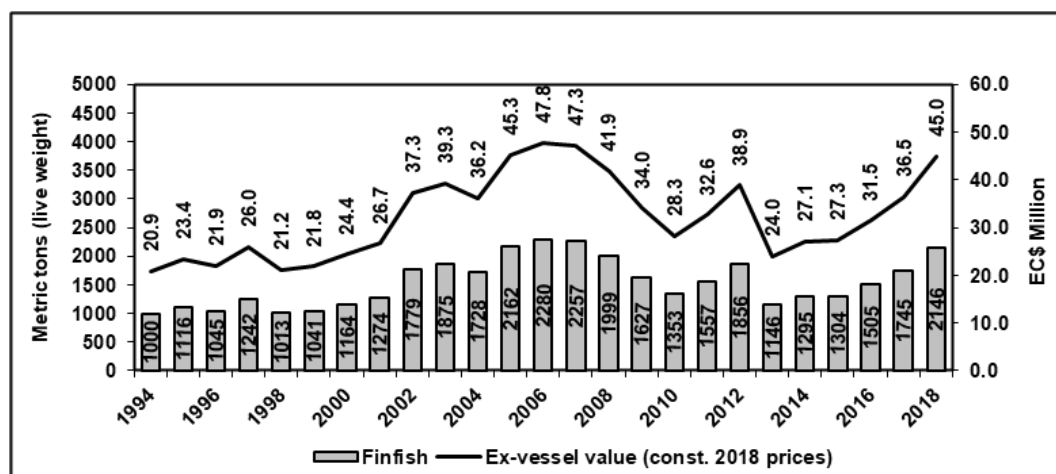


Figure 2. Trend in finfish capture production for Antigua and Barbuda; US\$1:00 = EC\$2.70 (Data source: Fisheries Division).

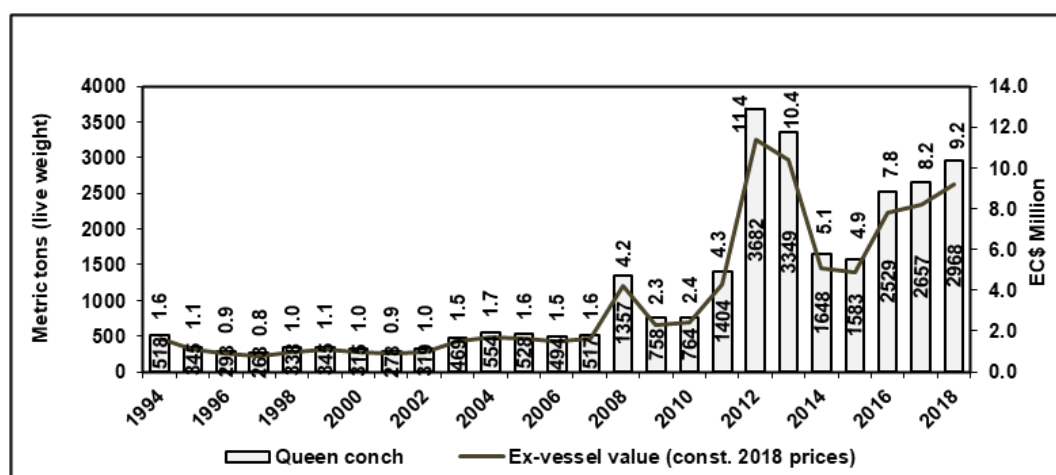


Figure 3. Trend in queen conch (*Strombus gigas*) capture production for Antigua and Barbuda; US\$1:00 = EC\$2.70 (Data source: Fisheries Division).

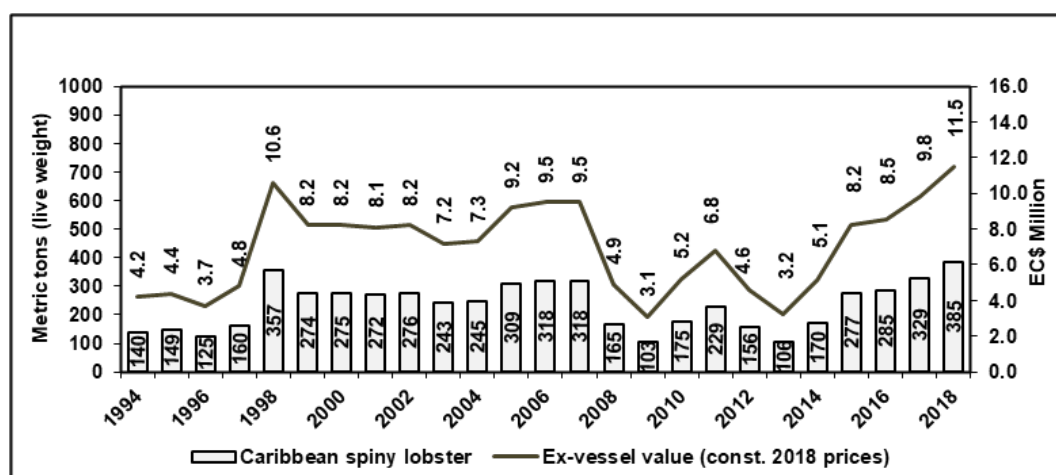


Figure 4. Trend in Caribbean spiny lobster (*Panulirus argus*) capture production for Antigua and Barbuda; US\$1:00 = EC\$2.70 (Data source: Fisheries Division).

## Aquaculture

Aquaculture production—mainly from aquaponics—was 24.8 metric tonnes in 2019. It was valued at EC\$601,000 (US\$222,593) (Figure 5). The main species cultivated were the Nile tilapia (*Oreochromis niloticus*) and the Red tilapia (*Oreochromis spp.*). Trends suggested that tilapia production would reach 34.6 metric tonnes, valued at EC\$838,000 (US\$310,370) in 2020. While aquaculture production of finfish is not expected to match finfish capture production in the medium term (2,146 metric tonnes versus 25 metric tonnes), it offers great potential for expansion—provided appropriate legal and institutional regimes along with the necessary fiscal incentives are put in place. Although the Fisheries Act 2006 makes provisions for sustainable development and responsible management of aquaculture activities (including keeping marine animals for exhibition), the absence of aquaculture regulations has impacted the development of the subsector, particularly with respect to food safety and meeting international requirements for trade. In 2020, the Fisheries Division approached the Food and Agriculture Organization of the United Nations for legal assistance in drafting statutory instruments under the Climate Change Adaptation of the Eastern Caribbean Fisheries Sector (CC4Fish) Project.

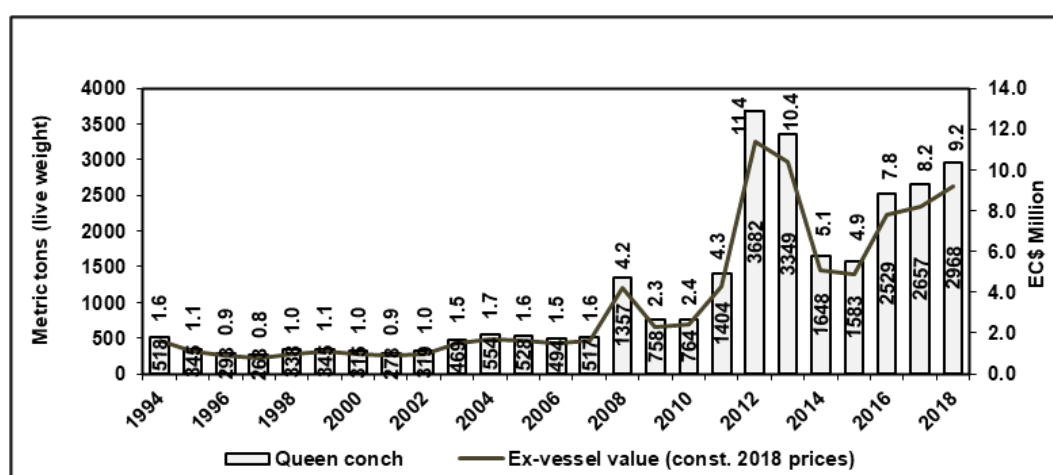


Figure 5. Trend in aquaculture production of tilapia (for direct consumption) for Antigua and Barbuda; US\$1:00 = EC\$2.70 (Data source: Fisheries Division).

## Employment and Role of the Fisheries Sector

At the end of October 2020, there were 861 active fishers in Antigua and 76 in Barbuda engaged in the fisheries sector (Fisheries Division 2020a). This included approximately 50 individuals employed solely in an underdeveloped processing sector or also involved in. The high energy cost associated with processing and storage, and inadequate access to capital has curtailed the development of the processing sector. Employment values should be taken as conservative estimates since the fisheries sector acts as a safety-net for other economic activities—a large proportion of fishers are also employed in the construction and tourism sectors. Downturns in those sectors impact fishing efforts (Fisheries Division 2010). For this reason, the Fisheries Division has introduced schemes to limit fishing and ensure long term sustainability of fishery resources. These schemes, coupled with various social protection and educational programmes, ensure individuals have options to make a living.

## Fishing Fleet and Gears

Over the past 50 years, the country's fishing fleet has undergone significant modernization. Most wooden sloops and dories, dominant in the 1970s, have been gradually replaced by modern fibreglass launches and pirogues with the latest fishing (Figure 6). Despite significant improvements in vessel construction and fishing technology, traps or 'fish pot'—used to target the



demersals (Figure 7)— remain the dominant gear due to the extensive nature of the island shelf. Typical investment for vessel, gear and equipment ranges from EC\$45,000 (US\$16,667) for a 22-foot fibreglass pirogue, to EC\$210,000 (US\$77,778) for a 38-foot fibreglass launch.



Figure 6. Typical modern fishing units in Antigua and Barbuda.



Figure 7. Traditional “wattle” fish pot (left) and modern steel frame fish pot (right).

### Fishing Communities, Landing Sites and Infrastructure

Landing sites range from rural beaches with limited or no infrastructure, to fishery complexes with potable water, slipway, ice-making and chill storage facilities (Figure 8). Some also have like washrooms, lockers, meeting rooms, etc. (Figure 9). Only 4 of 32 landing sites meet the European Union (EU) technical requirements for export of fish and fishery products (Horsford 2006). Traditionally, the European Union was the main destination for domestic fishery exports. In recent times the Hong Kong Special Administrative Region of the People’s Republic of China

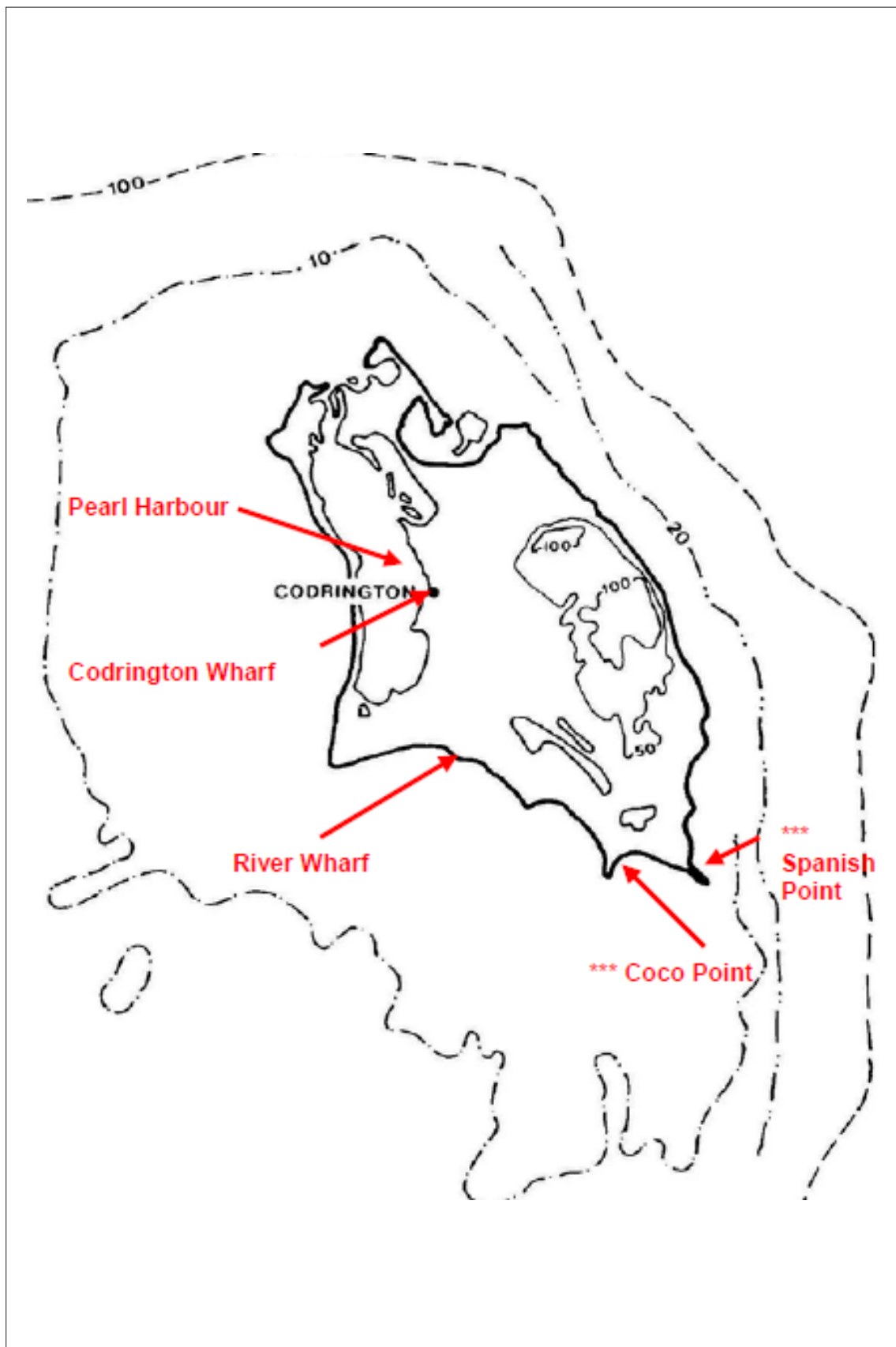


Figure 8. Location of fish landing sites in Antigua (Adapted from: Caribbean Conservation Association, University of Michigan and the United Nations Environment Programme 1980a). Sites marked with asterisks are currently inactive.



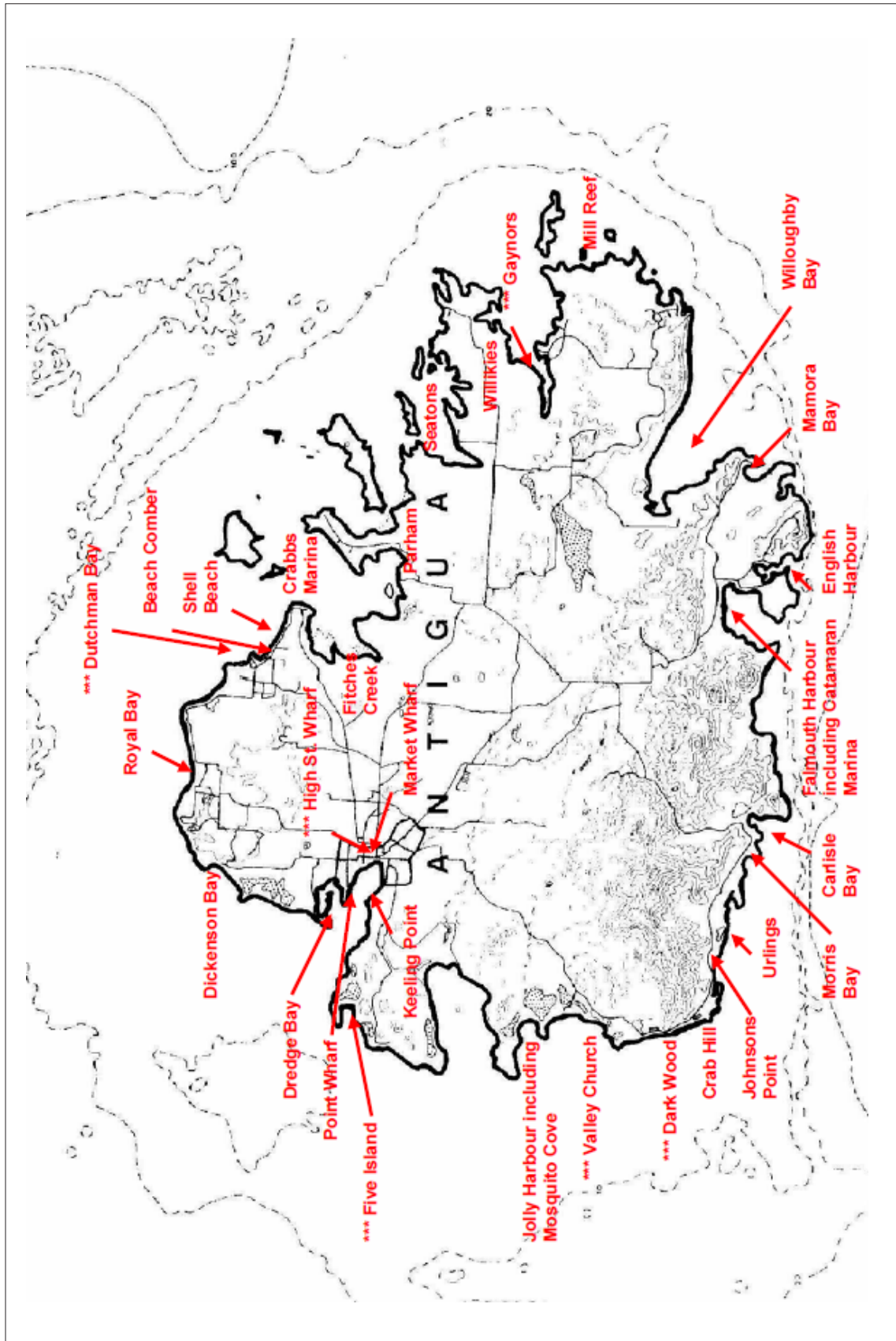


Figure 9. Location of fish landing sites in Barbuda (Adapted from: Caribbean Conservation Association, University of Michigan and the United Nations Environment Programme, 1980b). Depth contours are in fathoms and elevation contours are in feet. Sites marked with asterisks are currently inactive.



has overtaken the EU market (Fisheries Division 2020a). Sites approved by the EU for exports (Urlings, Parham and Point Wharf in Antigua and Codrington Wharf in Barbuda) were Japanese grant aid fisheries complexes.

Figures 10 and 11 provide locations of various landing spread out along the coast of Antigua and Barbuda. In the past, fishers generally resided in areas close to their livelihood. Much has changed due to an increase in ownership of personal vehicles allowing for greater flexibility. Exceptions to the rule include the southern coastal villages of Urlings, Old Road, Johnson Point and Crab Hill (collectively called the ‘round south community’ in Antigua), the coastal urban communities of Point-Villa and Grays-Green in Antigua, and the sole community on the island of Barbuda, Codrington Village.

### Food Security

The Food and Agriculture Organization of the United Nations (FAO) dataset, has estimated the per capita fish supply for Antigua and Barbuda at 55 kg (live weight) for 2017 (FAO 2020b). This is five times the per capita fish supply for Latin America and the Caribbean (10.5 kg), and more than double the supply (Figure 12) for Europe (21.5 kg) and the world (20.3 kg). While relatively high, this level of consumption is also driven by the demands of tourism, which drives fish imports. If the contribution of imports to fish supply is ignored, the country's per capita supply is 10.3 kg per annum—comparable to the regional average for Latin America and the Caribbean. Antigua and Barbuda is ‘food secure’ in terms of fish protein based solely on domestic supply. Within this context, under or moderately exploited fisheries such as the coastal and large pelagics offer great potential for future development of the sector. The Government plans to expand capture production in this area given the vast expanse of our Exclusive Economic Zone (EEZ).

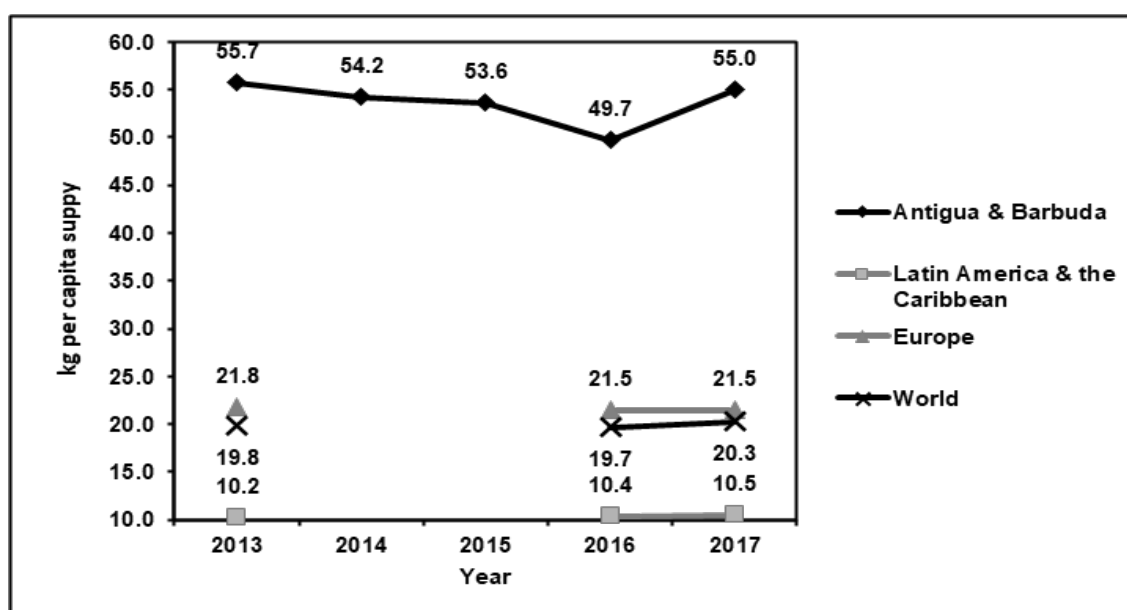


Figure 10. Trend in per capita supply of fish for Antigua and Barbuda, Latin America and the Caribbean, Europe, and the world (Data source: FAO 2020b).

## 2. Situational Analysis: Legislation, Policies and Programmes

### Poverty Eradication, Food Security and Income

The 2030 Agenda acknowledges eradicating poverty in all its forms and dimensions, including extreme poverty, as a great global challenge and indispensable for sustainable development.

According to the living conditions in Antigua and Barbuda poverty report by Kairi Consultants Limited in 2007:

- \* In 2005-06, the indigence line for Antigua and Barbuda was estimated at EC\$6.71 (US\$2.51) per day. 3.7 per cent of the population were considered chronically poor, lacking the wherewithal to meet a level of expenditure necessary to afford the minimum nutrition required to maintain good bodily health.
- \* Antigua and Barbuda's poverty line was estimated at EC\$6,318 (US\$2,366) per annum, with adjustments made for non-food expenditure. 18.3 per cent of the total population belonged to households whose per capita consumption fell below the poverty line.
- \* 10 per cent of the population was deemed 'vulnerable' to unanticipated events such as natural disasters or economic shocks. The vulnerability line was set at 25 per cent above the poverty line (US\$2,925).
- \* 71.7 per cent of the population was classified as 'non-vulnerable'.

The report attributed the causes of poverty to crisis in neighbouring states (migration due to economic disaster in Dominica and volcanic eruption in Montserrat). This also resulted in labour market issues with wages dropping to market clearing levels in tourism. Gender segregation in hotels and restaurants placed more women at risk of poverty.

Figure 13 provides a comparison of annual earnings for the owners and crew of the most common fishing units in Antigua and Barbuda (trap or pot fishing). This is relative to the 2005 minimum wage and earnings in the tourism and construction industry (Horsford 2007). At the lower end of the salary scale, on average, were the crew aboard a trap fishing vessel or the owner of a small trap fishing unit (open / open boat with cabin). They earned less than an individual employed at a low-end position in the tourism or construction industry. The upper end of the scale, consisted of owners of large fishing units (wooden / fibreglass launches) who earned wages comparable to their counterparts in the construction industry, but more than those in tourism. Individuals employed in small fishing units—a dominant feature of fisheries—earned less than their counterparts in the tourism and construction industry. In all cases, earnings were at or above the annual minimum wage (US\$ 4,622) and comfortably above the poverty line (US\$ 2,366 per annum).

According to an earlier definition, fishers, on average, would be considered non-vulnerable. In the context of the sector though, this definition does not hold. Only 9.6 per cent of the active fleet had vessel insurance based on sampling in 2005 (Horsford 2007). In its absence, a catastrophic storm could easily push fishers below the poverty threshold. This issue is elaborated on in the section on natural disasters.

The Caribbean Fisheries Co-Management (CARIFICO) project, supported by the Japan International Cooperation Agency (JICA) was designed to support the development of fisheries co-management arrangements. It works in partnership with the governments of six Caribbean islands which include Antigua and Barbuda. According to the project's livelihood analysis, conducted in 2016 (Figure 14) 84 per cent of fishers surveyed described their income from fishing as better than fair in 2011. In 2015, 75 per cent considered it to be better than fair. 2014's tropical storm 'Gonzalo' and its impact on fisheries may have influenced the 2015 results.

This National Poverty Reduction Strategy for Antigua and Barbuda (NPRS), 2011–2015, outlines the macroeconomic, structural and social policies and programmes to promote growth, reduce poverty and improve overall living conditions in the country (Government of Antigua and Barbuda 2011). It was designed via a participatory process with key stakeholders drawn from government agencies, civil society, the private sector, and local authorities. The strategy is centred on five pillars:

- \* Growth and wealth creation: by building on the present economic base and diversifying into new sectors and activities that are internationally competitive.
- \* Expansion of pro-poor employment and income generating opportunities: by increasing access to education, training and self-upgrading including through the use of ICTs; and by the provision of credit for micro-enterprises and small and mid-size enterprises.
- \* Modernisation of social protection and increasing the resilience of the poor: by anticipating risk factors that contribute to poverty and course correcting through programmes that target the poor.
- \* Good governance and public sector management: by institutionalising the rules of good governance evident in greater transparency and accountability in the delivery of public services.
- \* Building resilience through environmental sustainability: by making disaster risk reduction a feature of the planning process in the light of the high environmental risks that the country faces from hurricanes, earthquakes, and sea rise, as a result of global warming (Government of Antigua and Barbuda 2011).

There has been moderate successes with respect to pillars 2 to 5. Pillar 1 however remains the most challenging because Antigua and Barbuda is still heavily dependent on tourism and as such subject to its volatilities. Relatively new areas of the economy such as financial services are also constrained by ever increasing regulatory regimes from Organization for Economic Co-operation and Development (OECD) countries (e.g., establishing effective exchange of information in tax matters).

The government has many social programmes to help reduce poverty. The Board of Guardians, a division of the Ministry of Social Transformation, provides a fortnightly allowance to the poor and destitute. One flagship programme is the School Meals Programme for children in public schools. Meals are provided at a cost of EC\$1.00 (US\$0.37) per day for all primary school children who take part in the initiative (United Nations General Assembly [UNGA] 2016). The project is not means tested (to prevent stigmatization of poor children) and is heavily subsidised by the Government. This programme is complemented by the School Uniform Grant Programme, available to all children regardless of public or private schools.

The Peoples Benefit Programme is a social programme under the management of PDV Caribe Antigua and Barbuda Ltd (PDV CAB). PDV CAB is a company wholly owned by the Government of Antigua and Barbuda which was incorporated in 2005 in connection with the Petrocaribe Initiative. Poor persons and persons with disabilities can use a debit card to avail of subsidies on food (UNGA 2016). There is no age limit, but all beneficiaries need to pass a means test. Beneficiaries receive a sum of EC\$250.00 (US\$92.59) each month. They can purchase food and selected personal items from the Central Marketing Corporation (CMC) and participating supermarkets in town and rural areas (UNGA 2016). Central Marketing Corporation is an agency within the Ministry of Agriculture, whose mandate is to stimulate, facilitate and improve the production, marketing and processing of produce in Antigua and Barbuda for the benefit of the producer and consumer (CMC 2020).

In addition to the aforementioned public programmes, there are a number of food programmes managed by various service clubs such as Antigua Lions Club and the Rotary Club of Antigua.

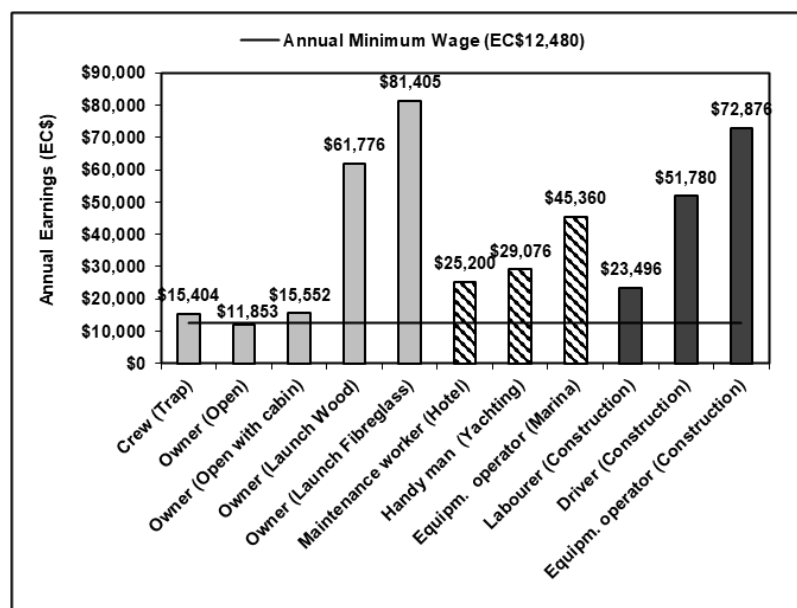


Figure 11. Annual earnings for selected individuals in the trap fishery, tourism and related sectors, and the construction industry in Antigua and Barbuda (Horsford 2007). Annual minimum wage (2005) based on EC\$6.00 per hour (8 hour-workday); EC\$2.70 = US\$1.00.

Since the COVID-19 pandemic, most have scaled-up their programmes by collaborating with various philanthropic entities. The Rotary Club of Antigua, for example, launched a three-month

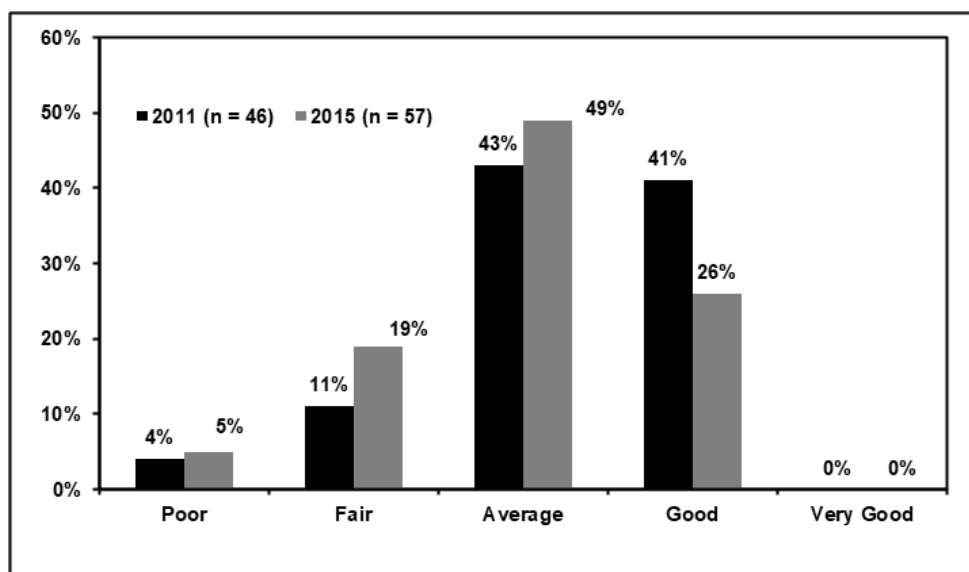


Figure 12. Fishers' perception of their income from fishing in Antigua and Barbuda for 2011 and 2015 (Data source: Montes et al. 2017).

scheme in conjunction with the Mill Reef Fund, targeting 400 single parents and families with breadwinners who had lost their jobs (Food Voucher Programme for Struggling Families 2020). To address the needs of pensioners, the unemployed, and other vulnerable residents the Antigua Lions Club partnered with the Jumby Bay Fund to launch a major food distribution project (Food Packages for Vulnerable Residents 2020). Since its inception, more than 800 food packages have been distributed to people across the country with help from volunteers from St. Anthony's Secondary School.

## Social Security and Social Protection

Antigua and Barbuda became the first country in the OECS to introduce a comprehensive social security scheme through the passage of the Social Security Act in 1972 (Antigua and Barbuda Social Security Board [ABSSB] 2020a). The enactment of the Act helped create a social security fund to provide the insured population and their dependents with some degree of income security in the event of sickness, injury, invalidity, maternity, retirement or death. A Board is responsible for collecting funds and paying cash benefits to contributors. Under the Act, every person between the ages of 16-60, gainfully occupied in insurable employment, shall be insured and shall remain insured for life.

Some of the entitlements under Social Security include:

- \* Sickness benefit: a cash benefit of 60 per cent of your average insurable weekly earnings is paid to an insured person absent from work because of a certified illness other than that caused by employment injury. This is available to any private sector employee or self-employed person between the ages of 16-60. It must satisfy the following conditions:
  - \* The person must have been in employment the day before the illness began.
  - \* The person must have paid not less than 26 weekly contributions into the scheme.
  - \* The person must have worked at least eight weeks in the three calendar months immediately before the illness began (ABSSB 2020b).
- \* Maternity benefit: an allowance, a grant, or both. The grant is payable for a maximum of 13 weeks to a woman who has given birth to a child (dead or living) if the term of pregnancy was not less than 28 weeks (ABSSB 2020c). The allowance, a one-time payment, constitutes 60 per cent of the insured person's average insurable weekly earnings and is payable if the woman or her husband has paid 26 weekly contributions since entering the scheme and has paid 26 weekly contributions in the year immediately before the confinement (ABSSB 2020c).
- \* Invalidity benefit: either a grant or a pension payable to an insured person who has not yet reached age 60, but is unable to take part in any further employment because of illness that is likely to remain permanent (ABSSB 2020d). The grant is a one-time payment payable to an insured person who has paid at least 52 weeks or 12 months of contributions. It is calculated at three-fourths of the total contribution paid or EC\$1,200 (US\$444), whichever is greater. Invalidity pension is a monthly payment, payable to an insured person who has paid contributions for at least three years before the invalidity began. The amount paid depends on the insured person's annual weekly insurable earnings and the number of contributions paid into the scheme. There are three types of invalidity pensions:
  - \* a transitional pension requiring 156 or three years of contributions;
  - \* a reduced pension requiring 350 to 499 contributions; and
  - \* a full pension requiring at least 500 contributions.
- \* Age benefit: a grant or a pension payable to an insured person who has reached the pensionable age and has satisfied the required contribution conditions (ABSSB 2020e). Age grant is a one-time payment payable to an insured person who has attained the pensionable age and has not paid less than 52 weeks contribution or the monthly equivalent thereof. The amount paid is 75 per cent of the total contributions (employee and employer) paid up to the pensionable year, or EC\$1,200 (US\$444), whichever is greater. Age pension is a monthly cash benefit payable to an insured person who meets the qualifying criteria, until death. The amount paid for the pension depends on the insured person's average annual insurable earnings and the number of weekly contributions paid into the scheme. No pensioner shall receive less than EC\$350.00 (US\$129.63) per month (ABSSB 2020e).

- \* Survivors' benefit: a grant or a pension payable to certain family members of an insured deceased person who was receiving invalidity or age pension or would have been entitled to invalidity or age benefit at the time of death (ABSSB 2020f). A survivors' grant is a one-time payment payable if the deceased would have been entitled to an invalidity or age grant. It amounts to 75 per cent of the total contributions (employee and employer) paid up to the time of death, or EC\$1,200 (US\$444), whichever is greater. A survivors' pension is payable monthly for a specific period or for life, if the deceased person had satisfied the conditions for an invalidity or age pension. Survivors of the deceased who may be entitled to payments are widow, invalid widower and unmarried children under the age of 18 if going to school at the time of death. A widower's or widow's pension, is 50 per cent of the amount the deceased was receiving or would have received. The minimum payment for widower or widow is EC\$350.00 (US\$129.63) per month. A child's pension is 25 per cent of the amount the deceased was receiving or would have received. If the child is an orphan or an invalid, the amount rises to 40 per cent. The minimum payment for a child is \$87.50 (US\$32.41) per month (ABSSB 2020f).
- \* Funeral grant is a lump sum of EC\$2,500 (US\$925.93) payable to the person who pays or will pay the cost of the funeral upon the death of an insured person under the following conditions:
  - \* The insured person was receiving sickness or maternity benefit or would have been entitled to such benefit at the time of death;
  - \* The insured person was receiving, had received or had satisfied the conditions of receiving invalidity benefit or age benefit;
  - \* The insured person paid at least 26 weekly contributions in the 12 months immediately before death (ABSSB 2020g).

Some astute features of the scheme include:

- \* The universal coverage assures workers that protection will follow when they change jobs.
- \* Complete portability of credits earned (i.e., employees can have their earnings automatically combined from all places of employment, and full credit given, towards determining their pension).
- \* The scheme's ability to finance the benefits rest on the entire economy and not just on one company or sector/industry.
- \* Benefits under social security also adjust to changing wage conditions through benefit and ceiling increases.
- \* It includes many social elements like survivors' protection for widowhood and children, invalidity protection before retirement for workers and their families, and, in some cases, an Old-Age Assistance Benefit Programme (ABSSB 2020a).

The Old-Age Assistance Programme was designed for individuals who never got the opportunity to contribute to the scheme in their senior years. The assistance, in the form of a pension, terminates with the death of the recipient. Persons with disabilities who are unable to provide for themselves are also supported by the programme with the same benefits as insured persons.

According to the Fisheries Regulations No. 2 of 2013, all individuals seeking licenses as local fishers must be registered under the Social Security Act, 1972, and any other labour requirements for Antigua and Barbuda. This entitles them, and certain family members to the aforementioned benefits. This provision was incorporated in response to a request from the Inland Revenue Commission (FAO 2004) as well as part of the process of formalizing" and professionalizing the fisheries sector. Fishers are required to pay 10 per cent of the minimum monthly declared earnings of EC\$2,500.00 (US\$925.93) as a minimum contribution to the Social Security Fund (Table 1).



There have been major reforms in social security, over the years to deal with evolving social and demographic changes. Geoffrey Joseph, Deputy Director of Social Security (ABSSB 2019), said that medical advances have increased pensioners' life longevity. The pension base, therefore, continues to grow resulting in increased pension obligations. Families have fewer children per household now. Young people are entering the workforce at a later age. All of these necessitated that the scheme change to meet the new challenges. Major reform measures so far include an increase in the contribution rate, insurable earnings ceiling, and the gradual movement of the pensionable age to 65 years. The ABSSB also recognized that many women are fast becoming main breadwinners of the family. Therefore their widowers should be entitled to survivor benefits as well. The Board hopes to address this issue in the near future (ABSSB 2019).

Other social assistance programmes include the Senior Citizens Utility Subsidy Programme and the Para-transit Mobility Programme. The former is a social programme that provides a monthly subsidy of EC\$100 (US\$37.04) towards the utility bills of pensioners under the Antigua and Barbuda Social Security Scheme. The Para-transit Mobility Programme, operated by the Ministry of Social Transformation, provides free transportation services to persons with disabilities to ensure their full mobility, access to and participation in public life (Directorate of Gender Affairs 2020).

**Table 1. Social Security self-employed earnings bands (ABSSB 2020h).**

Class	Categories of Self Employment	Declared Earnings
I	Beach and street vendors, craft-makers, shoe-makers, unskilled labourers and other persons within the informal sector	Not less than the national minimum wage. Currently EC\$1,420.00 (US\$525.93)
II	Beauticians, barbers, caterers, florists, car washers	Not less than EC\$2,000.00 (US\$740.74) per month
III	Fisher folks, mechanics, horticulturalists, taxi and bus drivers	Not less than EC\$2,500.00 (US\$925.93) per month
IV	Lab technicians, entertainers, electricians, skilled workers, carpenters, plumbers, etc.	Not less than EC\$3,000.00 (US\$1,111.11) per month
V	Persons engaged in their own business in commerce and trade; persons not under a contract of service and paid only by commission of fees or a share in profit; paid directors of companies; professionals including accountants, auditors, lawyers, architects, dentists, doctors, chemists, IT specialists, undertakers, building contractors, engineers, consultants and other persons offering expert professional advice; promoters	Not less than EC\$6,000.00 (US\$2,222.22) per month

## Health and Wellness

For a developing country, Antigua and Barbuda has a fairly robust health care system. Health care services are delivered at the primary, secondary, and tertiary levels through the public and private sectors. At the primary level, Antigua and Barbuda is divided into six medical districts. Services provided include medical clinics, maternal and child health, community mental health, dental care, screening for non-communicable diseases (NCDs), and prevention and control of communicable diseases. Secondary and tertiary health services are provided at the Mount St. John's Medical Centre, a 187-bed facility in Antigua, and the Hanna Thomas Hospital, an 8-bed facility in Barbuda (PAHO 2017a). The facility in Barbuda was significantly damaged by Hurricane Irma in September 2017 and rehabilitated only in August 2020 via funding from the India-United Nations Development Partnership Fund. In addition, there is the Clarevue Psychiatric Hospital, a 130-bed facility in Antigua that provides mental health services. The health care system is funded predominantly through public taxation and levies in support of the Medical Benefits Scheme (MBS).



The MBS was established in 1978 under the Medical Benefits Act Cap. 271, originally designed to assist beneficiaries, particularly those suffering from certain chronic disease (MBS 2020a). The Act was amended to expand the scope of the MBS in 1998, and in 2010 a new Medical Benefits Act was passed by Parliament. The following year, the Medical Benefits Regulation, 2011 came into effect. The Scheme currently offers financial assistance and pharmaceutical supplies to qualified residents of Antigua and Barbuda. Beneficiaries are also entitled to refunds for services such as laboratory tests, x-rays, surgery, ultra sounds, electrocardiographs or similar services, hospitalisation and drugs. The MBS also provides financial, managerial and medical supplies to the Mount St. John's Medical Centre and public health clinics (MBS 2020a). Registration with the MBS is mandatory according to the Fisheries Regulations of 2013 and as such, fishers and families are entitled to all of the services within. The scheme's assistance in covering hospitalization and prescription drugs drastically aided the response to Covid-19 and gave residents a sense of security.

In December 2017, the World Health Organization (WHO) validated Antigua and Barbuda along with Anguilla, Bermuda, Cayman Islands, Montserrat, and Saint Kitts and Nevis as achieving dual elimination of mother-to-child transmission of the HIV and syphilis (PAHO 2017b). From 2010 to 2014, crude death rate was stable at 5.7 per 1,000 people and the lowest among all Caribbean Community (CARICOM) Member States (Ministry of Health and the Environment 2016). Immunization coverage for the same period against preventable childhood illnesses (e.g., diphtheria, pertussis, tetanus, poliomyelitis, measles, mumps, and rubella) achieved a near perfect score. Maternal deaths virtually disappeared from the national health statistics—two deaths were recorded in 2015 following zero incidences for two consecutive years (Ministry of Health and the Environment 2016). From 1990 to 2018, Antigua and Barbuda's life expectancy at birth increased by 5.4 years (Figure 15), with life expectancy for females leading the way (World Bank 2020a).

Despite these successes, high rates of non-communicable diseases—cardiovascular diseases, cancer, diabetes, and chronic respiratory diseases—now account for more than 85 per cent of all deaths. It is the new challenge to advance the health and well-being of residents (Ministry of Health and the Environment 2016). Looking to the future, the National Strategic Plan for Health's (2016-2020) ambition of universal health coverage will be over the medium term. The focus will be on health risk reduction or wellness, by improving service delivery at the primary and secondary levels (particularly with respect to non-communicable diseases). This will be done by epidemiological surveillance, health planning and health information, pharmaceutical and medical supplies management, health financing, infrastructural development, and expanding strategic

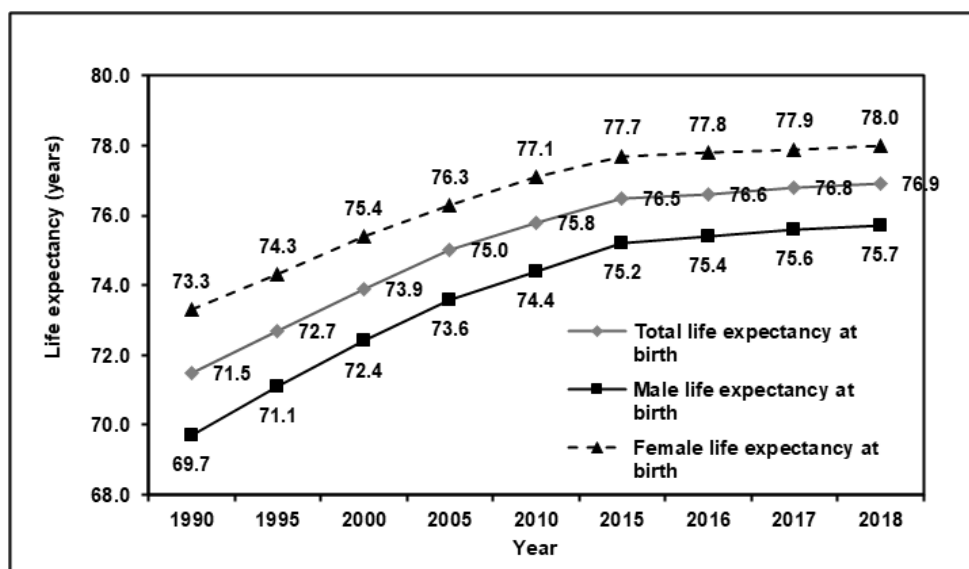


Figure 13. Trends in life expectancy at birth for Antigua and Barbuda based on consistent time series data (Data source: World Bank 2020a).

partnerships (Ministry of Health and the Environment 2016).

In June 2014, the Ministry of Health (2014) spearheaded the development of a National Strategy for Universal Health Coverage. The strategy expresses four broad lines of action:

- \* Expanding equitable access to comprehensive, qualitative, and community-oriented health services
- \* Strengthening stewardship and governance
- \* Increasing and improving financing, without out-of-pocket expenditures, with equity and efficiency
- \* Taking inter-sectoral action on the social determinants of health.

In November 2019, the Minister of Health, Wellness and the Environment collaborated with the Medical Benefits Scheme to host the proposed National Health Insurance Stakeholder briefing (MBS 2020b). Its objective was to provide stakeholders an insight into the establishment of a framework that could guide the implementation of universal health coverage via a National Health Insurance System. This process was led by the Health Economics Centre of the University of the West Indies, charged with the task of exploring the development of a framework. The University of the West Indies team identified pillars of efficiency in the framework to include, costing, modernization of the health information system and legislation on standards and protocol. These pillars of efficiency aim to improve and ensure the sustainability of the health care system, when the MBS is transformed into a National Health Insurance.

## Education, Training and the Digital Divide

Prior to the mid-1960s, most secondary schools were privately owned, making it difficult for many children to access higher education. Education has been free and compulsory for children 5-16 years, after introduction of the Education Act in 1973 (Cap. 145). The Act takes a non-discriminatory approach to education stating that “no person shall be refused admission to any public school on account of the religious or political persuasion, race or social status of such a person or his parents”.

In line with target 4.1 of the Sustainable Development Goals, this aims to “ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes, by 2030”.

Antigua and Barbuda’s legislative framework for education has led to a 99 per cent literacy rate (males: 98.4 per cent; females: 99.4 per cent) among those aged 15 and older (United Nations Educational, Scientific and Cultural Organization Institute of Statistics 2020). This has also contributed to a high human development metric with respect to education.

To further advance the development of Antigua and Barbuda, the Medium-Term Development Strategy (Government of Antigua and Barbuda 2015) proposed the following actions to ensure the country has the adequate skills and capacity to support sustainable development:

- \* Reduce overcrowding in provision of secondary education.
- \* Train secondary school teachers in remedial reading to effectively assimilate all students into the secondary education system.
- \* Reduce the high drop-out rate in secondary schools (particularly for males).
- \* Continue efforts to expand access to, and improve standards in early childhood education.
- \* Enhance the incorporation of special needs in the mainstream education system.
- \* Continue efforts towards a consolidation of tertiary level education provided in the country, including through the establishment of the University of Antigua and Barbuda—achieved in

September 2019 with the opening of the University of the West Indies, five islands campus.

- \* Develop the hotel component of the Antigua and Barbuda Hospitality Training Institute and take actions to improve its prestige.
- \* Develop a systematic approach towards gauging the relevance of the education being provided.
- \* Review mechanisms for prioritizing skills that will be supported through government assistance.
- \* Strengthen management capacity.

These achievements would not have been possible without the Board of Education Act 1994. The Act, establishes a Board of Education which helps execute certain education policies of the Government, and raise money required for the execution of such policies. The latter is done via contribution deducted from the earnings of all gainfully employed or self-employed persons from the age of 16 and above. The funds generated from the Education Levy goes towards the provision of:

- \* Financial assistance, bursaries and scholarships for citizens and nationals of Antigua and Barbuda.
- \* Finances towards the management and administration of the textbook scheme.
- \* Finances towards areas which the Minister may direct from time to time for studies and training (Antigua and Barbuda Board of Education 2020).

In addition to the standard academic route, there are a suite of programmes geared to providing adult education, lifelong learning, women and youth entrepreneurship for individuals seeking a second chance. These include but are not limited to:

- \* The Gilbert Agricultural and Rural Development Centre (GARD) has offered agricultural and enterprise training to women and youth between the ages of 16-30 since 1993. Training courses include agriculture, basic cookery, business management, customer service, food and beverage, weaving textiles, yacht maintenance and ICT evening course (United Nations General Assembly [UNGA] 2016).
- \* Work Experience Programme is a 6-month on the job training opportunity with a stipend for young persons. The programme aims to make beneficiaries more marketable for employment in various fields through training and capacity-building. Trainees attend career-building seminars hosted by the Ministry of Labour as part of the training process (Directorate of Gender Affairs 2020).
- \* Vocational training institutions include the Antigua and Barbuda Institute for Continuing Education (ABICE), the Antigua and Barbuda International Institute of Technology (ABIIT), and the Antigua and Barbuda Hotel Training Institute (ABHTI). The institutes have increased opportunities for women and children to receive training and capacity building in traditional areas as well as in areas that have been traditionally associated with men and boys like plumbing, construction, etc. (Directorate of Gender Affairs 2020).
- \* The Youth and Education Empowerment Programme (YEPP) is an initiative geared towards giving persons between the ages of 16-40 a second chance to complete formal schooling. The programme is designed to expose individuals to a range of courses and acquire competencies needed to improve their overall livelihood (Directorate of Gender Affairs 2020).
- \* The Antigua and Barbuda Investment Authority (ABIA) provides entrepreneurs and investors with the necessary support, facilitation services and intelligence on local facilities and industry sectors. A series of courses titled 'Mind Your Business' aims to teach local business owners and entrepreneurs (ABIA 2018b) Excel, QuickBooks, Marketing, Costing and Pricing, Human Resource Management, Record Keeping for Small Businesses, Payroll, Tax Filing, etc.

In accordance with to Section 35 (3) (e) of the Fisheries Regulations 2013, anyone applying for a fisher license needs to undertake mandatory training and certification as specified by the Chief Fisheries Officer. This includes training and certification in the following areas:

- \* Fisheries Laws and Protected Areas
- \* Record Keeping and Small Business Management
- \* Seafood Safety and Quality Assurance
- \* Navigation and Seamanship
- \* Engine Preventative Maintenance
- \* Dive Safety
- \* First Aid and Cardiopulmonary Resuscitation

These training sessions form the backbone of the Fisher Professionalisation Programme, geared towards formalizing the fisheries sector. The sessions improve technical competencies of all stakeholders involved and make them aware of their rights and responsibilities under the national fisheries legislation and related instruments (e.g., FAO Code of Conduct for Responsible Fisheries, Caribbean Community Common Fisheries Policy [CCCFP] and its Protocols). Conducted in modules, they are delivered by the staff of the Fisheries Division in collaboration with competent agencies and private sector entities (e.g., Red Cross, Antigua and Barbuda Search and Rescue, Antigua and Barbuda Defence Force Coast Guard and authorised dealers of marine engines).

Fishers' education generally reflects that of wider society. The exception is tertiary education (Figure 16). Approximately 28 per cent of fishers were college or university educated in 2019. This is three times the national average (8.7 per cent), according to data from the 2011 Housing and Population Census (Statistics Division 2014). Despite the eight-year gap in data, it is highly unlikely there was any major change, seeing as there were no major educational upgrades or initiatives in the time period.

Nowadays, the fisheries sector attracts individuals with at least a secondary education (Figure 17). Most work in fisheries to complement other economic activities and/or as a viable investment option. Of the 191 fishers sampled in 2019, 53 per cent had a secondary source of income and occupation.

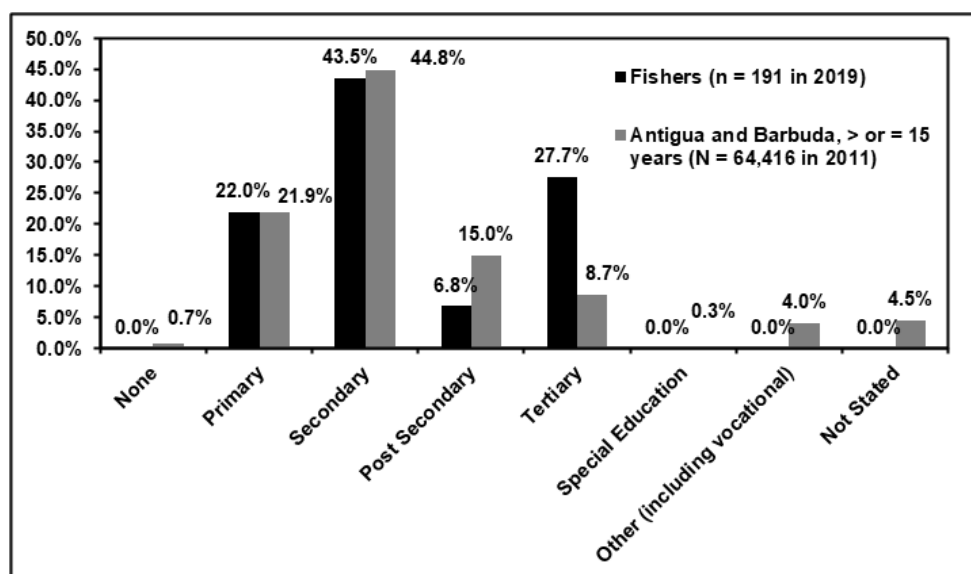


Figure 14. Highest educational level attained by sampled fishers relative to the general population of Antigua and Barbuda, 15 years and older (Data sources: Fisheries Division; Statistics Division 2014).

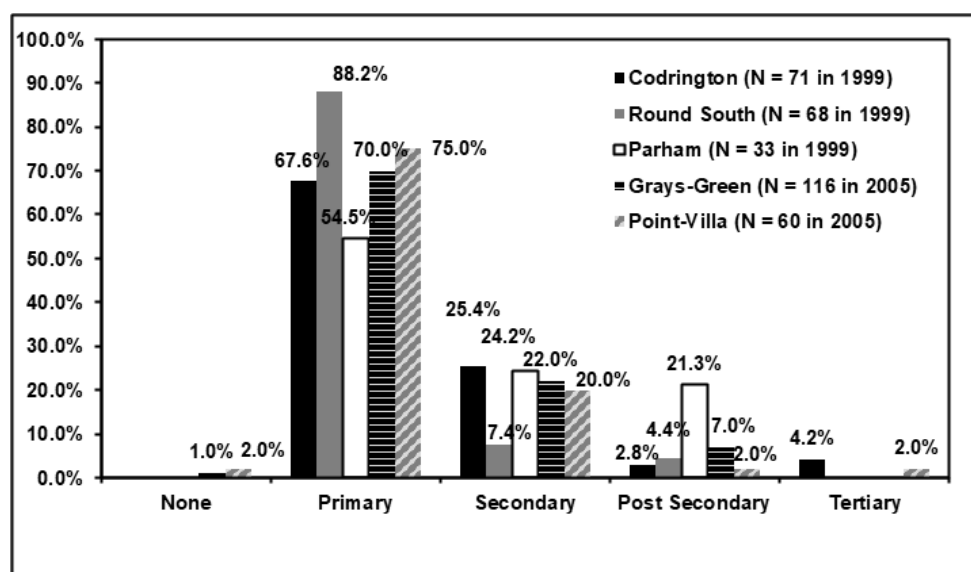


Figure 15. Highest educational level attained by active fishers in selected communities in Antigua and Barbuda (Data sources: Horsford 1999; Horsford 2005).

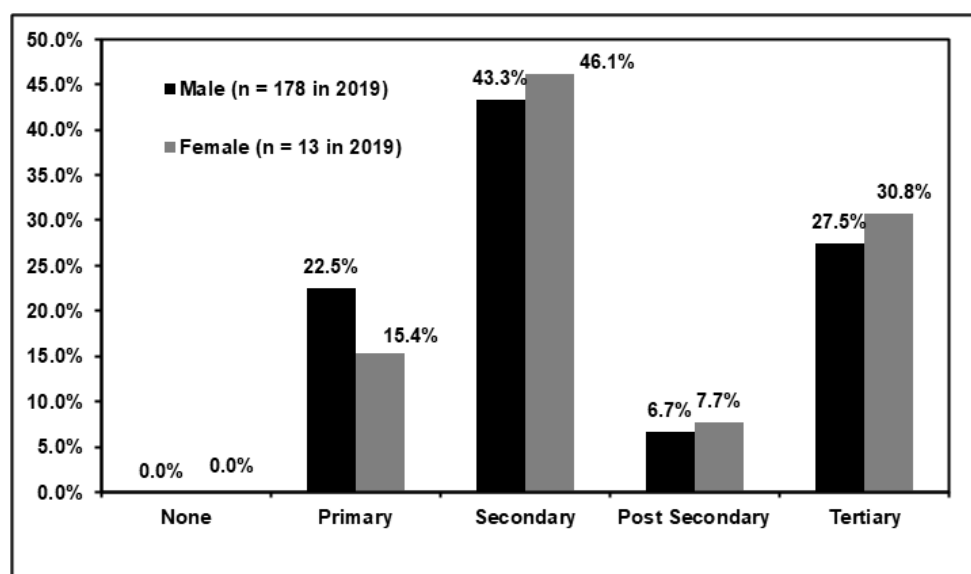


Figure 16. Highest educational level attained by sex for sampled fishers in Antigua and Barbuda (Data source: Fisheries Division).

Female fishers were marginally more educated than their male counterparts (Figure 18). This is consistent with similar trends observed in the general population and throughout much of the other OECS Member States over the past decades. In fact there is a declining participation of males at the upper secondary and tertiary levels. In 2010, approximately 65 per cent of entries for the Caribbean Secondary Education Certificate examination and for the Caribbean Advanced Proficiency Examination were female (OECS 2012). On average, the enrolment rate of males attending tertiary education in OECS Member States is about 35 per cent.

Information and communications technology (ICT) skills have become fundamental for today's labour market. Over the years a valid email address has become just as important as 'proof of address' for opening a bank account. Individuals who lack basic skills or ICT tools (smartphone, computer, etc.)—access to most of which requires a valid email address—are at a disadvantage in today's society. Of the 191 fishers surveyed in 2019, 39.3 per cent said they had a valid e-mail

address. More females than males utilised this basic ICT (46.2 per cent versus 38.8 per cent).

The digital divide was emphasised during the Covid-19 lockdown. Only half the fishers could utilise the Fisheries Division's online virtual inspection programme to register and license fishing vessels. Authorities were forced to have both physical and virtual vessel inspection programmes run concurrently. Individuals lacking the skills of ICT tools encountered difficulties accessing cash since most banks moved much of their services online as well as reduced hours for physical banking.

## Housing, Land Use and the Blue Economy

A key priority identified in Antigua and Barbuda's Medium-Term Development Strategy (Government of Antigua and Barbuda 2015) is "better access to adequate housing". Actions proposed to address this include establishing new housing developments, replacing inadequate and dilapidated shelters on already owned lands, alleviating housing pressure in urban areas through the construction of flats and redevelopment of existing areas. Furthermore, the government seeks to develop strategies to reduce construction cost, developing serviced housing lots to facilitate house construction by individuals, improving aesthetics through landscaping for new as well as established settlements, and collaborating with financing institutions to develop appropriate housing loan programmes to minimise financing cost to beneficiaries. Public-private partnership was identified a mechanism to finance housing development.

The devastating impact of 2017's Hurricane Irma on the island of Barbuda saw approximately 95 per cent of houses damaged or destroyed (United Nations Development Programme [UNDP] 2019b). This highlights the need to fast-track access to adequate housing. Recognizing this, UNDP supported government efforts on housing support for Barbuda. 150 residential structures were repaired and recovered using the 'Build Back Better' approach, in compliance with the 2015 OECS Building Code, as well as the Antigua and Barbuda Building Guidelines (UNDP 2019b). The frequency and intensity of tropical storms—Hurricane Irma was a category 5 tropical storm, the most powerful on record—and climate change predictions have forced Antigua and Barbuda to review its Building Code. The new draft Building Code adapted from a 2016 OECS counterpart is current available for public review (Public Feedback Invited on New Draft Building Code 2020).

Antigua and Barbuda has a number of social housing programmes for the poor and vulnerable. These include:

- \* Home Advancement Programme for the Indigent (HAPI) helps vulnerable populations with home repair. It is implemented by the Ministry of Social Transformation in collaboration with the private sector. Since the introduction of the programme over a dozen homes and families have benefited from home repairs and renovation (Directorate of Gender Affairs 2020).
- \* Central Housing and Planning Authority (CHAPA) Low Income Housing Project facilitates the ownership of affordable house and land for vulnerable groups, particularly women and single headed households (Directorate of Gender Affairs 2020).
- \* Government's Residential Assistance and Care (GRACE) Programme for the Elderly provides care for persons 60 years and over. It also helps persons with physical disabilities (Directorate of Gender Affairs 2020).
- \* Fiennes Institute for the Elderly and Indigent provides care and accommodation for at risk senior citizens. This includes those unable to care for themselves and those without familial support. Residents are housed across six wards and cared for by a staff of dedicated nurses (Directorate of Gender Affairs 2020).

The statutory body, the Development Control Authority (DCA), is governed by the Physical Planning Act of 2003. It is mandated to implement land use planning and development functions in Antigua and Barbuda (Ministry of Agriculture, Fisheries and Barbuda Affairs 2020). The DCA is



responsible for ensuring orderly and progressive development of land in urban and rural areas. It grants permission to subdivide or develop land and carry out related functions as described in the Physical Planning Act 2003. The Act requires that the DCA be governed by an eleven-member Board consisting of three persons appointed by the Minister (one as Chairman and another as Secretary) and eight persons as ex-officio members (Ministry of Agriculture, Fisheries and Barbuda Affairs 2020). This composition is intended to ensure an integrated approach is taken regarding land use and development.

According to the United Nations Environment Programme (UNEP), the blue economy espouses the same desired outcome as the 2012 United Nations Conference on Sustainable Development's Green Economy initiative—"improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities" (Ocean Action Hub 2017). It endorses the same principles of low carbon, resource efficiency and social inclusion, but it is grounded in a developing world context and fashioned to reflect the circumstances and needs of countries whose future resources are marine (UNEP 2016). Fundamental to this approach is the principle of equity to ensure developing countries can:

- \* Optimize the benefits received from the development of marine environments, e.g. fishery agreements, bioprospecting, oil and mineral extraction.
- \* Promote national equity, including gender equality, and in particular inclusive growth and decent jobs for all.
- \* Have their concerns and interests properly reflected in the development of seas beyond national jurisdiction.

It has been argued by Daniel Pauly that if the blue economy is to be sustainable in the truest sense of the word, then fisheries, and in particular artisanal and small-scale fisheries, should be the. Pauly contends that artisanal and small-scale fisheries have features that make them sustainable (they use less fuel than industrial fisheries per tonne of fish landed, and are more selective than industrial fisheries) and less likely to be negatively influenced by global crises. If small-scale fisheries are to be a central focus of the blue economy—which they are currently not (Pauly 2018; Bennett 2019)—they will require equitable access to marine resources.

Antigua and Barbuda's fishers are struggling to maintain their traditional access and user rights as they compete with coastal development, much of which is driven by the demands for infrastructure related to tourism (e.g., hotels, marinas, seaports). Since the 1980s, the country has seen drastic alteration to coastal and marine environments. Baldwin (2000) has documented much of the loss of important wetlands in Antigua. In Jolly Harbour for example, resort construction involved dredging and filling 1.44 sq km of salt pond to create a yacht marina with ocean access, a shopping mall and various quays with condominiums. In addition, access to landing sites (i.e., beach access) has reduced in certain rural areas because of coastal gated communities and resorts (Fishermen's Fight for Beach Access to Go to Court 2017). Section 60 of Fisheries Regulations 2013 makes provisions to designate fish landing sites whereby fishers have additional legal rights in addition to their traditional access rights. To mitigate user conflicts going forward, greater use of marine spatial planning and ocean zoning is required to ensure fishers are not displaced by other maritime stakeholders.

When studying the contribution of aquaculture to income growth and poverty reduction in Bangladesh, Rashid et al. (2019) used household survey data and a microsimulation approach, to highlight how the blue economy can help the poor. The study estimated that aquaculture's contribution to income growth between 2000 and 2010 was 2.1 per cent, which translated to reducing poverty by 1.7 per cent. The estimates may seem small, but the numbers aren't. 1.8 million Bangladeshis escaped poverty between 2000 and 2010 due to the rapid growth in aquaculture. The model highlights possibilities for aquaculture development in Antigua and Barbuda provided appropriate legal and institutional regimes to mitigate the negative impacts, and necessary fiscal incentives are put in place. The process has started with the development of



a few innovative small-scale aquaponics facilities that are energy efficient and well suited to the islands' dry conditions. Figure 5 highlights the exponential growth in fish production from these facilities since 2011.

## Public Utilities (Water, Electricity, ICT)

Universal access to safe drinking water is a fundamental need and a basic human right. Securing water goes a long way in reducing illness and death, especially among children. Since 2000, 1.6 billion people have gained access to basic drinking water services. In 2017, 785 million people still lacked a basic water service and among them 144 million people still collected drinking water directly from rivers, lakes and other surface water sources (UNICEF and WHO 2019).

Antigua and Barbuda has a well-developed public utilities system which provides access to safe drinking water despite prolonged periods of drought. The worst drought in modern times (1983–1985) devastated the agriculture sector, especially livestock (National Office of Disaster Services 2020). The government imported water from the neighbouring island of Dominica. They also purchased and installed a desalination plant at Crabbs on the north coast in 1987.

Antigua and Barbuda's long history of dealing with droughts was key to establishing the Antigua Public Utilities Authority (APUA). A government statutory agency set up under the Public Utilities Act 1973, it aims to ensure consumers receive efficient water services, electricity and telecommunications, including mobile and internet (APUA 2020a). APUA grew from the merger of the Electricity, Water and Telephone Department, under the Public Utility Act. It gives the company the right to carry out the following activities in the State of Antigua and Barbuda:

- \* Generate, distribute, supply and sell electricity
- \* Provide telephone services for calls within the State
- \* Supply, distribute, maintain and sell water services
- \* Provide incidental services relative to the above

To successfully fulfil APUA's mission, all policy and legislation comes from the Minister for Public Utilities—a member of the. The day-to-day operation of the organization is handled by the General Manager, assisted by a management team. The Board of Commissioners appointed by the Cabinet (APUA 2020a) oversees them.

The country's access to drinking water and basic sanitation is listed in Tables 2 and 3. For drinking water 'basic' means improved source with 30 minutes round trip collection time; 'limited' means improved source with over 30 minutes round trip collection time; and 'unimproved' means a source that does not protect against contamination. For sanitation, 'basic' means private improved facility which separates excreta from human contact; 'limited' means improved facility shared with other households; and 'unimproved' means a facility which does not separate excreta from human contact.

In 2017, 97 per cent of the population had basic access to drinking water whilst 88 per cent had access to basic (private) sanitation (UNICEF and WHO 2019). Hence, Antigua and Barbuda is on track to meet SDG 6 which aims to "ensure availability and sustainable management of water and sanitation for all" by 2030. Going forward greater focus has to be placed on increasing the coverage of basic (private) access to sanitation.

Due to the importance of safe drinking water to health and sanitation, APUA provides subsidies on drinking water. This, despite ageing infrastructure and the high cost associated with producing water via reverse osmosis. In November 2019, APUA received cabinet approval to secure a loan for EC\$ 30 million (US\$ 11.1 million) to refurbish its existing water network. This, The Antigua Observer reported, eventually cost over EC\$ 15 million (US\$ 5.6 million) a year because of obsolescence and excessive wear and tear. Despite a World Bank recommendation, the government has been reluctant to pass the cost on to consumers.

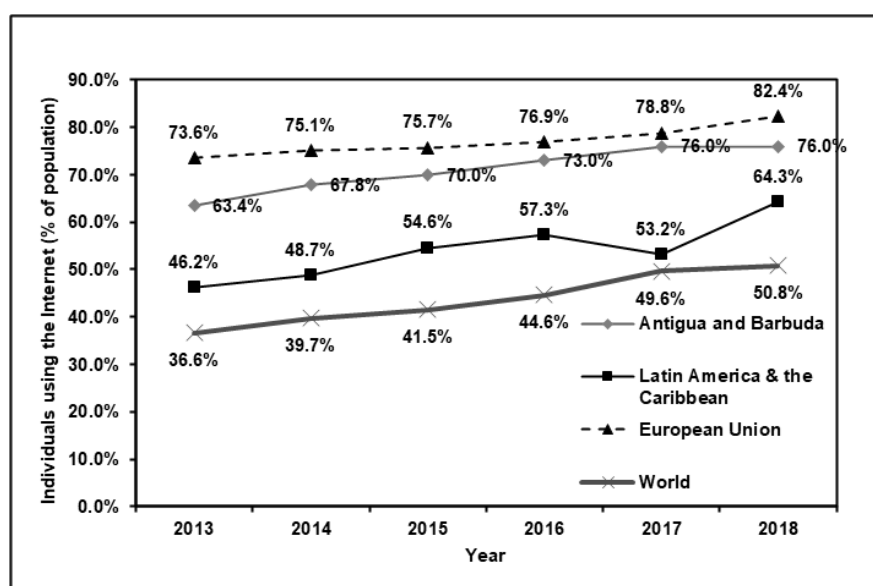


Figure 17. Trends in Internet usage for Antigua and Barbuda and selected country groupings (Data source: World Bank 2020b).

Renewable energy is now available to customers. APUA's interconnection policy allows for a maximum distributed non-fossil fuelled power penetration level of 15 per cent of feeder for yearly maximum demand (APUA 2020c); large scale commercial or industrial pilot systems (50kW–225kW) will also be considered for the purpose of gathering interconnection study data. Consumers who have renewable energy systems up to 5kW are required to install a bidirectional meter onto their property (APUA 2020c). The meter measures power coming into the property from APUA and also, the excess power sent to the APUA grid by the renewable energy system. The customer is billed for the power consumed from APUA and credited for the energy exported to APUA based on the avoided fuel cost. Customers who have systems in excess of 5kW are governed under the 'buy all, sell all' net billing system (APUA 2020c) wherein they pay for all of the power consumed. The energy produced by the customer is then credited at the avoided fuel cost.

According to the International Telecommunication Union, in 2018, 76 per cent of Antigua and Barbuda's population used the Internet (World Bank 2020b). Figure 19 highlights that the country's Internet usage by the population of Antigua and Barbuda is 1.5 times that of the world (50.8 per cent) and greater than that of the region (64.3 per cent). Usage was comparable to that of developed economies in Europe. Despite these national gains, the issue of the digital divide (in terms of skills and resources) cannot be ignored in the context of fisheries, gender, age and human development.

**Table 2. Access to drinking water for Antigua and Barbuda (Data source: UNICEF and WHO 2019).**

Year	At least basic (percentage of the population)	Limited (more than 30 mins) (percentage of the population)	Unimproved (percentage of the population)	Surface water (percentage of the population)	Annual rate of change in basic service
2000	98%	<1%	2%	<1%	-0%
2017	97%	<1%	3%	<1%	

**Table 3. Access to sanitation for Antigua and Barbuda (Data source: UNICEF and WHO 2019).**

Year	At least basic (percentage of the population)	Limited (shared) (percentage of the population)	Unimproved (percentage of the population)	Open defecation (percentage of the population)	Annual rate of change in basic service
2000	82%	4%	12%	1%	0.3%
2017	88%	4%	8%	<1%	

## Employment, Labour Relations and Decent Work

Antigua and Barbuda Medium-Term Development Strategy, emphasises “decent wages and work conditions” as vital to sustainable development (Government of Antigua and Barbuda 2015). Towards pursuing this goal, the following actions were proposed for 2016 to 2020:

- \* Continue efforts to implement a labour market information system in collaboration with the International Labour Organization (ILO). This is expected to facilitate better organization of employment programs and contribute to greater labour market flexibility.
- \* Undertake necessary studies to inform developing strategy which improves planning for the labour market. Led by the Statistics Division, periodic labour force surveys will provide the necessary scientific data to support development planning. This will contribute towards the development of the labour market information system as well as serve as a foundation for other labour market related studies. The labour market information system will track the movement of skills into Antigua and Barbuda from the OECS and CARICOM countries and vice versa. This information will provide evidence needed to develop strategies to smoothen transitions for other regimes (e.g., OECS and CARICOM regimes for free movement of persons) and to maximize benefits to the country.
- \* Studying the potential for enhancing the labour incentive framework will contribute towards enhancing labour.
- \* Studying the role providing unemployment benefits can play towards improving the flexibility of labour markets. Led by the Ministry of Labour, in collaboration with other stakeholders, this will also require review of regulations that govern labour relations.

Freedom of movement is the right of all OECS nationals in the economic union area—that is nationals from Antigua and Barbuda, Dominica, Grenada, St. Kitts and Nevis, Saint Lucia and St. Vincent and the Grenadines. The Revised Treaty of Basseterre lays out the provisions for individuals to enter and stay indefinitely in any OECS Protocol Member State except in circumstances where the OECS national poses a security risk to the receiving country. The free movement of persons is directly linked to broader goals of regional integration and harmony in Article 13 of the Protocol of Eastern Caribbean Economic Union in the Revised Treaty of Basseterre. The treaty specifies that the movement must be hassle-free, without harassment or impediments (International Organization for Migration [IOM] 2019). The CARICOM Single Market and Economy (CSME) free movement regime practiced a phased approach, facilitating movement through a limited list of categories of people. CSME Member States have expanded the categories able to move over time. This is done by the five facilitation of travel regimes. Three are relevant for the free movement of people:

- \* Indefinite stay for skilled nationals (e.g., musicians, media workers, university graduates, artistes, sportspersons)
- \* Movement of service providers

- \* Movement as part of the right of establishment (International Organization for Migration [IOM] 2019). Under the regime, spouses and dependent family members of any of the aforementioned categories are also allowed to move and spouses have the right to work.

The fisheries sector in general has benefited socially, economically and culturally from immigration whether by filling a labour vacuum in the sector created by the dominance of the tourism and construction or through the introduction of new fishing methods (e.g., “palang” and moored fish aggregating device [FAD]) or new fishery (Fisheries Division 2010). Figure 20 shows the diverse background of fishers residing in Antigua and Barbuda, highlighting a liberal immigration regime. New challenges like discord between natives and immigrants regarding rights to fish, introduction of undesired fishing methods or gears (reflected in the amended list of prohibited methods / gears in the Fisheries Regulations 2013) have arisen. There is now a need for management regimes to sustain fishery resources that are not traditionally targeted by natives (e.g., sea cucumbers).

The section on Education, Training and the Digital Divide provides a list of employment generation projects and skill development programmes for fishers and their dependants within and outside fishing and fish processing activities. In addition, the Ministry of Labour’s ‘One Stop Employment Centre’ facilitates employment and offers training services to job seekers at no cost (Directorate of Gender Affairs 2020). These services include (but are not limited to) computer and QuickBooks training, career counselling, resume and cover-letter assistance. During the pandemic and subsequent lockdowns, educational and training programmes were suspended or switched to online delivery via various platforms (Google Classroom, Zoom, GoToMeeting, etc.). The reopening of schools and other educational institutions with special protocols (e.g., temperature checks, mask wearing, physical distancing, reduced class size, etc.) started on September 7, 2020 using a phased approach.

Employment generation and skill development programmes have been relatively successful. Overall unemployment rates have moved to single digits over the past five years—13.7 per cent in 2015 and 8.7 per cent in 2018 (Statistics Division 2018c; Statistics Division 2020a). Despite the gains, youth unemployment between the ages of 15 to 24—33.9 per cent in 2015 and 25.7 per cent in 2018—remains a huge challenge (Statistics Division 2018c; Statistics Division 2020a). Fewer females are unemployed and yet the gender gap has widened from 1.6 per cent in 2015 to 2.6 per cent in 2018.

To address youth unemployment the following is essential:

- \* Greater emphasis needs to be placed on private sector driven growth through a package of incentives that are performance based; this will allow for greater job creation.
- \* Youth need to be inculcated with an entrepreneurship mind-set beyond simple academics (i.e., be able to create a job as opposed to looking for a job). This process has to start as early as primary school.
- \* Financing has to be scaled up to support youth entrepreneurship and business incubation.

Of the 191 active fishers sampled in 2019, 53 per cent had another source of income and occupation. Occupational pluralism or occupational multiplicity (having more than one job or multiple sources of income from various occupations or enterprises) is common in the fisheries sector. Figure 21 summarises the other (main) sources of income or employment by industry for active fishers in 2019. Some individuals had more than two jobs or enterprises. There was vertical integration of businesses (a fishing operation and a fish shop or seafood restaurant). This approach to mitigating business risk in fishing (damage or loss of vessel due a storm) by pursuing economic opportunities in other industries suggest that about half the fishers in Antigua and Barbuda have a somewhat robust degree of financial resilience and adaptive capacity. Figure 21 also demonstrates a high level of occupational mobility (the capacity to change occupation) of fishers, possibly due to the fact that 78 per cent of fishers have a secondary school education or higher (Figure 16) as well as other skills. Based on the nature of the most common gear

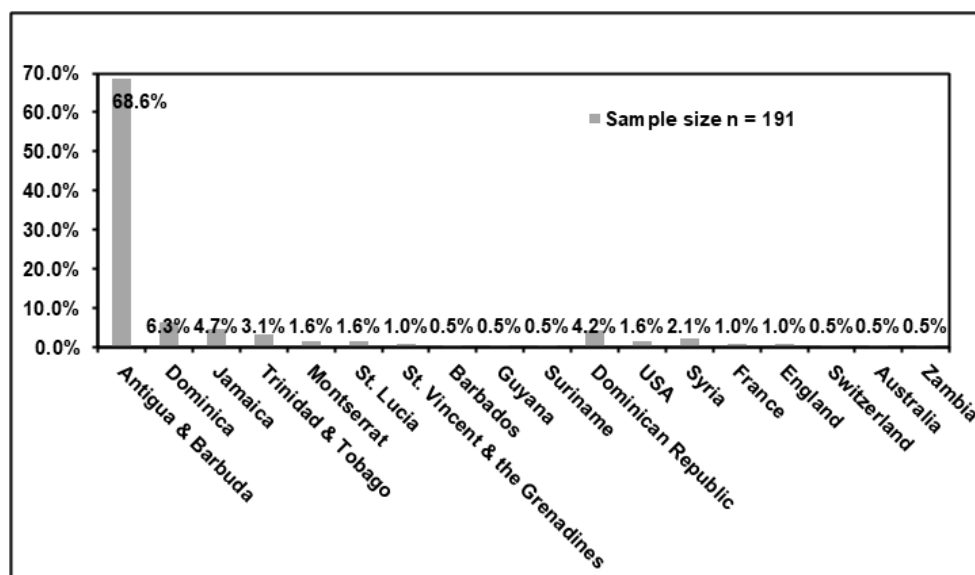


Figure 18. Country of birth for active fishers residing in Antigua and Barbuda in 2019  
(Data source: Fisheries Division).

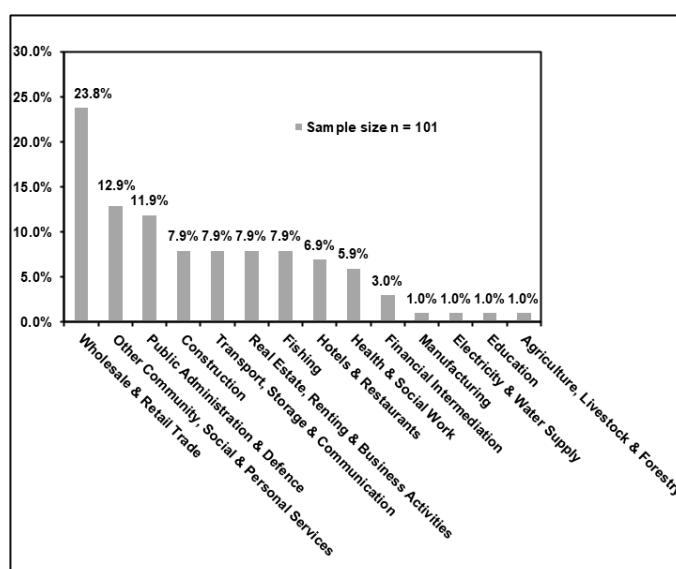


Figure 19. Other employment by industry for active fishers residing in Antigua and Barbuda in 2019  
(Data source: Fisheries Division).

employed (i.e., fish traps or pots), most fishers can have a regular 9-to-5 job during the day and fish overnight or on the weekend.

The Antigua and Barbuda Labour Code 1974 establishes the minimum standards employers must meet regarding labour practices and decent work in the country. It is the envy of many countries in the region (Labour Code Amendments, An Urgent Necessity 2019). The Antigua and Barbuda Labour Code protects workers fundamental human right of freedom, assembly and to form trade unions (United Nations General Assembly [UNGA] 2016). It also includes the terms of employment, health and safety issues, collective bargaining, etc. The Labour Code allows trade unions to organize, conduct activities and bargain collectively without interference. The legislation also prohibits retaliation against persons who take industrial action. Article E8 (1) of the Labour Code ensures equal pay for women in both the public and private sectors. Article C4(1) prevents discrimination “by reason of race, colour, creed, sex, age or political beliefs”.

The Labour Code also provides for collective bargaining, conciliation, mediation and arbitration managed by the Labour Commissioner under a tripartite mechanism—trade unions, employers and Government. The National Minimum Wage Committee, a tripartite body, is enshrined in the Labour Code. The national minimum wage is currently set at EC\$ 8.20 (US\$ 3.04) per hour. In the past, a sectoral minimum wage rather than one minimum wage right across the board was recommended. Employers used it to exploit workers who should really be earning above and beyond that amount (No Increase on the Horizon for Minimum Wage 2010).

The Labour Code is complemented by specific regulations related to fishing that governs Safety at Sea and Occupational Health and Safety (both dealt with in a separate section). Antigua and Barbuda has also ratified the Seafarers' Identity Documents Convention, 1958 (No. 108) as well as incorporate relevant technical requirements of the Work in Fishing Convention, 2007 (No. 188) into the Fisheries Act 2006 and Fisheries Regulations 2013. These technical requirements include: minimum age to engage in fishing (16 years); medical benefits and mandatory social security; training in occupational health and safety, and mandatory safety at sea; minimum requirement for food and potable water on board. In some cases this goes further than the Convention—subsistence fishers are subject to the same occupational health and safety, and safety at sea requirements as commercial fishers.

## Human Rights and Access to Justice

The preamble of the country's Constitution contains human rights provisions outlined in the United Nations Universal Declaration of Human Rights. Citizens of Antigua and Barbuda can petition the court in for perceived violations of civil liberties and rights granted by the Constitution (UNGA 2016). Citizens can go to court for judicial review of any action of the Executive Branch of Government which they feel has infringed on their human rights. Residents and citizens can access the Magistrates Court for redress in a variety of matters including, domestic violence, maintenance and access to children, liquor licensing etc. A vast majority of criminal cases commence in the Magistrates Court. The Industrial Court deals with matters of industrial actions, trade disputes, complaints of unfair dismissals by employees etc.

The Legal Aid and Advice Centre, a government assisted programme, offers advice and assistance to persons who cannot afford to pay the full legal cost of a lawyer in private practice (Ministry of Justice and Legal Affairs 2020). The service is not free but assistance is based on a means test (pay slip where relevant, ownership of assets, etc.), circumstances and available resources. A standard processing fee is requested, as well as a reasonable charge (based on the means test) for the legal service rendered. Its main areas of assistance include:

- \* Family matters: domestic violence, child support, access to and custody of children, adoption, divorce and maintenance
- \* Juveniles (children under the age of 18 years): consumer affairs matter, landlord and tenant, wills and inheritance matters, affidavits, power of attorney, deeds poll, notarising of documents, writing of letters, citizenship and passport forms (Ministry of Justice and Legal Affairs 2020)

Antigua and Barbuda has a 'dualist legal system' which means international human rights law is not directly applicable domestically. Antigua and Barbuda must first translate international law into national legislation before it can be applied by the national courts. The major human rights instruments which Antigua and Barbuda is party to are:

- \* The International Convention of the Elimination of all forms of Racial Discrimination,
- \* The Convention against Torture and other cruel forms of treatment or punishment,
- \* The Convention on the Rights of the Child,
- \* The United Nation Convention against Transnational Organized Crime,



- \* The International Convention for the Suppression of the Financing of Terrorism, and
- \* The United Nations Convention on the Rights of Persons with Disability (UNGA 2016).

In June 2018, Antigua and Barbuda became the first Caribbean country to ratify the Inter-American Convention against Racism, Racial Discrimination and Related Forms of Intolerance. They were only the third nation in the western hemisphere to do so, after Uruguay and Costa Rica. Prior to this, the Government of Antigua and Barbuda formally apologized before the Organization of American States (OAS) for discrimination against the Rastafarian community, a group that was historically criminalised due to their use of cannabis and religious beliefs. The Cannabis Act, No. 28 of 2018, permits the possession of 15 grams or less of cannabis for religious purposes.

For environmental justice, eleven countries, which include Antigua and Barbuda ratified the Escazú Agreement. The agreement entered into force in April 2021. It was the only binding agreement that emerged from the UN Conference on Sustainable Development (Rio+20) and the first environmental agreement adopted by the Latin America and Caribbean region. The Escazú Agreement seeks to ensure that all people have access to timely and reliable information, and are able to access justice regarding environmental matters. It also aims to contribute to achieving the 2030 Agenda for Sustainable Development. It will help guarantee environmental rights in the region; provide special protections for environmental human rights defenders; and ensure people play a part in decisions related to environmental challenges, such as climate change, ocean pollution and deforestation (International Institute for Sustainable Development [IISD] 2019).

Institutions which support human rights and access to justice in Antigua and Barbuda include the office of the ombudsman and the office of the Information Commissioner. The ombudsman is an independent constitutional person mandated to investigate complaints from persons aggrieved by the actions of government officials and statutory authorities (UNGA 2016). The ombudsman has no coercive powers but will resolve problems through a process of investigation and reconciliation. The office of the Information Commissioner was established by the Freedom of Information Act 2004, which seeks to give maximum effect to Section 12 of the Constitution (“every person has the right, and is free, to receive and to disseminate information and ideas without interference”; subject only to such exceptions as are reasonably justifiable in a democratic society). Citizens can seek the assistance of the Information Commissioner as a last resort to obtain information from a public authority when they have been unsuccessful in their attempts to get it. Public authorities are to provide the Information Commissioner any information requested, provided that the information is not in a category (personal information, legal privilege, commercial and confidential information, health and safety, defence and security, law enforcement, public economic interest) exempted by the Act (UNGA 2016).

Despite these successes, there is a level of distrust in the local and regional judiciary. This is highlighted by the failure of 2018 constitutional referendum to make the Caribbean Court of Justice the final court of appeal, replacing the London-based Judicial Committee of the Privy Council. Two thirds of the valid votes were required to be in favour of the proposed constitutional amendment to be approved. The final vote tally saw 8,509 (38 per cent) votes for the amendment, 9,234 (52 per cent) against and 39 invalid or blank. Some of the arguments that stood out during the public debates leading up to the referendum on why the country should retain the Privy Council were:

- \* people do not trust the local and regional judiciary
- \* people want emphasis on reforming and improving courts, prison, police stations and case management locally before thinking about changing the final appellate court
- \* the Privy Council does not cost the Antigua and Barbuda government anything so there is no risk of undue influence
- \* the Privy Council has served us well for nearly 200 years so there is no need to move or fix what exists (Defeat for CCJ, What is Next? 2018)



There is an urgent need to address the issue of trust in the judiciary system, the Magistrates Court, the High Court and the Court of Appeals as well as improve the efficiency of the local court system. Some of this has started with greater interaction between residents and the Antigua and Barbuda Bar Association on programmes such as “Bar Talk”. They are geared towards enlightening the general public on various aspects of the law and the functioning of the judiciary system. This complements other local programmes such as “Constitutional Corner” hosted by the Antiguan and Barbudans for Constitutional Reform and Education, Inc. (ABCRE), whose primary mission is to increase knowledge and awareness of the Constitution (ABCRE 2020). ABCRE is a New York-based non-partisan, registered not-for-profit organization involving the Antigua and Barbuda diaspora and local residents. ABCRE believes the Constitution should be taught in schools as part of the curriculum (ABCRE Wants Constitution Re-written 2017). This would go a long way in educating the public about their basic human rights under the Constitution and ensuring the citizenry are better stewards of our democracy and advocates for good governance.

Legal problems of the poor characteristically arise from systematic abuse embedded in the institutionalized operation of various public and private organizations affecting large numbers of similarly situated individuals. McCalla (1980) highlighted that conventional legal aid systems do not sufficiently appreciate four generic characteristics of the poor:

- \* the “narrow world” of the poor outside of which they feel disparaged, uncertain, and distrustful
- \* powerlessness in the sense of the absence of resources, knowledge, control, and vulnerability to exploitation
- \* lack of organizational participation and a failure to have developed and participated in issue-oriented organizations
- \* the complete inexperience of the poor with the legal system itself. Their experience with the law predisposes them to a negative, if not openly antagonistic attitude toward the legal system and to a conception of the law as a vehicle of deprivation and abuse to be feared, rather than as a viable and effective resource for vindicating rights.

Based on the aforementioned, it is necessary to supplement or replace individual representation with other forms of advocacy that would serve to aggregate the demands of the poor. A rural legal service programme, cognizant of the particular deficiencies and discrepancies of conventional legal aid schemes, and predicated on physical decentralisation and demographic equilibrium, is seen as the solution for better advocacy for the poor (McCalla 1980). This along with a more formal public-private partnership arrangement between the Ministry of Justice and Legal Affairs and the Antigua and Barbuda Bar Association may be one way of scaling-up legal assistance to the poor.

## **Social Inclusion, Domestic and Gender-based Violence**

A comprehensive legislative review conducted in 2014 included recommendations to strengthen the Offences against the Person Act, Sexual Offences Act, Domestic Violence Summary Proceedings Act 1999 and the Domestic Violence Act 2015, Criminal Law Amendment Act and Trafficking in Persons Act 2010 (Directorate of Gender Affairs 2020). The review, while highlighting existing gaps and providing recommendations, did not lead to any amendments within the Sexual Offences Act. The Sexual Offences Act 1995 does not recognise rape in marriage in all circumstances in accordance with Articles 3 (1) and 4 (1) of the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW). Since the review, the Trafficking in Persons Act 2010 has been amended to include provisions for protection of victims as well as establishment of a Trafficking in Persons Prevention Committee which has the power to formulate policies and programme. The Migrant Smuggling Prevention Act 2010 has been amended and now provides for increased penalties under the legislation. Additionally, the Evidence (Special Provisions) Amendment Act 2016 allows for vulnerable witnesses of crimes such as sexual assault and abuse

to give evidence without having to face the perpetrator in court. This is to reduce their potential re-victimisation (Directorate of Gender Affairs 2020).

The Domestic Violence Act 2015 aims “to provide greater protection for victims of domestic violence and to make provision for the granting of protection orders and for matters incidental thereto and connected therewith”. The Act provides a clear definition of acts of domestic violence and deals with access to protection orders, breach of protection orders, the duties and powers of the police when handling and investigating incidents of domestic violence etc. Marital rape is included as an offence of domestic violence in the instance of marital separation. It however does not unequivocally criminalize marital rape and define it based on lack of consent (Directorate of Gender Affairs 2020). The government recognizes the need to have effective systems in place to deal with sexual violence and has committed to reviewing the Sexual Offences Act to address existing gaps.

The government is in the process of developing a National Prevention of Harassment and Discrimination Policy to deal with cases of sexual harassment in public places (including workplace and public transportation). This was delayed due to the pandemic. Additionally, it has committed to passing legislation on sexual harassment modelled from the CARICOM and OECS model sexual harassment bills (Directorate of Gender Affairs 2020). These seek to protect both women and men from unwanted sexual advances, requests for sexual favours, and crude sexual behaviour that affects the quality of life by creating an intimidating, hostile or offensive environment.

Institutions and programmes available to support victims of domestic and gender-based violence include:

- \* The Directorate of Gender Affairs Support and Referral Centre: a one-stop location with integrated services (e.g., legal, medical, psychosocial, and referral services) for survivors of domestic and gender-based violence (Directorate of Gender Affairs 2020). The support unit, located in-house, is responsible for obtaining clients’ statements, investigating sexual offence cases, and providing assistance with retrieval of property and clothing if a client decides to leave the abuser. Clients can also receive a complete forensic medical examination by a doctor following a rape or sexual assault. A sexual assault evidence collection kit is used during the examination.
- \* The Sexual Offences Model Court: The Judicial Reform And Institutional Strengthening Project (JURIST) Project, with support from the CCJ and the Government of Canada, established a Sexual Offences Model Court at the Antigua and Barbuda High Court in 2019 (Directorate of Gender Affairs 2020). Its main objectives are to provide timely, gender responsive and coordinated response to complainants of sexual assault cases, ensure gender coordination between courts and agencies that provide services to sexual assault complainants, improve the monitoring and evaluation for sexual offences and reduce the secondary trauma that complainants experience through mechanisms such as video conferencing technology and special waiting rooms, etc.
- \* Women Against Rape (WAR): a non-governmental organization whose mission is promoting inclusive health parity and victim justice through advocacy, education and direct services geared towards women and families affected by sexual violence (WAR 2020). Direct services provided include counselling, client advocacy and referrals to sensitive agencies.

Despite various policies and programmes that support women and their gains in education, female fishers account for a mere 7 per cent of active fishers based on samples from 2019 (Figure 22). It is possible that the number is higher but goes unregistered because of gender roles assigned in society. Spouses or girlfriends invested in fishing operations often leave the registration to their male counterparts. This creates challenges when relationships are severed since their ownership in the fishery is not legally registered. Spouses or girlfriends also provide unpaid work in areas such as processing or marketing as part of their contribution to the family business. A lot of work needs to be done to mainstream the role of women in the sector.

The Caribbean Regional Fisheries Mechanism (CRFM) Secretariat initiative 'Mainstreaming Gender Equality in the Fisheries of the Caribbean' aims to improve sustainable fisheries for vulnerable populations in the Caribbean, particularly women and girls, in order to advance gender issues, decent work, and youth involvement in the sustainable development of fisheries (Caribbean and the North Brazil Shelf Large Marine Ecosystems [CLME+] 2020). The initiative focusses majorly on capacity building, since mainstreaming gender, youth and decent work is a recurring theme in the Caribbean's fisheries sector (CRFM 2020a). A greater understanding of what constitutes gender equity and equality, youth empowerment and decent work, helps ensure the implementation of necessary actions for achieving inclusive and equitable sustainable fisheries. The various activities conducted throughout this initiative, and specifically the capacity building activities aim to:

- \* Establish a knowledge base and build awareness of gender issues and gender dimensions of fisheries in the Caribbean.
- \* Enhance the capacity of stakeholders to mainstream gender in the project cycle.
- \* Share the findings and results from the research conducted under the initiative to guide policies.
- \* Support CRFM Member States for gender-sensitive indicator development, monitoring and evaluating gender mainstreaming in sustainable fisheries.
- \* Help CRFM Member States develop national gender action plans for sustainable fisheries based on the specific priorities and needs at the national level, and dependent on engagement with stakeholders (CRFM 2020a).

The recently developed CRFM five-year Gender Analysis and Action Plan on Gender Mainstreaming in Fisheries provides directions for strategic priorities and activities on gender mainstreaming throughout the region (CRFM 2020b). Priority areas include:

- \* Enhancing collection and analysis of comprehensive sex-disaggregated socioeconomic data in fisheries.
- \* Increasing understanding of the differentiated social and cultural factors impacting labour and poverty of women, men, and youth in fisheries, and creating gender-responsive approaches to address them.

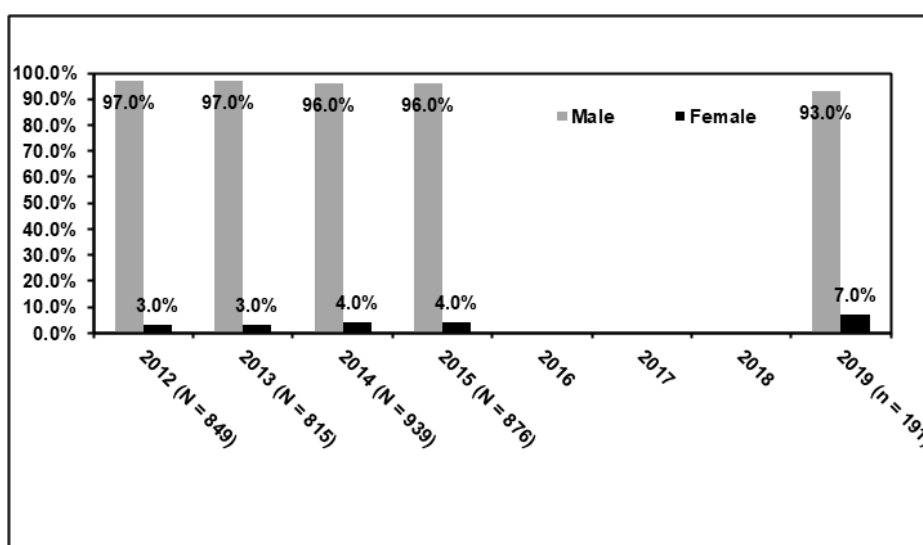


Figure 20. Trend in the composition of active fishers in Antigua and Barbuda by sex (Data source: Fisheries Division).

- \* Enhancing cross-sectoral collaboration and knowledge generation on gender equality and youth engagement in fisheries.
- \* Strengthening engagement with fisherfolk organizations and local level stakeholders on implementing gender-responsive approaches in fisheries.

The plan is expected to be reviewed at the mid-term of implementation to determine its effectiveness, and adjusted if necessary (CRFM 2020b).

## Climate Change and Natural Disasters

According to the Centre for Research on the Epidemiology of Disasters, Antigua and Barbuda is among the most highly exposed to natural disasters—ranked in the top four countries by land area and population affected by disasters from 1970 through 2002 (International Monetary Fund [IMF] 2004). Antigua and Barbuda was impacted by Hurricanes Luis and Marilyn in 1995, Hurricane Georges in 1998 and Hurricane José and Tropical Storm Lenny in 1999. These disasters caused cumulative damage of about 40 per cent of the GDP (IMF 2004). Cumulative value for the loss of gear (mainly traps) due to Hurricane Luis, Georges, José and Lenny was US\$ 1.8 million (Horsford 2000). Estimated value for the damage done to vessels and infrastructure by Hurricane Luis and Georges was EC\$ 4.24 million (US\$ 1.57 million) and EC\$ 3.35 million (US\$ 1.24 million), respectively. More recently, in 2017, most Disaster Needs Assessment for Hurricane Irma estimated the total damage (destroyed physical assets) for Antigua and Barbuda as EC\$ 367.5 million (US\$ 136.1 million), with losses amounting to approximately EC\$ 51.2 million (US\$ 18.9 million), and recovery needs amounting to EC\$ 600 million (US\$ 222.2 million). Approximately 95 per cent of the houses on Barbuda were damaged or destroyed, and the total recovery needs for this sector were estimated at EC\$ 214.9 million (US\$ 79.6 million). Hurricane Irma, the ninth named hurricane of the 2017 Atlantic hurricane season—and the most powerful on record, with maximum winds of 290 kilometres per hour — made a direct hit on the island of Barbuda on September 6, 2017. In the same year, only 5.9 per cent of fishing vessel owners reported (Figure 23) that they had vessel insurance (Fisheries Division 2020a). High premiums, unsuitable coverage (the maritime limits of the policy normally did not cover the extent of fishing operations) and the type of coverage (the deductible in marine hull insurance policy was high) were cited as the main reasons for not availing insurance.

As a matter of priority, in 2018, a Protocol on Climate Change Adaptation and Disaster Risk Management in Fisheries and Aquaculture was approved for CARICOM States during the 8<sup>th</sup> Special Meeting of the Ministerial Council of the Caribbean Regional Fisheries Mechanism (CRFM). The approved Protocol under the Caribbean Community Common Fisheries Policy (CCCFP) aims to ensure development of a regional fishery sector that is resilient to climate change and ocean acidification, and enhanced through comprehensive disaster management, and sustainable use of marine and other aquatic living resources and ecosystems (CRFM 2018b). Its overall objective is to support member states adapt to the impacts of climate change, and build resilience in fisheries sector livelihoods assets and ecosystems. They will do this through research and integrated adaptive planning and policy development, awareness and capacity building and regulatory reforms.

The protocol was fast-tracked with support from the Food and Agriculture Organization of the United Nations (FAO) / Global Environment Facility (GEF) funded Climate Change Adaptation in the Eastern Caribbean Fisheries Sector (CC4FISH) Project. The initiative was implemented in the context of a technical cooperation agreement signed between CRFM and FAO (CRFM 2018a). The project's main objective is to increase resilience and reduce vulnerability to climate change impacts in the Eastern Caribbean fisheries sector through introduction of adaptation measures such as capacity building of fishers and aquaculturists and mainstreaming of climate change into fisheries governance (FAO 2020c).



With technical and financial from CC4FISH, Antigua and Barbuda has developed a Climate Smart Aquaculture Feasibility study and is in the process of developing its Aquaculture Management Strategy which will include climate change adaptation and disaster risk management (FAO 2020d). The goal is to increase resilience of aquaculturists as well as attract youth to aquaculture. Existing aquacultures facilities were visited in 2018 and recommendations were provided to improve resilience to extreme weather events—expected to increase in frequency and power in the coming years due to climate change. The project is also working on improving aquaponics systems at



Figure 21. Destruction of fishing vessels and buildings in Codrington, Barbuda by Hurricane Irma, September 2017.

schools to improve learning outcomes and support aquaculture development (FAO 2020d). To-date over 60 fishers and vendors have been trained in Food Safety and Handling Best Practices, and fisheries authorities have been trained as Trainers in Fisheries and Aquaculture Response in Emergencies using FAO guidelines for Post Disaster Damage and Needs Assessments.

In order to address the issue of insurance in the fisheries sector and recognizing that fisheries can play an important role in disaster recovery (e.g., food security, income), a rapid bounce back mechanism was developed to meet the needs after a disaster. The Caribbean Ocean and Aquaculture Sustainability Facility (COAST) is an innovative climate risk insurance mechanism to promote food security, livelihoods of fishers, resilient fisheries, sustainable management of coastal infrastructure and disaster risk reduction in the Caribbean (Caribbean Catastrophe Risk Insurance Facility Segregated Portfolio Company [CCRIF SPC] 2019). Designed to drive sustainable finance for Caribbean fisheries, COAST was envisioned as a parametric insurance product at a scale relevant to vulnerable fishing communities. While it is governments that purchase COAST policies, the parametric insurance product is unique, in that it incorporates a livelihood protection component (akin to micro-insurance) and a tropical cyclone component like sovereign insurance (CCRIF SPC 2020). The COAST product provides coverage for losses caused by bad weather to fishers and for direct damages caused by tropical cyclones (wind and storm surge) to fishing vessels, fishing equipment and fishing infrastructure. Bad weather is defined as high waves and occurrence of heavy rainfall throughout the policy year (CCRIF SPC 2020). For the 2019-20 policy year, the COAST product for the fisheries sector was available to two pilot countries, Grenada and Saint Lucia. The Government of Antigua and Barbuda intends to join the initiative once the pilot stage is completed.

## Environment, Biodiversity and Sustainability

The Environmental Protection and Management Act No. 10 of 2019 is among the main legislative frameworks governing environment management. The Act gives the Department of Environment means to formulate programs and policies with an aim towards the preservation and conservation of natural environments, with a stark focus on sustainable development (Department of the Environment 2020a). On a regional and international level, the Environmental Protection and Management Act sets the regulatory framework for meeting obligations under Multilateral Environmental Agreements (MEAs) to which Antigua and Barbuda is party.

The National Strategic Biodiversity Action Plan (2014-2020) aims to ensure the biological diversity of Antigua and Barbuda is sustainably and equitably used, protected and conserved so that it contributes positively to the social and economic development of the country (Government of Antigua and Barbuda 2014). In order to achieve this, the Plan seeks to:

- \* Establish a national system, including protected areas, for the management and conservation of biodiversity.
- \* Strengthen the capacity of government natural resources management institutions, as well as non-governmental organizations, to support the overall aim of the strategy.
- \* Develop, improve and enforce ecological legislation to provide adequate protection of biological diversity.
- \* Strengthen public awareness of environmental issues, ecological education and public participation in decision.

In order to achieve its targets, the government has embarked on a sustainable financing plan for biodiversity and in particular, protected areas management. This financing mechanism—the Sustainable Island Resource Fund—is a self-sustaining non-profit entity established under the Environmental Protection and Management Act which will earn revenue and attract funding to maintain the protected areas and reduce fossil fuel consumption in Antigua and Barbuda (Government of Antigua and Barbuda 2014).

Antigua and Barbuda is the first country in Latin America and the Caribbean to ban single-use plastic bags in an effort to address micro-plastic in the marine environment. To work towards a healthier, cleaner environment, the government has banned plastic shopping bags. The ban covers the importation, distribution and sale of single-use plastic bags after June 30, 2016 (Department of the Environment 2020b).

Regional and international institutions that play a role in biodiversity and sustainability include:

- \* Ocean Governance and Fisheries Unit of the OECS: It aims to reconcile sector-specific international legal instruments with a more comprehensive, ecosystems-based approach necessary to diagnose complex problems and establish priorities. To-date, a vision and the elements of a framework for ocean governance have been articulated in the Eastern Caribbean Regional Ocean Policy (OECS 2020b).
- \* Caribbean Regional Fisheries Mechanism (CRFM): The mechanism consists of a Ministerial Council, a Fisheries Forum (a technical and scientific advisory body to the Ministerial Council), and a Fisheries Technical Unit or Secretariat. The Ministerial Council, comprising of the Ministers responsible for Fisheries in each Member State, is the highest decision-making body of the CRFM and is responsible for formulating the policy of the Mechanism (CRFM 2020c).
- \* Western Central Atlantic Fishery Commission (WECAFC): they aim to promote effective conservation, management and development of living marine resources of the area of competence of the Commission, in accordance with the FAO Code of Conduct for Responsible

Fisheries, and address common problems of fisheries management and development faced by members of the Commission (FAO 2021a). WECAFC area of competence includes the Western Central Atlantic (area 31) and the Northern part of the South West Atlantic (area 41).

The Caribbean Community Common Fisheries Policy— a binding treaty, approved after an extensive negotiation process, by the CRFM Ministerial Council during its 4<sup>th</sup> Meeting held in Antigua and Barbuda in 2011—focusses on cooperation and collaboration of Caribbean people, fishers and governments in conserving, managing and sustainably utilizing fisheries and related ecosystems. The 51<sup>st</sup> Special Meeting of the Council for Trade and Economic Development in Agriculture, held in Suriname in 2014, adopted the CCCFP as a final policy document of the Caribbean Community (CRFM 2019). The policy supports the welfare and well-being of Caribbean people to benefit from a strong regional fisheries policy. In addition to CCCFP, two protocols have been approved under the CCCFP by the Ministerial Council in 2018: the Protocol on Climate Change Adaptation and Disaster Risk Management in Fisheries and Aquaculture and the Protocol on Securing Sustainable Small-Scale Fisheries for Caribbean Community Fisherfolk and Societies (Caribbean Community Secretariat 2020). The latter incorporates SSF Guidelines into regional policy and practice.

There has been a shift in paradigm for national fisheries legislation from ‘optimal utilization’ towards a more ‘holistic and sustainable approach’ regarding fisheries management. Ecosystem based approaches to fisheries management and the ‘precautionary principle’ are the cornerstones of the Fisheries Act 2006 and Fisheries Regulations 2013 (Fisheries Division 2010). The Ecosystem Approach to Fisheries (EAF) recognizes the need to maintain the ecosystem resources for their sustainable use, while acknowledging that humans are an integral part of the process (FAO 2021b). EAF seeks to improve all fishery management processes by adopting risk management principles recognizing that complete knowledge is never available and not essential to start the process. The precautionary approach is set out in the FAO Code of Conduct for Responsible Fisheries (Articles 6.5 and 7.5) and the 1995 United Nations Fish Stock Agreement (Article 6 and Annex II). In keeping with EAF, measures adopted to mitigate fisheries impact on the environment and non-target species include:

- \* mandatory biodegradable panels in fish pots to prevent ‘ghost fishing’
- \* restrictions on the length, type and soak time of gill nets to mitigate bycatch of marine turtles
- \* ban on certain harmful fishing gears / methods (e.g., large driftnet more than one kilometre in length, hookah rig, multi-panel nets)
- \* closed seasons to protect spawning or breeding species such as the Caribbean spiny lobster, queen conch, Nassau grouper, red hind, coney, parrotfish (Scaridae) and marine turtles
- \* harmonization of closed seasons with other range States.
- \* protection of critical marine habitats through the use of Marine Protected Areas.

Additionally, there is a National Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing (NPOA-IUU) (Fisheries Division 2010) and a National Plan of Action for the Conservation and Management of Sharks (NPOA Sharks) (Fisheries Division 2015), which recognizes the important role top predators play in the ecosystem. The former is intended to support the International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing (IPOA-IUU), developed by the FAO in 2001. The NPOA-IUU utilises a mixture of traditional strategies like enhanced monitoring, control, surveillance, enforcement as well as increased fines and modern approaches like traceability, catch certification and consumer awareness. A Regional Plan of Action to Prevent, Deter, and Eliminate Illegal, Unreported, and Unregulated Fishing (RPOA-IUU) was endorsed by WECAFC at its July 2019 meeting.





Figure 22. View of the North East Marine Management Area from Seatons Village, Antigua.

## Fisheries Management and Governance Approach

At the regional level the Caribbean Network of Fisherfolk Organizations (CNFO) is a network of national and primary fisherfolk organizations and fisherfolk leaders operating in the CARICOM. Their mission is to improve the quality of life for fisherfolk and develop a sustainable and profitable industry through networking, representation and capacity building. The three areas of strategic focus for the organization are capacity building, policy advocacy and policy engagement (CNFO 2020a).

The CNFO's objectives include:

- \* Promoting and supporting the development of fisherfolk organizations, particularly national fisherfolk organizations.
- \* Developing the capacity and knowledge base of its membership to manage successful fisheries operations, and to participate in sustainable fisheries governance and management at all levels, from local to global and policy to practice.
- \* Promoting mutually beneficial partnerships with other entities, that seek to promote the interests of small-scale fishers.
- \* Actively advocating for the interests of fishers and their organizations.
- \* Representing the views, interests, concerns and positions of Caribbean small-scale fishers in relevant fora.
- \* Promoting the ecosystem approach to fisheries.
- \* Building resilience and adaptive capacity of fishers, fisherfolk organizations and fishing communities to deal with the likely impacts of climate change and disasters (CNFO 2020a).

At the regional level the CNFO has made significant contributions to developing a Caribbean Community Common Fisheries Policy and operationalizing the Castries (St. Lucia) Declaration on IUU (Illegal, Unreported and Unregulated) fishing. It has attained observer status on the CRFM. It also developed a regional Code of Conduct for Caribbean Fisheries (2020-2025) under the FAO / GEF StewardFish Project in partnership with The University of the West Indies, Centre for Resource Management and Environmental Studies (UWI-CERMES).

At the national level the CNFO (and its predecessor the Caribbean Network of Fisherfolk Organizations – Coordinating Unit) has collaborated and established partnerships with fisheries management agencies (educating fishers on the FAO Code of Conduct for Responsible Fisheries and the Ecosystem Approach to Fisheries). It aided in the development of Antigua and Barbuda's National Plan of Action to Prevent, Deter and Eliminate IUU Fishing (NPOA-IUU) (Fisheries Division 2010) and worked with the Fisheries Division and FAO (Figure 25) in the development of Antigua and Barbuda National Plan of Action for the Conservation and Management of Sharks (NPOA Sharks) (Fisheries Division 2015). The CNFO coordinates with national and primary fisherfolk organizations to assist fishers in crisis.

The following is a list of local fisher organizations functioning in Antigua and Barbuda:

- \* Antigua and Barbuda Fishermen Co-operative Society Ltd. (formerly the St. John's Fishermen Co-operative Society Ltd).
- \* Antigua and Barbuda Sport Fishing Association: the body representing pelagic sport fishers.
- \* Antigua and Barbuda Fishermen's Alliance: an umbrella organization that deals with major issues affecting the fisheries sector.
- \* Antigua and Barbuda FAD Fishers Association: constituted under the Friendly Societies Act in 2017 to promote the development and management of moored fish aggregating device (FAD) in Antigua and Barbuda waters; this was one of the successful outcomes of the Japan International Cooperation Agency (JICA) Caribbean Fisheries Co-Management (CARIFICO) Project.
- \* Barbuda Fisher Folk Association: constituted under the Friendly Societies Act in 2015 to improve the livelihood of fishers in Barbuda.
- \* South Coast United: is a fledgling organization that represents the interests of fishers from Antigua's south coast.
- \* Spear Fishermen's Association: also a fledgling group advocating for changes in the Fisheries Regulations 2013 concerning spear fishing and traditional rights to landing site on the east coast of Antigua.

In 2001, the Fishermen's Alliance successfully worked on issues surrounding the dredging project for St. John's Harbour—the main seaport in Antigua (Horsford and Lay 2013). The chief issue was the impact of dumping dredged silt at sea on the marine environment, fisheries and the dive sector. The Alliance was successful in influencing the selection of the marine site (originally the Alliance lobbied for land-based disposal) for dumping by identifying important fishing grounds..

The Alliance also successfully negotiated terms of price control on fish, managing to convince the government that market forces should dictate the ex-vessel price for fish after the government proposed re-introducing price control (Lay 2001).

Despite these achievements, the main challenge local and national organizations face is their viability beyond a particular issue (i.e., keeping members interested in the process of governance once a problem or issue is solved). The CNFO hopes to revitalize a number of these organizations as they consolidate efforts to develop the leadership and management skills of their members. The CNFO Virtual Leadership Institute in collaboration with University of the West Indies Centre for Resource Management and Environmental Studies (UWI-CERMES) under the FAO / GEF StewardFish Project seeks to address the leadership capacity gap through a series on online training and outreach (CNFO 2020c).

Over the past decades there have been gradual shifts in fisheries governance in Antigua and Barbuda from one that is top-down and centralized to one that is participatory and devolved (Horsford and Lay 2013). This shift comes from recognizing potential benefits to be gained from





Figure 23. Contribution by the CNFO Representative, Mr. Mitchell Lay (forefront), in the review of the draft National Plan of Action for the Conservation and Management of Sharks, Point Wharf Fisheries Complex, Antigua, March 2015.



Figure 24. Fisheries Division's staff and fishers from the south coast of Antigua engaging in field research on the queen conch (*Strombus gigas*) in 2012.

greater involvement of stakeholders in the decision-making and management regime. Benefits include an increased understanding of management decisions, improved compliance by user groups, mitigated user conflicts, improved relationship with stakeholders and an increased effectiveness of fisheries governance.

The partnership of the Fisheries Division with the queen conch fishers from the south coast of Antigua is perhaps one of the best examples of collaborative co-management (i.e., where Government and stakeholders share decisions) in the region (Horsford and Lay 2013). In 2011 and 2012, the Fisheries Division sought active participation of conch fishers in fisheries research (Figure 26). This was in response to rising costs associated with managing of queen conch (*Strombus gigas*), an Appendix II listed species under the Convention on International Trade in

Endangered Species of Wild Fauna and Flora (CITES). International trade in queen conch or parts thereof (meat, souvenir shells, etc.) is regulated by CITES and subject to the provisions of the Convention. The shift in governance led to:

- \* A negotiated two-month closed season for conch. Fisheries authority had originally proposed a four-month closed season but only two months was approved due to the relative good health of stocks
- \* Increased understanding of management decisions due to stakeholder participation in research
- \* Improved compliance by conch fishers. Mean rate of compliance regarding conch size restrictions was 88 per cent.
- \* A limited entry management regime, where individuals who have been fishing the resource historically are given priority access thereby enhancing their stewardship through securing tenure.
- \* Increased effectiveness and cost efficiency of fisheries governance (Horsford and Lay 2013).

## Safety at Sea and Occupational Health and Safety

According to Antigua and Barbuda's plan of action to prevent, deter, and eliminate illegal, unreported and unregulated (IUU) fishing, vessel safety violations accounted for 10 per cent of breaches in fisheries legislation (Figure 27) from 1992 to May 2009 (Fisheries Division 2010). For the same period there was one fatality and 28 fishers rescued from as far afield as the neighbouring island of Nevis (Figure 28). At least three fishing vessels ran aground on the surrounding reefs around Antigua and Barbuda for the same period. Other areas of concern include the occupational health and safety of scuba divers employed in the queen conch and spiny lobster fisheries.

In an effort to address safety at sea and occupational health and safety, the Fisheries Act 2006 complements the Labour Code and draws on two sources; the detailed set of harmonised provisions for fishing vessel registration and safety, included in Annex VI to the Final Report of the Food and Agriculture Organization of the United Nations (FAO) regional project on Standards for the Construction and Survey of Small Fishing Vessels (TCP/RLA/0069); and Part III of the Draft Harmonised OECS Fisheries Act (FAO 2004). The register of local fishing vessels fulfils a number of functions. It ensures that:

- \* No local fishing vessel shall be used for fishing or related activities unless it has been entered in the register (Section 11 of the Act); Registration also becomes a prerequisite for the issuance or validity of a local fishing license
- \* Relevant information relating to local fishing vessel is kept in the register, and the information is updated. This is vital for search and rescue operations
- \* Local fishing vessels are required to be seaworthy and adhere to relevant standards. This is ensured by requiring inspections and certification
- \* Local fishing vessels must have approved names and must display such names
- \* Local fishing vessels must be marked with registration numbers and other identification markings

Mandatory safety equipment listed in Schedule II of the regulations include:

- \* Life jacket for each person on board
- \* VHF radio capable of receiving and transmitting messages or signals
- \* Marine tool kit to enable crew to carry out minimal repair to the vessel while at sea
- \* Basic spare kit

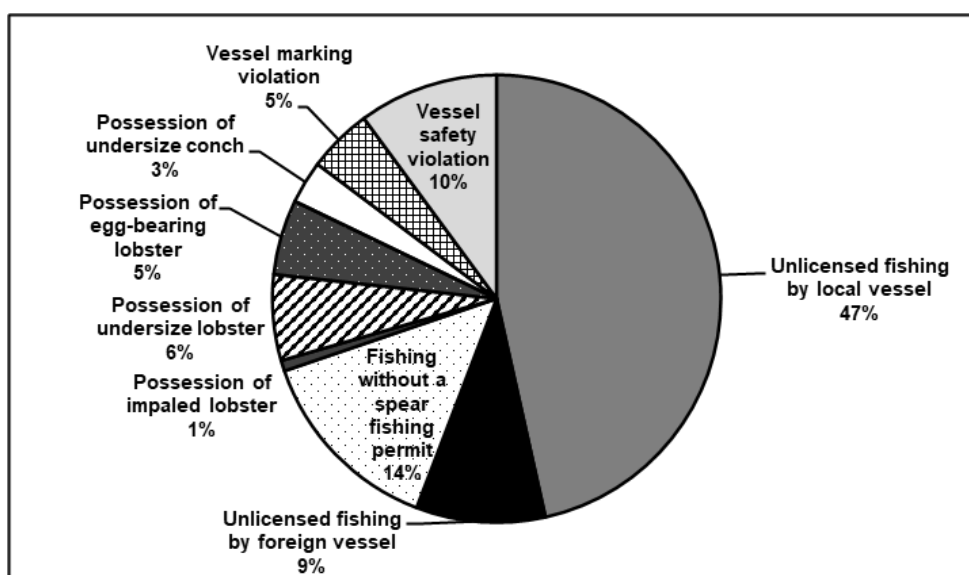


Figure 25. Beaches of the fisheries legislation of Antigua and Barbuda from 1992 to May 2009 (N = 129 compounded offences) (Data source: Fisheries Division 2010).

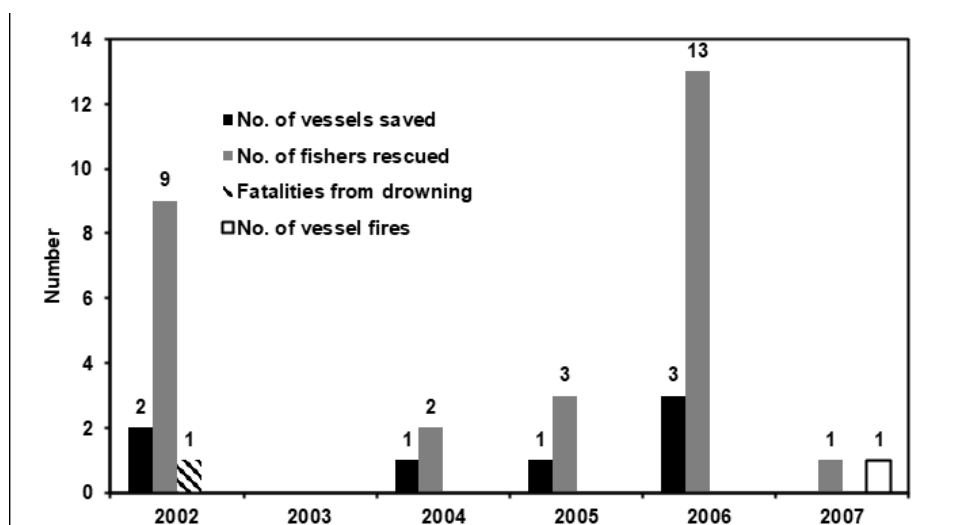


Figure 26. Major incidents relating to occupational health and safety in the fisheries sector of Antigua and Barbuda (Fisheries Division 2010).

- \* Sea anchor of a size and design to slow the drift of the boat
- \* Sound making device, to prevent collision at sea or get the attention of a passing vessel
- \* Not less than five gallons of reserved fuel for any motor on board the vessel
- \* Battery-powered flash light.
- \* Small mirror capable of being used as a reflector.
- \* Flares of type A, B, or C.
- \* Not less than one gallon of fresh drinking water for each person on board the vessel, stowed in a closed and secure manner

- \* Non-perishable rations sufficient to sustain two persons for at least 3 days
- \* First aid kit.

In addition, the Fisheries Division and/or Coast Guard improved occupational health and safety in the fisheries sector by:

- \* Increasing the number of vessel safety inspections at sea
- \* Increasing the level of the minimum fine from EC\$100.00 (US\$37.04) to EC\$500.00 (US\$185.19) for first offence related to vessel safety
- \* Detaining vessel until compliance, for repeat offenders
- \* Mandatory training and / or certification in First Aid and Cardiopulmonary Resuscitation in collaboration with the Red Cross and Dive Safety with the Antigua and Barbuda Search and Rescue (ABSAR)
- \* Introducing a coastal monitoring network for fishing vessels using an Automatic Identification System (AIS) to enhance search and rescue. The system consists of three radar antennas with the capability to cover up to 90 nautical miles each and three Automatic Identification System (AIS) receivers which incorporate a standardized VHF transceiver with a positioning system such as a GPS receiver, along with other electronic navigation devices to allow maritime agencies to monitor and track vessel movements

## Other Challenges and Opportunities:

### Vulnerability to Exogenous Economic Shocks

The fact that Antigua and Barbuda is a small open economy heavily dependent on tourism makes it highly vulnerable to exogenous economic shocks. Tourism is the economic 'engine of growth', generating foreign exchange and providing employment. The World Travel and Tourism Council (2020) estimated that travel and tourism (including transportation) contributed to 42.7 per cent of the country's total GDP in 2019 and accounted for 90.7 per cent of total jobs, including those indirectly supported by the industry. The International Monetary Fund (2005) indicated that the correlation between industrial country output and domestic output was strongly positive for Antigua and Barbuda (0.7) and therefore, domestic business cycle fluctuations were highly correlated with business cycle fluctuations in industrial countries. For these reasons, events such as the September 11, 2001 terrorist attack in the United States and the recession between 2007-09 resulted in major downturns in domestic output. In the case of the latter, real GDP for Antigua and Barbuda contracted by 9.6 per cent in 2009 (Eastern Caribbean Central Bank [ECCB] 2010) due to a decline in tourism and construction.

Within the fisheries sector, Codrington community in Barbuda is most vulnerable to exogenous economic shock due to a heavy reliance on mainly live lobster exports to sustain the community. On average, 84 per cent of the lobsters landed in Barbuda are exported to the neighbouring French Overseas Departments of Guadeloupe and Martinique (Horsford 2004) and more recently the Dutch Overseas Country of St. Maarten. Low local demand due to a small population—1,784 in 2015 (Statistics Division 2018c)—and the absence of major hotel infrastructure, limits marketing options for fishers. Peaks in exports tended to coincide with the tourism season (i.e., December to April) in EU Member States Overseas Countries and Territories (Horsford 2004).

Figure 29 indicates that export of live lobster is negatively correlated with stayover visitor arrivals. For every 1000 hotel stayover guests arriving in Antigua and Barbuda per year, 533 kg less lobster is exported annually (Horsford 2016). While the data used is for Antigua and Barbuda, over 95% of the visitors stayed in Antigua due to limited accommodations in Barbuda. Fishing



communities in Antigua are heavily dependent on the demand from domestic tourism, which is subject to the economic performance of developed countries.

In order to address identified vulnerabilities, the following measures are recommended:

- \* Diversification of the national economy from tourism: Agriculture, the blue economy, including capture fisheries for under-utilized pelagics and aquaculture development are all viable areas for expansion. Antigua and Barbuda has managed to increase landings of large pelagics utilizing the moored fish aggregating device (FAD) under the Japan International Cooperation Agency (JICA) Caribbean Fisheries Co-Management (CARIFICO) Project.
- \* Diversification of source markets within the tourism sector: With the middle class growing in emerging economies like China and India, they are expected to play a larger role as sources for tourism
- \* As part of fiscal policy, resilience planning needs to be incorporated into budget preparation and economic development initiatives
- \* For Barbuda, the export-oriented lobster fishery should build greater linkages with the tourism sector in Antigua in order to improve business resilience; provisioning of the yachting and cruise tourism sector are all unexplored areas

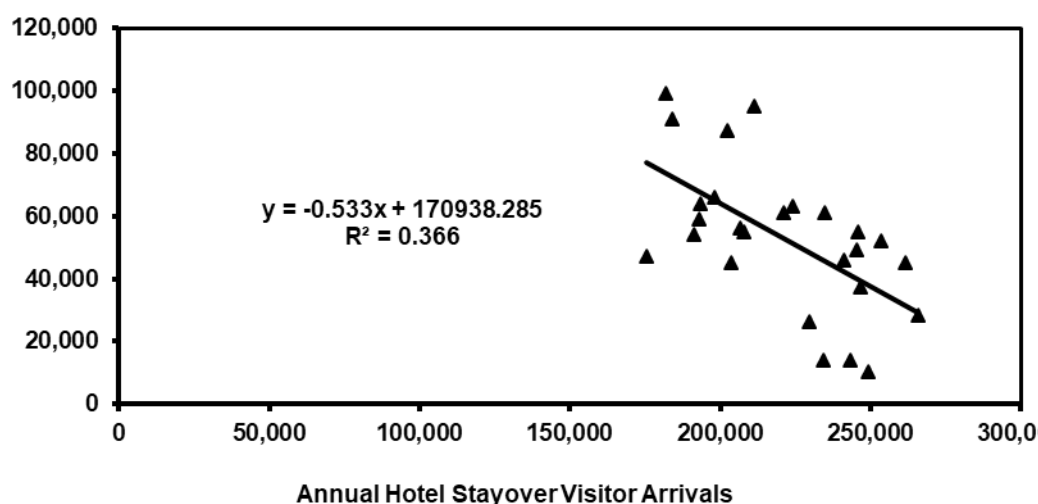


Figure 27. Relationship between annual live lobster exports and annual stayover arrivals at hotels in Antigua and Barbuda from 1989 to 2014 (Horsford 2016). Barbuda (Fisheries Division 2010).

## Coronavirus Disease (COVID-19) Pandemic

On December 31, 2020, the total number of persons in Antigua and Barbuda with laboratory confirmed Covid-19 cases was 159. 6 cases were active (Ministry of Health, Wellness and the Environment 2020). Till that date, a total of 5 individuals had died from Covid-19 and 59 per cent of confirmed cases were imported into the country (Figure 30). The success of the government's protocols is perhaps linked to their somewhat rapid response to the WHO warning concerning the pandemic. The government quickly sourced essential supplies (personal protective equipment, ventilators, etc.), introduced travel restrictions, and declared a state of emergency and curfew

on March 28, 2020 (Government of Antigua and Barbuda 2020a). A contact tracing programme was developed, and individuals with symptoms were isolated and tested and those in close contact quarantined. Various protocols were established to mitigate the spread of the virus (e.g., mandatory wearing of facemask, social distancing and personal hygiene, essential business limited to only pick-up / delivery systems, guidelines for frontline and essential workers). The main drawback was that the purpose built isolation and quarantine facility was not established ahead of the pandemic (Quarantine and Isolation Ward Set to be Functional within Fortnight 2020), hence contingency measures had to be developed.

Initially there was a shortage of healthcare workers (many forced to work long hours) and personal protective equipment for those on the frontline was scarce. The government addressed these issues by sourcing essential supplies through a sub-regional intergovernmental procurement programme and supplemented its healthcare workers with professionals from Cuba (Government of Antigua and Barbuda 2020b). The fact that the Medical Benefits Scheme offers financial assistance to cover laboratory testing, X-ray and similar services, hospitalisation and prescription drugs drastically aided the response to Covid-19. Current initiatives which will address the shortage of healthcare workers in the long term include the opening of the University of the West Indies Five Islands Campus in September 2019. It houses the School of Health and Behavioural Sciences that offers a nursing programme.

The union representing one of the largest groups of workers affected (i.e., hotel workers), managed to negotiate with the hotel and tourism association a form of financial relief through access to a thrift fund, where workers could access up to 50 per cent of their investment (Hotel Workers in line for Financial Relief 2020). The fund was originally designed for education advancements, providing health benefits and property improvements. The workers and the employers paid 2.5 per cent each into the fund. Payments were only made to workers who were laid off. The union also proposed that the government approach all local financial institutions to seek relief in the form of loan payment deferral and other standing order arrangements. The government was able to facilitate this with the Bankers Association (Eastern Caribbean Central Bank [ECCB] 2020a). Other proposals by unions included the setting up of an unemployment fund in the long term to 'cushion the blow' during times of economic crisis (Lovell and ABWU want Govt to Establish Unemployment Benefit Fund 2017). Regarding labour matters, the Attorney General promised alterations to both the country's Labour Code and Industrial Court Act to increase the efficiency of the Court and allow for virtual sitting in light of the pandemic (AG Pledges Overhaul of Labour Laws 2020). To achieve this during the lockdown, digital literacy and ICT infrastructure had to be improved to avail online services in areas such as (Remote Learning: Boon or Bane? Teachers Give Observermedia Their Views 2020).

In the informal sector, fishers, farmers, market vendors, street vendors and private bus operators were considered essential workers, and allowed to operate for limited hours during the lockdown—provided certain protocols were in place (social distancing, facemask, handwashing / sanitising facilities, etc.). The fisher associations responded to the crisis by reducing the price of fish from EC\$ 9.00 (US\$ 3.33) per lb to EC\$ 8 (US\$ 2.96) per lb and the Government followed up with provided concessionary fuel to all authorized fishers. The price has since reverted back to EC\$ 9 (US\$ 3.33) per lb with the phased opening of the borders with restrictions (screening, negative Covid-19 test within 48 hours, quarantine, etc.) starting June 1, 2020 (Government of Antigua and Barbuda 2020c).

At the subregional level, the Eastern Caribbean Central Bank (ECCB), the monetary authority for most members of the OECS, including Antigua and Barbuda, convened meetings with Ministries of Finance of Member governments to support the development of national and regional responses ranging from collaboration with the OECS Commission on procurement of critical supplies, assessments, resource mobilization and coordination, as well as engage with the International Monetary Fund (IMF) and The World Bank on assistance for Member States (ECCB 2020b). In the case of Antigua and Barbuda, the government opted to forego approaching the IMF to avoid

additional debt. According to the IMF, the public debt-to-GDP ratio is estimated at 88.2 per cent in 2018 (Caribbean Development Bank [CDB] 2018).

The pandemic highlighted the need for the following at the national level:

- \* Diversification of national economy from tourism
- \* Greater food security through revitalisation of agriculture and expansion of fisheries to include capture fisheries for under-utilised pelagics and aquaculture development
- \* Improvement in labour laws and functioning of the industrial court (e.g., virtual sitting)
- \* Strengthening of social safety nets by expanding coverage to include unemployment benefits and universal healthcare
- \* Initiatives to reduce income and gender inequality
- \* Upgrading of health care infrastructure and improving the condition of workers in the health sector to increase retention
- \* Improvement of ICT infrastructure and the use of ICT in education from early childhood to adult education. Improvement in the digital literacy of teachers is vital to the process

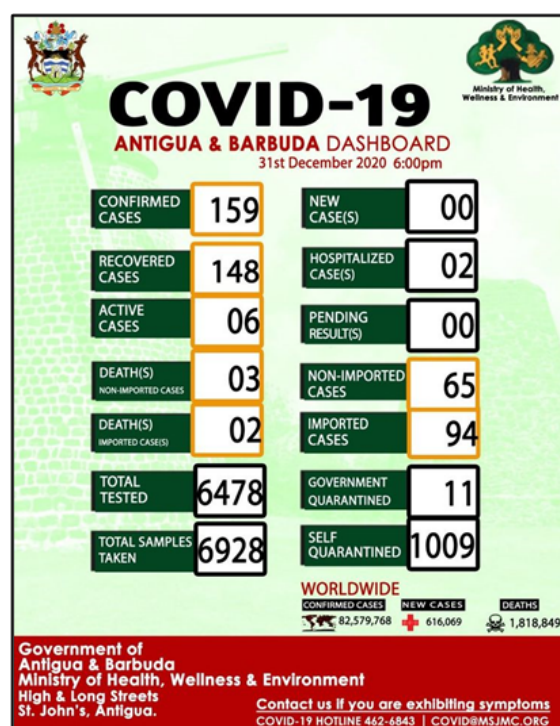


Figure 28. Number of confirmed cases of COVID-19 in Antigua and Barbuda, up to December 31, 2020 (Ministry of Health, Wellness and the Environment 2020).

In an effort to understand the initial impact of the pandemic on the fisheries sector, the number of fishers licensed during the first six months of this year was compared to previous years. Figure 31 indicates that the number of fishers registering and licensing for the first time or renewing their licence increased by 262 per cent when compared to the mean number of licences issued in previous years since the enactment of new fisheries regulations in 2013. This underscores the important role the fisheries sector serves as a socio-economic safety net, in terms of employment and food security in light of the collapse of tourism and its related sectors when borders closed.

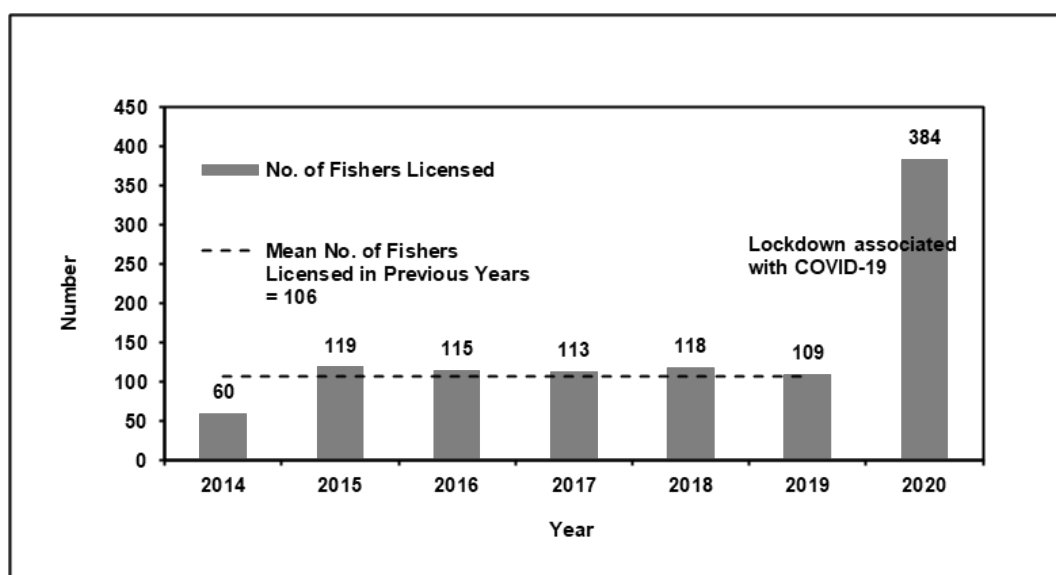


Figure 29. Number of fishers registering and licensing for the first time or renewing their licence during the first six months of the year in Antigua (Data source: Fisheries Division).

**Government of Antigua and Barbuda  
Fisheries Division**

**GUIDELINES FOR PREVENTING THE SPREAD OF THE  
CORONAVIRUS (COVID-19) IN THE FISHERIES SECTOR**

**Fisher-folks:**

Should be aware of the common symptoms of COVID-19: **fever; cough; shortness of breath; breathing difficulties; fatigue.**

Should follow good hygienic practises:

- ✓ Staying home when sick;
- ✓ Washing hands often with soap and water (for 20 seconds);
- ✓ Frequently clean / disinfect work surfaces and touched objects;
- ✓ Wear a facemask to cover your mouth and nose.

**Fishing Trips:**

Vessel captains should observe "social distancing" (6 ft. between yourself and others) by limiting crew size (including captain).

Vessel Length	Maximum Crew
< 21 ft.	2 individuals
21-31 ft.	3 individuals
31-40 ft.	4 individuals
41-50 ft.	5 individuals
>50 ft.	6 etc.

**Fish Markets, Fish Shops & Landing Sites:**

Managers of markets / shops should regulate the number of customers entering to **avoid overcrowding.**

Vessel captains should encourage customers to observe "social distancing" at landing sites.

Prepared by: Ian Horsford, April 2020

FACT:  
Currently there is no evidence to support transmission of COVID-19 associated with food (US Centers for Disease Control and Prevention).

**If you believe you are exhibiting symptoms, contact the COVID-19 hotline: (268) 462-6843**

Figure 30. Guidelines for preventing the spread of the coronavirus (COVID-19) in the fisheries sector (Fisheries Division 2020b).



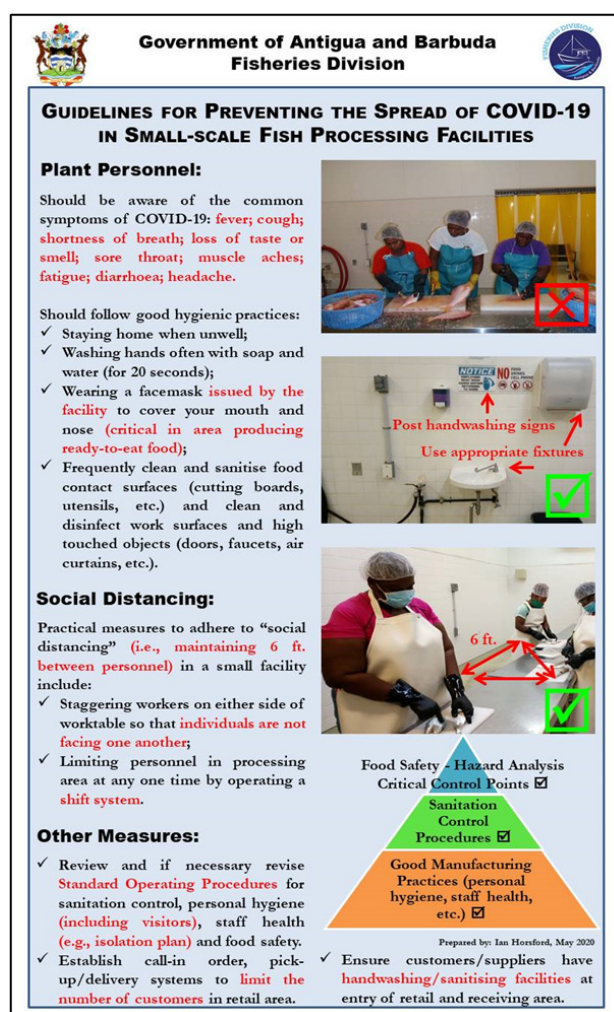


Figure 31. Guidelines for preventing the spread of COVID-19 in small-scale fish processing facilities (Fisheries Division 2020c).

While this spike in fishing effort sustains basic needs of fishers and their households in the short run, as well as feeding the local population, limits will have to be placed on the number of new entrants to ensure long term sustainability of the resources. This process has already started with the transition from an ‘open access’ to a ‘limited entry’ management regime in 2013, with respect to the two most valuable fishery resources—the Caribbean spiny lobster (*Panulirus argus*) and the queen conch (*Strombus gigas*).

The main initiatives and policies taken prior to and in response to the Covid-19 pandemic, in the context of fisheries included:

- \* The revision of occupational health, personal hygiene and food safety guidelines for fishers (both seagoing individuals and plant workers, Figures 32 and 33). These were initiated by the fisheries authority in April and May 2020. The limitation placed on crew size particularly for hand line fishers was mitigated via a strategy of crew rotation.
- \* Development of alternative business models / services such as virtual inspection of fishing vessels, marketing online, pickup / delivery systems, etc. In an effort to minimise face-to-face interaction and but also provide aid to fishers lacking necessary knowledge of finance and / or ICT tools (smartphone, laptop, etc.), both virtual and physical inspection programmes for registering and licensing vessels ran concurrently.

- \* Recognition of fishers as essential workers under the Public Health Act (Dangerous Infectious Disease) (Amendment) (No. 2) Regulations, 2020 (Government of Antigua and Barbuda 2020d) allowed them to operate under limited hours provided certain protocols were in place (social distancing, facemask, handwashing / sanitising facilities, etc.).
- \* In May 2018, FAO GEF StewardFish project (FAO 2020e) was launched with the goal of empowering fishers throughout the fisheries value chains to engage in resource management, decision-making and sustainable livelihoods. A component of project, ICT training of fisher-folk leaders took place during this year.



### 3. Conclusions: Key Messages and Recommendations

Assessment of social development in the small-scale fisheries sector of Antigua and Barbuda in the context of the SSF guidelines revealed the following:

- \* **Poverty Eradication, Food Security and Income:** Fisher incomes were generally above the minimum wage (EC\$ 1,420 or US\$ 525.93 per month). They were however were at risk of poverty due to vulnerability to natural disasters and exogenous economic shocks. Antigua and Barbuda has a National Poverty Reduction Strategy as well as a number of food programmes both public and private to address the issue. There is need for diversification of the tourism-based economy to mitigate the risk posed by exogenous economic shocks. Development of the under-exploited pelagic fishery is one option currently being pursued.
- \* **Social Security and Social Protection:** The country has a fairly robust social protection system with a social security scheme that includes sickness benefits, maternity benefits, invalidity benefits, age benefits, etc. These benefits are available to fishers and certain dependents since fishers are required to present proof of registration with the scheme at part of the process of becoming a licensed local fisher. Despite the achievements of the scheme major reforms are necessary.
- \* **Health and Wellness:** The Medical Benefits Scheme (MBS) offers financial assistance and pharmaceutical supplies to qualified residents of Antigua and Barbuda. Beneficiaries are also entitled to refunds for services such as laboratory tests, X-rays, surgery, ultra sounds, electrocardiographs or similar services, hospitalization and drugs. The National Strategy Plan for Health (2016-2020) hopes to scale-up the scheme to a universal healthcare system as well as increase focus on prevention (wellness). Fishers and their family are entitled to all of the aforementioned services since registration with the MBS is mandatory according to the Fisheries Regulations of 2013.
- \* **Education, Training and the Digital Divide:** There are a suite of programmes (adult education, women and youth entrepreneurship, etc.) geared to providing a second chance for those individuals not successful via the standard academic route. In addition, the educational levy scheme provides bursaries and scholarships for Antigua and Barbuda nationals. Since 1973, education has been free and compulsory for children aged 5-16. In 2019, approximately 28 per cent of fishers were college or university educated. In addition, fishers are required to undergo mandatory training in areas such as fisheries laws, safety at sea, seafood safety, etc. The digital divide (in terms of knowledge and resources) is an emerging challenge which was highlighted by the lockdown associated with the Covid-19 pandemic.
- \* **Housing, Land Use and the Blue Economy:** Frequency and intensity of tropical storms and climate change predictions, have forced Antigua and Barbuda to review its Building Code. Coupled with an integrated approach to land use, this is seen as a mechanism to mitigate associated risk. Marine spatial planning is seen as the solution to user conflicts in the blue economy. Securing tenure for traditional users (e.g., fishers) remains a challenge due to the power wielded by the tourism sector.
- \* **Public Utilities (Water, Electricity, ICT):** The Antigua Public Utilities Authority is a government statutory agency set up under the Public Utilities Act 1973 with the aim of ensuring consumers receive the best possible value in telecommunications (including mobile and Internet), electricity and water services. While these services are readily available and services such as water are subsidized, issues such as prolonged droughts, ageing infrastructure and transitioning to green energy remain a challenge.
- \* **Employment, Labour Relations and Decent Work:** The Antigua and Barbuda Labour Code articulates the core labour standards principles of the International Labour Organization

(ILO) under a tripartite mechanism (trade unions, employers and Government). The Labour Code provides for collective bargaining, conciliation, mediation and arbitration managed by the Labour Commissioner. The National Minimum Wage Committee, a tripartite body, is enshrined in the Labour Code. The national minimum wage is currently at EC\$ 8.20 (US\$ 3.04) per hour.

- \* **Human Rights and Access to Justice:** The preamble of the Constitution of Antigua and Barbuda contains human rights provisions outlined in the United Nations Universal Declaration of Human Rights. The Constitution is the supreme law and citizens can go to court for judicial review of any action of the Executive Branch of Government which they feel has infringed or infringes on their human rights. For environmental justice, Antigua and Barbuda ratified the Escazú Agreement, which entered into force in April 2021. The Escazú Agreement seeks to ensure that all people have access to timely and reliable information, and are able to access justice regarding environmental matters.
- \* **Social Inclusion and Gender-based Violence:** There are a number of policies and programmes geared toward social inclusion of youth and women as well as legislation and support services to address gender-based violence. The process of mainstreaming gender throughout the fisheries value chain has started under various projects (eg: Enabling Gender-Responsive Disaster Recovery, Climate and Environmental Resilience in the Caribbean [EnGenDER] and the Mainstreaming Gender Equality in the Fisheries of the Caribbean Initiative). A regional Gender Analysis and Action Plan on Gender Mainstreaming in Fisheries has been developed by the Caribbean Regional Fisheries Mechanism (CRFM).
- \* **Climate Change and Natural Disasters:** Antigua and Barbuda is one of the most highly exposed countries in the world to natural disasters according to the Centre for Research on the Epidemiology of Disasters. As a matter of priority in 2018, a protocol on Climate Change Adaptation and Disaster Risk Management in Fisheries and Aquaculture was approved for CARICOM States by the Ministerial Council of the Caribbean Regional Fisheries Mechanism (CRFM). The protocol aims to ensure development of a regional fishery sector that is resilient to climate change and ocean acidification, and enhanced through comprehensive disaster management, and sustainable use of marine and other aquatic living resources and ecosystems.
- \* **Environment, Biodiversity and Sustainability:** In 2016 Antigua and Barbuda was the first country in Latin America and the Caribbean to ban single-use plastic bags in an effort to address micro-plastic in the marine environment. A key component of the National Strategic Biodiversity Action Plan (2014-2020) is the establishment of a national fund to facilitate sustained management of the country's ecosystems and protected areas. An ecosystem approach to fisheries is enshrined in the Fisheries Act, and measures have been adopted to mitigate fisheries impact on the environment and non-target. A National Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing (NPOA-IUU) has been developed to address the issue of IUU fishing and a regional plan of action is being developed. Additionally, a National Plan of Action for the Conservation and Management of Sharks (NPOA Sharks) has been developed, recognizing the important role top predators play in the ecosystem.
- \* **Fisheries Management and Governance Approach:** There has been a move to shift fisheries governance from consultative to collaborative or delegated co-management in Antigua and Barbuda. This shift has led to an increased understanding of management decisions, improved compliance by user groups, mitigated user conflicts, improved relationship with stakeholders and increased effectiveness and cost efficiency of fisheries governance. At the local and national level, fisher organizations need strengthening in the areas of leadership, management, policy advocacy and engagement.

- \* **Safety at Sea and Occupational Health and Safety:** The country ratified the Seafarers' Identity Documents Convention, 1958 (No. 108) as well as incorporated relevant technical requirements of the Work in Fishing Convention, 2007 (No. 188) into the Fisheries Act 2006 and Fisheries Regulations 2013. Technical requirements include, but are not limited to: minimum age to engage in fishing (16 years), mandatory medical benefits and social security, training in occupational health and safety, mandatory safety at sea, minimum requirement for food and potable water on board, mandatory safety equipment (life jackets, VHF radio, first aid kit, etc.). These technical requirements complement the Antigua and Barbuda Labour Code.

Whilst many of the above mentioned gains in human and social development are built on the phenomenal growth of the tourism sector in the 1980s, Antigua and Barbuda is highly vulnerable to exogenous economic shocks due to a heavy reliance on the sector. In 2019, travel and tourism (including transportation) contributed to 42.7 per cent of the total GDP and accounted for 90.7 per cent of total jobs, including those indirectly supported by the industry (World Travel and Tourism Council 2020). This issue along with the Covid-19 pandemic has highlighted deficiencies and vulnerabilities in Antigua and Barbuda's social and economic development policies and programmes. To address these issues there is an urgent need to:

- \* diversify the national economy from tourism
- \* provide greater food security through revitalization of agriculture and expansion of fisheries to include capture fisheries for under-utilized pelagics and aquaculture development
- \* incorporate, resilience planning as part of fiscal policy into budget preparation and economic development initiatives
- \* improve labour laws and functioning of the industrial court (e.g., virtual sitting)
- \* strengthen social safety nets by expanding coverage to include unemployment benefits and universal healthcare
- \* reduce income and gender inequality. In addition to education and training, funding for entrepreneurship needs to be scaled up to foster new businesses and emerging like aquaculture.
- \* upgrade health care infrastructure and improving the condition of workers in the health sector to increase retention.
- \* improve ICT infrastructure and the use of ICT in education from early childhood to adult education. Improvement in digital literacy of teachers is vital to the process.

Although much of this paper focuses on various metrics related to human and social development, one should not forget that numbers are merely a snapshot and that there are stories behind them. As Brodeur said, "statistics are human beings with the tears wiped off". Despite the impressive gains in development in Antigua and Barbuda, natural disasters have highlighted the fragility of these advancements by setting back a lifetime of work for most of its residents. Perhaps the time has come for institutions such as The World Bank and the International Monetary Fund to move beyond metrics such as GDP or income per capita to form their lending policy, given the unique challenges Small Island Developing States face due to limited economies of scale and fragile ecosystems.

The advent of Covid-19 presents a unique opportunity to reset global policies with respect to human development and the environment. The question is whether or not we will seize it?

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# Social Development and Sustainable Fisheries: Antigua and Barbuda

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Antigua and Barbuda's robust social security schemes have, over the years, been a great safety net for sustainable fisheries in the country. This report analyses and reports on recent changes across the system and its effect on fishers. Increased digitization and reliance on remote technology has become a barrier for those without means or the knowledge to access many schemes. The ever present threat of climate change—in a country prone to natural disasters—poses significant challenges to the sector and has over the past few years caused shifts in policy. Antigua and Barbuda's fisheries' desperately need an economic overhaul. Hugely reliant on tourism, and therefore vulnerable to external shocks, the sector witnessed massive downturns due to the pandemic. Its effects highlighted deficiencies the country is still coming to grips with.



ICSF ([www.icsf.net](http://www.icsf.net)) is an international NGO working on issues that concern fishworkers the world over. It is in status with the Economic and Social Council of the UN and is on ILO's special list of Non-Governmental Organizations. It also has Liaison status with the FAO. ICSF works towards the establishment of equitable, gender-just, self-reliant and sustainable fisheries, particularly in the small-scale, artisanal sector.

ICSF draws its mandate from the historic International Conference of Fishworkers and their Supporters (ICFWS), held in Rome in 1984, parallel to the World Conference on Fisheries Management and Development organized by the Food and Agriculture Organization of the United Nations (FAO). As a global network of community organizers, teachers, technicians, researchers and scientists, ICSF's activities encompass monitoring and research, exchange and training, campaigns and action, as well as communications.