



**CRFM Statistics and Information Report – 2018**

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# **CRFM STATISTICS AND INFORMATION REPORT FOR 2018**



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CRFM Secretariat  
Belize

# **CRFM Statistics and Information Report –2018**

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CRFM Secretariat  
Belize and St. Vincent and the Grenadines

# CRFM STATISTICS AND INFORMATION REPORT – 2018

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## **LIST OF ACRONYMS AND ABBREVIATIONS**

<b>AC</b>	Aquaculture
<b>ACP</b>	African, Caribbean and Pacific states
<b>BOT</b>	British Overseas Territories
<b>CARICOM</b>	Caribbean Community
<b>CIA</b>	Central Intelligence Agency
<b>CRFM</b>	Caribbean Regional Fisheries Mechanism
<b>CWP</b>	Coordinating Working Party on Atlantic Fishery Statistics
<b>ECCB</b>	East Caribbean Central Bank
<b>EEZ</b>	Exclusive Economic Zone
<b>FAD</b>	Fish Aggregating Device
<b>FAO</b>	Food and Agriculture Organization of the United Nations
<b>FRP</b>	Fibreglass Reinforced Plastic
<b>GDP</b>	Gross Domestic Product
<b>GRFP</b>	Glass-fibre Reinforced Plastic
<b>GRP</b>	Glass Reinforced Plastic
<b>JICA</b>	Japan International Cooperation Agency
<b>LOA</b>	Length Overall
<b>MCF</b>	Marine Capture Fisheries
<b>OECS</b>	Organisation of Eastern Caribbean States
<b>SIDS</b>	Small Islands Development States
<b>TCI</b>	Turks and Caicos Islands
<b>UNESCO</b>	United Nations Educational, Scientific and Cultural Organization
<b>US</b>	United States
<b>WECAFC</b>	Western Central Atlantic Fishery Commission
<b>WWAP</b>	World Water Assessment Programme

## INTRODUCTION

The mission of the Caribbean Regional Fisheries Mechanism (CRFM) is “to promote and facilitate the responsible utilization of the region’s fisheries and other aquatic resources for the economic and social benefits of the current and future population of the region” (CARICOM Fisheries Unit, 2002). The members of the CRFM are: Anguilla, Antigua and Barbuda, The Bahamas, Barbados, Belize, Dominica, Grenada, Guyana, Haiti, Jamaica, Montserrat, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Suriname, Trinidad and Tobago and the Turks and Caicos Islands.

The fisheries of Member States are an important foreign exchange earner and a primary contributor to income, employment, food security and social and economic stability, especially in coastal communities.

CRFM Member States are required to collect, manage and appropriately use scientific data and information to inform the fisheries management planning and decision making process, and fulfil international reporting requirements. Thus, one of the main activities of the CRFM focuses on the enhancement of fisheries data collection systems in the participating Member States. Activities that have been undertaken to improve data collection systems and capabilities of Member States include: training, provision of computers, development of a fisheries database and technical support.

Although data collection systems have improved over the years, Member States still struggle with data collection issues mainly due to the challenge of limited human and financial resources available for data collection and management activities at the national levels. Notwithstanding the above mentioned constraints, Member States continue to collect and compile the best available data and information for planning and decision-making. It is in this context that the CRFM Statistics and Information Report has been compiled with the aim of providing, at the regional level, an information source for its Member States and other stakeholders to access the most up to date fisheries statistical information that are available from the CRFM Member States. It is hoped that the publication will provide Member States and stakeholders with a regional picture of the fishing fleet, fish production, number of fishers and employment in the sector and the economic importance of the fishery sector of the CRFM region.

This publication is primarily an update of the *CRFM Statistics and Information Report –2016* (CRFM, 2018) with data for 2017 and 2018. In cases where data for 2017 and 2018 were not available at the time of publication, these data will be updated in subsequent publications.

## METHODOLOGY

Data were collected from the Fisheries Divisions / Departments, the Statistical Departments and other relevant authorities in the CRFM Member States. These sources are considered the primary sources. The national reports of the Member States submitted to the CRFM are also regarded as primary sources of data. Where it was not possible to collect data from the primary sources, or where data gaps existed, literature searches were conducted and data and information obtained from sources, such as publications by the FAO, project documents, industry magazines, or statistical publications.

## CHAPTER 1: THE FISHERIES RESOURCES OF THE CRFM REGION

### 1.1 Land area, coast line, continental shelf area and EEZ of CRFM Member States

The Member States of the CRFM are 14 sovereign Small Island Developing States (SIDS) and three British Overseas Territories (BOT) (Table 1). Most Member States have exclusive economic zones (EEZs) many times the land area (Table 2). The combined land area of CRFM Member States is 433,549 km<sup>2</sup> whereas the area of the combined EEZ<sup>1</sup> is on the order of 2,060,721 km<sup>2</sup> as some Member States are still negotiating delimitation issues with neighbouring States. The shelf areas; defined as continental shelf areas from shore to a depth of 200 m (Zeller and Pauly, 2015) and the inshore fishing areas; defined as the area that extends from shore to either 50 km offshore or to the 200 m depth contour, whichever comes first (Chuenpagdee *et al.* 2006) only for territories that are inhabited and have local fisheries (Zeller and Pauly, 2015), were also sourced from the Sea Around Us (2016) and are provided as indicative to what the exact figures might be<sup>2</sup>.

**Table 1: CRFM Member States and their affiliations to CARICOM, OECS and as SIDS**

INDEPENDENT COUNTRIES	OVERSEAS TERRITORIES
1. Antigua and Barbuda (SIDS, CARICOM, OECS)	Anguilla (OECS Associate Member, CARICOM Associate Member)
2. Bahamas (The) (SIDS, CARICOM)	Montserrat (CARICOM, OECS)
3. Barbados (SIDS, CARICOM)	Turks and Caicos Islands (CARICOM Associate Member)
4. Belize (SIDS, CARICOM)	
5. Dominica (SIDS, CARICOM, OECS)	
6. Grenada (SIDS, CARICOM, OECS)	
7. Guyana (SIDS, CARICOM)	
8. Haiti (SIDS, CARICOM)	
9. Jamaica (SIDS, CARICOM)	
10. St. Kitts and Nevis (SIDS, CARICOM, OECS)	
11. St. Lucia (SIDS, CARICOM, OECS)	
12. St. Vincent and the Grenadines (SIDS, CARICOM, OECS)	
13. Suriname (SIDS, CARICOM)	
14. Trinidad and Tobago (SIDS, CARICOM)	

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<sup>1</sup> Source of data - Sea Around Us (2016) and was determined as follows: Surface areas are expressed in km<sup>2</sup> and were obtained by overlaying a global 2-minute cell ESRI GRID of surface area values with a matching ESRI GRID of EEZs. For each EEZ the intersecting surface area based on the 2-minute raster was extracted and summed (Zeller and Pauly, 2015). The figure includes: the 12 nm territorial areas, as they were generally too small to differentiate at the scale of our global ½ degree cell grid system used to determine the EEZs (Zeller and Pauly, 2015)

<sup>2</sup> Disclaimer from Sea Around Us (2016); Maritime limits and boundaries depicted on “Sea Around Us” maps are not to be considered as an authority on the delimitation of international maritime boundaries.



**Table 2: Land area, coast line, exclusive economic zone (declaration year), shelf area, and inshore fishing areas of CRFM Member States**

Member States	Land area (km <sup>2</sup> )*	Coast line (km)*	EEZ (km <sup>2</sup> )** (EEZ declaration year <sup>3</sup> )	Shelf area (km <sup>2</sup> )**	Inshore fishing areas (km <sup>2</sup> )**
Anguilla	91	61	92 178 (1981)	2 120	2 031
Antigua and Barbuda	443	153	107 939 (1982)	3 886	3 764
Bahamas	10 010	3 542	628 026 (1977)	117 344	93 763
Barbados	430	97	183 773 (1979)	342	342
Belize	22 806	386	36 182 (1992)	10 491	10 491
Dominica	751	148	28 593 (1981)	356	356
Grenada	344	121	26 133 (1978)	2 709	1 902
Guyana	196 849	459	140 369 (1977)	50 506	22 690
Haiti	27 560	1 771	123 525 (1977)	5 672	5 672
Jamaica	10 831	1 022	263 284 (1991)	13 874	13 422
Montserrat	102	40	7 586 (1983)	168	168
St. Kitts and Nevis	261	135	10 209 (1984)	855	634
St. Lucia	606	158	15 472 (1984)	593	593
St. Vincent and the Grenadines	389	84	36 304 (1983)	2 340	2 223
Suriname	156 000	386	127 817 (1978)	53 738	18 422
Trinidad and Tobago	5 128	362	79 798 (1983)	23 236	18 717
Turks and Caicos Island	948	389	153 533 (1978)	5 560	5 560
<b>Totals</b>	<b>433 549</b>	<b>9 314</b>	<b>2 060 721</b>	<b>293 790</b>	<b>200 750</b>

Source: (\*) Central Intelligence Agency; accessed

20 May 2020.

(\*\*) Sea Around Us (2016).

## 1.2 Categories of fishery resources of the CRFM Member States

The fisheries resources of the CRFM Member States can be found in:

<sup>3</sup> This reflects the year in which this EEZ was officially declared by a country, or in cases where no EEZ was declared (or the exact date could not be ascertained), the year 1982 (conclusion of the UNCLOS convention) is the assumed declaration year (Sea Around Us, 2016).

- a) Inland waters<sup>4</sup> and or freshwater systems<sup>5</sup> (rivers, ponds, lakes, etc.)
- b) Aquaculture<sup>6</sup> systems (systems used for farming aquatic animals)
- c) Marine waters<sup>7</sup> (including the territorial sea, archipelagic waters, EEZ and high seas)

All the independent CRFM Member States are SIDS and are characterised by highly integrated ecosystems and sub-ecosystems linked to the marine environment. So too are the overseas territories which are not officially recognized SIDS, but share many common features of SIDS. The aquaculture systems depend on the inland and freshwater systems and the marine environment for water supply, and in turn the coastal marine environment is susceptible to changes and activities in the inland and freshwater systems and from aquaculture. Figure 1 provides a schematic representation of the linkages and sub-sectors of the fisheries sector of the CRFM Member States.

### 1.2.1 Fisheries of the inland waters and or fresh water systems of CRFM Member States

Information and data on the fisheries resources of the inland and fresh water systems of the region were limited, as most Member States do not collect data from this sub-sector. There is a great need for improved data collection and research to better understand the scope and importance of the fisheries in the inland and fresh water systems of CRFM Member States. However, the information that was available indicated that the exploitation of the fisheries resources of inland waters or fresh water systems of most of the CRFM Member States was important at the subsistence and/or cultural level. Eleven Member States indicated that the fisheries of the inland waters and fresh water systems (even in cases where the fishery did not produce large economic gains) were of importance to the cultural life of the country and / or played an important role at the subsistence level by providing protein to the local population (Table 3). With regards to economic gain from the fishery, eight Member States: Belize, Dominica, Guyana, Haiti, Jamaica, St. Vincent and the Grenadines, Suriname and Trinidad and Tobago, had important economic activities and earnings from this sub-sector. Haiti, Suriname and St. Vincent and the Grenadines had estimates of the amount of fish produced from inland waters and fresh water systems, which stood at approximately 600 t for Haiti (2009 estimate); 650 t for Suriname (2014 estimate); and 3.9 t (2017 estimate) and 1.52 t (2018 estimate) for St. Vincent and the Grenadines.

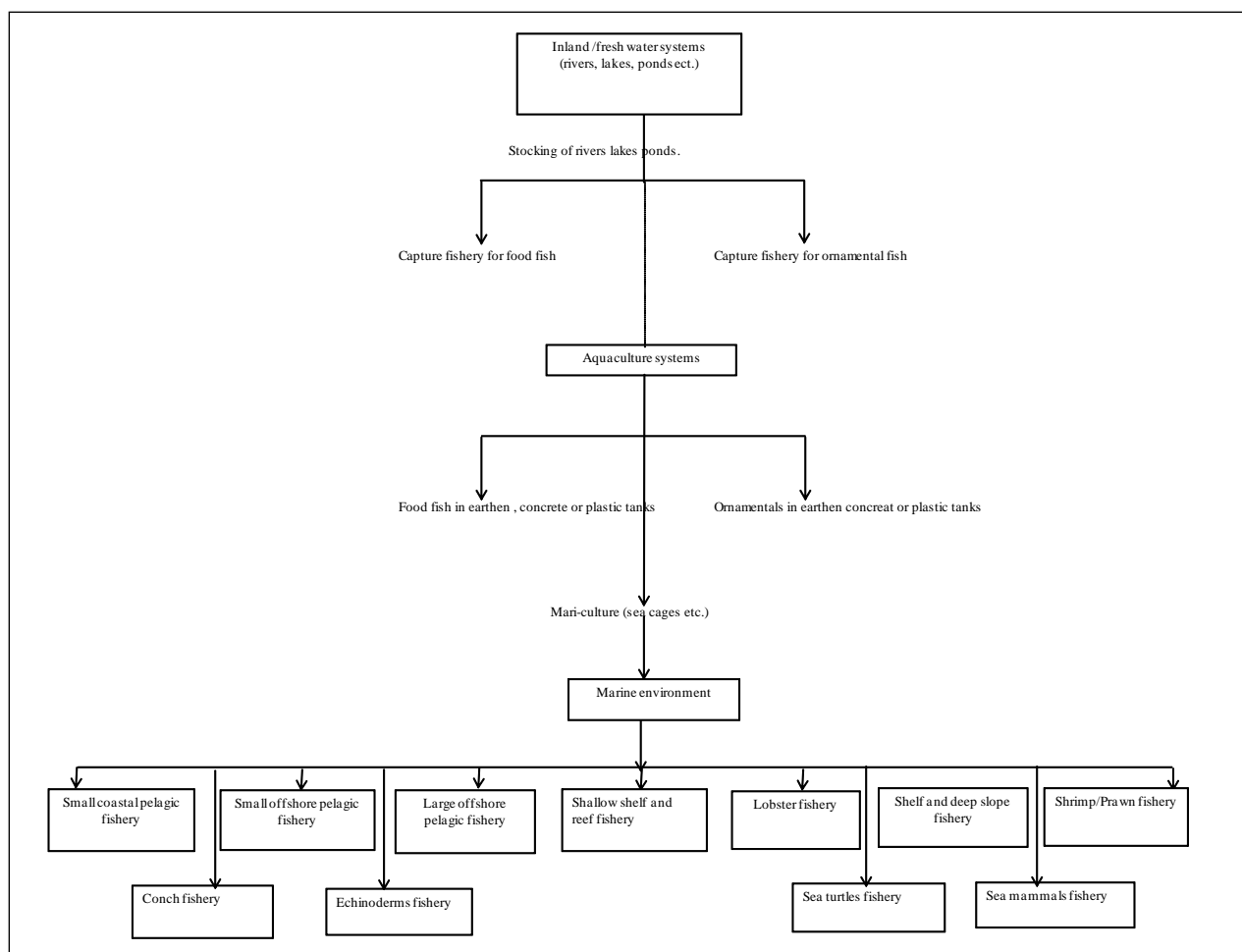
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<sup>4</sup> Inland waters; may be used to refer to lakes, rivers, brooks, streams, ponds, inland canals, dams, and other land-locked (usually freshwater) waters (FAO, 2002-2013).

<sup>5</sup> Freshwater ecosystems include lakes, rivers, ponds, streams, groundwater, springs, cave waters, floodplains, as well as bogs, marshes and swamps, which are traditionally grouped as inland wetlands (UNESCO, 1995 – 2012).

<sup>6</sup> The definition used for aquaculture in this paper is after FAO (2012b) and is understood to mean the farming of aquatic organisms including fish, molluscs, crustaceans and aquatic plants. Farming implies some form of intervention in the rearing process to enhance production, such as regular stocking, feeding, protection from predators, etc. Farming also implies individual or corporate ownership of the stock being cultivated. For statistical purposes, aquatic organisms which are harvested by an individual or corporate body which has owned them throughout their rearing period contribute to aquaculture while aquatic organisms which are exploitable by the public as a common property resource, with or without appropriate licences, are the harvest of fisheries.

<sup>7</sup> Marine waters; refers to oceans and seas including adjacent saltwater areas (FAO, 2002-2013).



**Figure 1: Linkages between and sub-sectors of the inland/fresh water systems, aquaculture systems and marine waters of CRFM Member States**

**Table 3: Status, cultural and or subsistence importance, economic importance and latest estimate of catch of the fisheries of inland waters /fresh water systems of CRFM Member States**

<b>Member States</b>	<b>Status of the fisheries of inland waters / fresh water systems</b>	<b>Fisheries of inland waters / fresh water systems are of cultural and / or subsistence importance</b>	<b>Fisheries of inland waters / fresh water systems are of economic importance</b>	<b>Latest estimate of catch from fisheries of inland waters / fresh water systems</b>
<b>Anguilla</b>	There are no rivers in Anguilla, and a significant portion of the naturally occurring fresh water is tapped through well systems. Fishing is not occurring in the inland waters / fresh water systems of Anguilla.	No	No	0
<b>Antigua and Barbuda</b>	Traditional harvest of some freshwater and estuarine species at the subsistence level or for recreational purposes occurs in Antigua and Barbuda. The resources harvested include mullets, tarpons and tilapia (FAO, 2007b).	Yes	No	NA
<b>Bahamas</b>	There are no true rivers or streams on the Islands of The Bahamas. Inland water bodies are, in most instances, places where the water table is at or near the same level as the land surface (US Army Corps of Engineers, 2004). Fishing is not occurring in the inland waters / fresh water systems of The Bahamas.	No	No	0
<b>Barbados</b>	The permanent and temporary freshwater catchments of Barbados serve as habitats for species of freshwater shrimps (Simmons & Associates, Inc. 2000), however no known commercial fishing activities occur in these fresh water catchment areas (Fisheries Division Barbados, 2014*).	No	No	0
<b>Belize</b>	The inland freshwater fisheries activities are primarily subsistence in nature. The species targeted include: the Baysnook ( <i>Petenia splendida</i> ), the Mayan cichlid locally called crana ( <i>Cichlosomas urophthalmus</i> ) and the tilapia ( <i>Oreochromis niloticus</i> ). The tarpon ( <i>Megalops atlanticus</i> ), two species of catfish ( <i>Ictalurus furcatus</i> and <i>Ictalurus</i> spp.) and the freshwater turtle or hicatee ( <i>Dermatemys mawii</i> ) are also important species in the fishery (Gillett and Myvette, 2008).	Yes	Yes	NA
<b>Dominica</b>	The traditional catching of goby fry (locally called <i>tetiri</i> ) caught at river estuaries, is of some economic importance to some villages in	Yes	Yes	NA

Member States	Status of the fisheries of inland waters / fresh water systems	Fisheries of inland waters / fresh water systems are of cultural and / or subsistence importance	Fisheries of inland waters / fresh water systems are of economic importance	Latest estimate of catch from fisheries of inland waters / fresh water systems
	Dominica (particularly the western village of Layou) (FAO, 2004 - 2013a).			
<b>Grenada</b>	Inland fishery is restricted to harvesting of fresh water crawfish and a half dozen species of finfish within small streams, carried out solely on a subsistence basis. Though contribution from this activity is very minuscule when compared to marine fishery, several rural families depend on this resource for the supply of valuable protein (FAO, 2007a).	Yes	No	NA
<b>Guyana</b>	Freshwater fishing is conducted in rivers, creeks, lakes, reservoirs, canals, and in savannah areas. The data available indicate that most inland fishing is carried out by Amerindians. At present, the effort is largely directed at subsistence fishing, although a few fishermen participate in small-scale commercial fisheries (FAO, 2005b).	Yes	Yes	NA
<b>Haiti</b>	Lakes in Haiti are fished extensively. For example, the Lake Azuei, also known as Etang Saumatre, (which is the largest lake in Haiti; 22,000 acres), has ~ 3000 people living around the lake. For about 60% of this population, the sole source of income is fishing (Hargreaves, 2011).	Yes	Yes	600 t (2009 est.)
<b>Jamaica</b>	Most of the main rivers of Jamaica (there are about 22 main rivers) are fished by the local population. Community watershed ponds and rivers were stocked with <i>Tilapia mossambica</i> (FAO, 2005 - 2020) and a riverine fishery for the species now exists in Jamaica. Fresh water crayfish and shrimp and mullets are also harvested.	Yes	Yes	NA
<b>Montserrat</b>	There is a traditional fishery in the rivers for crayfish and small lobsters. Tilapia are also fished from fresh water ponds (Department of Fisheries Montserrat, 2012*).	Yes	No	NA
<b>St. Kitts and Nevis</b>	Recently in Nevis the ponds and lagoons have become a source for fishing, targeting tilapia and mullets. (Department of Marine Resources, St. Kitts and Nevis, 2012*).	No	No	NA

<b>Member States</b>	<b>Status of the fisheries of inland waters / fresh water systems</b>	<b>Fisheries of inland waters / fresh water systems are of cultural and / or subsistence importance</b>	<b>Fisheries of inland waters / fresh water systems are of economic importance</b>	<b>Latest estimate of catch from fisheries of inland waters / fresh water systems</b>
<b>St. Lucia</b>	There is little information about the freshwater fish species of St. Lucia and therefore research in this regard is needed. Thirteen species of freshwater shrimp have been recorded for St. Lucia and there existed a freshwater shrimp fishery up to 1994 when a moratorium was implemented (Department of Fisheries, St. Lucia. 2012*).	No	No	0
<b>St. Vincent and the Grenadines</b>	The traditional catching of Goby fry (locally called Tri-tri) caught at river mouths and estuaries, is of economic importance to St. Vincent and the Grenadines.	Yes	Yes	3.9 t were caught in 2017 and 1.52 t in 2018 (Fisheries Division St. Vincent and the Grenadines, 2020*)
<b>Suriname</b>	The inland waters of rivers, estuaries and swamps support a substantial inland waters fishery. The main gears used are driftnets, Chinese seines, seines (locally called river seine) and gillnets (locally called lagoon gillnet) (JICA & IC Net, 2012). In 2014, 650 t of fish were captured from the fresh water systems of Suriname (Department of Fisheries Suriname, 2016*).	Yes	Yes	650 t (2014)
<b>Trinidad and Tobago</b>	Exploitation of fish and decapods occurs in the rivers and streams of Trinidad and Tobago but largely on a subsistence level, except for the tetra fish ( <i>Hypostomus robinii</i> ). The amount taken is not quantified by regulatory agencies. Tetra fishing is for the aquarium trade (Alkins-Koo <i>et al.</i> 2003).	Yes	Yes	NA
<b>Turks and Caicos Islands</b>	No known systematic commercial fishing activity is occurring in the inland/freshwater systems of the Turks and Caicos Island	No	No	0

NA = Not Available

\* Information obtained directly from the Fisheries Authority of the Member State.

### 1.2.2 The aquaculture systems of CRFM Member States

During 2017 and 2018 most of the CRFM Member States (as was the case in 2015 and 2016), did not produce fish via aquaculture activities. Belize and Jamaica had been the top CRFM producers for a number of years, producing an average 6,662 t and 767 t respectively for the period 2013 to 2014. However, Haiti

produced 2,600 t of fish from aquaculture in 2015, and 6,400 t in 2016. Updated figures for Haiti for 2017 and 2018 were not available at the time of preparing this report. Therefore, the estimate used for Haiti for 2017 and 2018 is the reported production for 2016, which puts Haiti in the top producing position. Belize produced ~4,753 t in 2015 but production fell to 1,109 t in 2016. Aquaculture production in Belize decreased due to the occurrence of Early Mortality Syndrome (EMS) - which is caused by a strain of bacteria called *Vibrio parahaemolyticus*) that caused substantial losses in cultured shrimps the previous year (Gov. of Belize, 2017). Belize has not recovered and shrimp production was down to an average of 611 t for the 2017 to 2018 period. Jamaica registered improvements in aquaculture production, with an average production of 1,426 t over the period 2017 to 2018.

Table 4 and Table 5 provide overviews of the status of aquaculture in CRFM Member States as at 2017 / 2018.

**Table 4: Status of aquaculture in CRFM Member States - 2017 / 2018**

<b>Member States</b>	<b>Status of aquaculture 2017 – 2018</b>	<b>References / Sources</b>
<b>Anguilla</b>	One small aquaponics farm was established during the period 2014-2015 (a small fresh water tilapia pool, with 250 fish). However, hurricane Irma in 2017 destroyed the farm.	Personal communication Gumbs / Masters, 2020
<b>Antigua and Barbuda</b>	Aquaculture production was mainly from aquaponics. The species cultivated were the Nile tilapia ( <i>Oreochromis niloticus</i> ) and the red tilapia ( <i>Oreochromis</i> spp.). The two major aquaculture facilities in Antigua suffered marginal damage due to Hurricane Irma in 2017 and one facility in Barbuda was destroyed.	Personal communication Horsford / Masters, 2020
<b>The Bahamas</b>	Aquaculture fish production was negligible as most of the facilities were still in the start-up phase. As of 2015, there were seven permitted aquaculture establishments and 22 species permitted for aquaculture in The Bahamas. However, production is insignificant with most of the limited aquaculture production at present coming from aquaponics farms, which generate more income from the vegetable production activities than from fish culture.	FAO, 2016
<b>Barbados</b>	Persons have expressed interest in aquaculture and some persons have set up backyard ponds for the culturing of tilapia. However, aquaculture activities are still in the planning stages.	Personal communication Willoughby / Masters, 2014
<b>Belize</b>	Shrimp production figures indicate a substantial drop in white shrimp production in the year 2015 and 2016, and production was still reduced in the 2017 to 2018 period. This was a result of the occurrence of a shrimp disease (Early Mortality Syndrome - EMS) which caused production losses.	Sosa, 2017
<b>Dominica</b>	Aquaculture infrastructure was damaged as a result of heavy rainfall and flooding brought about by the passage of Hurricane Maria in September 2017. The industry has not yet recovered (one farm is on the road to recovery). However, work is on-going.	Personal communication Hilton / Masters, 2020
<b>Grenada</b>	During the period 2015-2016 Grenada focused on increasing the number of seamoss ( <i>Eucheama isiforme</i> and <i>E. cottonii</i> ) aquaculturalists. The seed stock of <i>Eucheama isiforme</i> and <i>E. cottonii</i> were sourced in Venezuela. The backyard ornamental / tilapia facilities have folded, in favour of aquaponics.	Personal communication Isaac / Masters, 2018

Member States	Status of aquaculture 2017 – 2018	References / Sources
<b>Guyana</b>	Species produced during the 2017-2018 period included Tambaqui ( <i>Colossoma macropomun</i> ), tilapia, black water shrimp and hassar (( <i>Hoplosternum littorale</i> ). Production decreased over the period by approximately 45%.	See Table 5
<b>Haiti</b>	Aquaculture production increased from 560 t in 2013/2014 to 6,400 t in 2016.	Fisheries Department Haiti, 2017
<b>Jamaica</b>	Aquaculture production in Jamaica has increased to over 1000 t in both 2017 and 2018. This resulted from the entrance of a large producer which has been responsible for approximately 50 % of the total aquaculture production over these years. Some veteran fish farmers have re-entered into the production of tilapia in order to take advantage of an increasing demand for fresh fish and some existing farmers have increased their production acreage. The consistent supply of seed stock is a major weakness for the sub-sector. Another weakness is inconsistency in the supply of feed and the almost monthly increase in the price of the feed.	National Fisheries Authority Jamaica, 2020 / Personal communication Smikle / Masters, 2020.
<b>Montserrat</b>	No aquaculture activity took place in Montserrat during the period.	Personal communication Ponteen / Masters, 2019
<b>St. Kitts and Nevis</b>	Two aquaculture projects were in operation; one in St. Kitts and one in Nevis. The projects operate at the subsistence level, producing tilapia in ponds using seawater.	Personal communication Browne / Masters, 2018
<b>St. Lucia</b>	In 2018 there were 82 fish ponds (32 in 2014) and 43 shrimp ponds (27 in 2014) under production throughout the island, with ponds covering a total of 16.68 hectares of land. In 2018, 27,200 fish fingerling and 210,000 post larval shrimps were produced and the total annual production for aquaculture fish and shrimp in 2018 was 14.181 tonnes. Sea moss ( <i>Gracilaria</i> spp.) production also occurs in the country. In 2015, 61 persons were involved in sea-moss production.	Fisheries Department, St. Lucia, 2019
<b>St. Vincent and the Grenadines</b>	No aquaculture activity took place in St. Vincent and the Grenadines during the period.	Fisheries Division St. Vincent and the Grenadines, 2017
<b>Suriname</b>	In 2015 there were 82.9 hectares of fish ponds/tanks and 28.8 hectares of shrimp ponds/tanks in Suriname. Production increased from ~80 t in 2013/2014 to 122.17 t in 2015.	Fisheries Division Suriname, 2016
<b>Trinidad and Tobago</b>	During 2017-2018 there were approximately seven registered farmers producing fish at a small scale commercial level, reduced from 31 during the 2015-2016 period. Only two hatcheries remained operational. There are also approximately 80 persons who are not yet at the commercial level and can be regarded as subsistence level producers. Overall, most of the operations can still be regarded as small scale and approximately 120 persons were directly employed in the sector in 2018.	Personal communication Lalla / Masters, 2020
<b>Turks and Caicos Islands</b>	Aquaculture activities ceased with the closure of the Turks and Caicos Islands conch farm, in August 2012.	Personal communication Clerveaux / Masters, 2014



**Table 5: Overview of species produced, total annual aquaculture production (meat weight in tonnes) and value (US\$) of aquaculture in CRFM Member States for the period 2017- 2018**

Member States	Species cultivated 2017 – 2018	Production (t) 2017	Value of aquaculture product 2017 (US\$)	Production (t) 2018P	Value of aquaculture product 2018 (US\$) P	Reference /Source
Anguilla	Tilapia (in aquaponics)	NA	NA	NA	NA	
Antigua and Barbuda	Sea-moss (Eucheuma spp. and Gracilaria spp.)	NA	NA	NA	NA	
	Nile tilapia ( <i>Oreochromis niloticus</i> ) and the red tilapia ( <i>Oreochromis spp.</i> )	NA	NA	14.7	131 852	
<b>ANTIGUA AND BARBUDA; TOTAL</b>		NA	NA	<b>14.7</b>	<b>131 852</b>	
Bahamas	None	--	--	--	--	
Barbados	None	--	--	--	--	
<b>Belize</b> <sup>8</sup>	Whiteleg shrimp ( <i>Litopenaeus vannamei</i> )	541	4 568 818	540	2 685 856	Statistical Institute of Belize Import and Exports of Fish, 2017 and 2018*
	Tilapia hybrids ( <i>Oreochromis niloticus</i> )	57.2	55 374	0	0	
	Cobia ( <i>Rachycentron canadum</i> )	0	0	0	0	
	Tilapia (small-scale aquaculture /backyard farms)	49.2	216 770	32.2	141 871	Personal Communication Sosa/Masters 2019
<b>BELIZE; TOTAL</b>		<b>648</b>	<b>4 840 961</b>	<b>573</b>	<b>2 827 727</b>	
<b>Dominica</b>	Asian freshwater prawn ( <i>Macrobrachium rosenbergii</i> )	NA	NA	NA	NA	
	Nile tilapia ( <i>Oreochromis niloticus</i> )	NA	NA	NA	NA	
	Sea moss known as GT ( <i>Gracilaria</i> spp.)	NA	NA	NA	NA	
<b>DOMINICA; TOTAL</b>		NA	NA	NA	NA	
Grenada	Sea moss <i>Eucheama isiforme</i> and <i>E. cottonii</i> and tilapia (in very small quantities)	NA	NA	NA	NA	
<b>Guyana</b>	Red tilapia ( <i>Oreochromis</i> spp.),	80.2	NA	NA	NA	Fisheries Division Guyana, 2018
	Black shrimp ( <i>Penaeus</i> spp.),	231.5	NA	NA	NA	
	Tambaqui ( <i>Colossoma macropomun</i> ),	0.0	NA	NA	NA	
	Brown hoplo locally called hassar ( <i>Hoplosternum littorale</i> ),	0.0	NA	NA	NA	
	Mullet ( <i>Mugil cephalus</i> ),	0.0	NA	NA	NA	

<sup>8</sup> Belize whiteleg shrimp is the export amount and value

Member States	Species cultivated 2017 – 2018	Production (t) 2017	Value of aquaculture product 2017 (US\$)	Production (t) 2018P	Value of aquaculture product 2018 (US\$) P	Reference /Source
	Others aggregated (tambaqui, mullet, bashaw, queriman, hassar)	385.0	NA	NA	NA	
	Flathead catfish locally called bashaw ( <i>Pylodictis olivaris</i> )	0.0	NA	NA	NA	
<b>GUYANA; TOTAL</b>		<b>696.6</b>	<b>3 214 472</b>	<b>310.7</b>	<b>573 164</b>	
<b>Haiti<sup>9</sup></b>	Pangasius Tilapia Claria Carp	6 400	33 863 031	6 400	33 863 031	Fisheries Department Haiti, 2017 / Personal communication Badio/Maters, 2017
<b>HAITI;TOTAL</b>		<b>6 400</b>	<b>13 756 856</b>	<b>6 400</b>	<b>33 863 031</b>	
<b>Jamaica</b>	Tilapia hybrids ( <i>O. niloticus</i> )	1 091.2	4 564 838	1 212.6	5 188 172	National Fisheries Authority Jamaica, 2020 / Personal communication, Smikle / Masters, 2020.
	Striped catfish/Basa ( <i>Pangasius hypophthalmus</i> )	249.0	1 294 800	299.0	1 650 562	
	Mangrove oyster ( <i>Crassostrea rhizophorae</i> ) <sup>10</sup>	300 dozen	700	300 dozen	700	
<b>JAMAICA; TOTAL</b>		<b>1 340</b>	<b>5 859 639</b>	<b>1 512</b>	<b>6 838 734</b>	
<b>Montserrat</b>	None	--	--	--	--	
<b>St. Kitts and Nevis</b>	None	--	--	--	--	
<b>St. Lucia</b>	Tilapia, ( <i>Tilapia mossambica</i> )	9.1	18 448	10	23 031	Data unit of the Department of Fisheries St. Lucia, 2017
	Shrimp ( <i>Macrobrachium rosenbergii</i> )	4.4	32 654	4.3	27 758	
	Seamoss ( <i>Gracilaria</i> spp.)	0.0	0	0	0	
<b>ST. LUCIA; TOTAL</b>		<b>13.4</b>	<b>51 102</b>	<b>14.2</b>	<b>50 789</b>	
<b>St. Vincent and the Grenadines</b>	None	--	--	--	--	
<b>Suriname<sup>11</sup></b>	Tilapia (red hybrid tilapia)	1	0	1	0	Department of Fisheries Suriname, 2017
	Brown hoplo locally called atipa ( <i>Hoplosternum littorale</i> )	0	0	0	0	
	Tambaqui ( <i>Collosoma macropomum</i> )	80.75	0	57.4	0	
	Whiteleg shrimp ( <i>Litopenaeus vannamei</i> )	0	0	0	0	

<sup>9</sup> Production by species not available. Value was calculated using the price of tilapia US\$2.40 per pound (Webster, 2012). 2016 estimates.

<sup>10</sup> Numbers of oysters not included in the total production

<sup>11</sup> Suriname values calculated using rates for 2015

Member States	Species cultivated 2017 – 2018	Production (t) 2017	Value of aquaculture product 2017 (US\$)	Production (t) 2018P	Value of aquaculture product 2018 (US\$) P	Reference /Source
<b>SURINAME: TOTAL</b>		<b>81.75</b>	<b>586 721</b>	<b>58.4</b>	<b>419 138</b>	
<b>Trinidad and Tobago</b>	Tilapia (red hybrid tilapia)	5.45	26 184	5.45	26 184	Fisheries Division Trinidad and Tobago, 2017
	Brown hoplo locally called cascadu(ra) ( <i>Hoplosternum littorale</i> )					
	Giant river prawn ( <i>Macrobrachium rosenbergii</i> )	0	0	0	0	
<b>TRINIDAD AND TOBAGO ; TOTAL</b>		<b>5.45</b>	<b>26 184</b>	<b>5.45</b>	<b>26 184</b>	
<b>Turks and Caicos Islands</b>	Queen conch ( <i>Strombus gigas</i> )	0	0	0	0	
<b>FISH TOTALS ALL MEMBER STATES</b>		<b>9 185</b>	<b>48 442 110</b>	<b>8 888</b>	<b>44 730 618</b>	

*P = Provisional*

*NA=Not Available*

*1kg= 2.20462 lbs*

### 1.2.3 Fisheries of the marine waters of CRFM Member States

All CRFM Member States exploit the fisheries resources found in the territorial sea and in the archipelagic waters (of an archipelagic State), as well as parts of the sea that are included in the exclusive economic zone of that State. Belize, St. Kitts and Nevis and St. Vincent and the Grenadines also exploit the high seas via the operation of open registries.

The fishing fleets and fishing gears used to exploit the marine fisheries are mostly artisanal in nature.

The fleet consists of:

1. Traditional fishing vessels: such as canoes - made using the traditional method of *digging out* the trunk of a tree, or planked canoes - which are usually small un-decked boats less than 6 m in length, usually powered by oars and/or sails, however small outboard engines could be used as well.
2. Larger canoes or pirogue type vessels: usually made with glass reinforced plastic (GRP - fibreglass). These could be decked or un-decked and are usually between 6 m to 12 m in length. These vessels are usually powered by outboard engines. However oars and sails are used as well.
3. Longliners or trawlers; usually greater than 12 m in length, some with steel hulls. Generally they are large covered vessels.

The gears utilized include the Antillean “Z” or “S” traps (commonly called fish pots or fish traps), hand and trolling lines, cast nets, gill nets, hoop nets, spears, spear guns, lobster hook, lobster traps, pelagic longline gear, Chinese seines, and beach seines. Casitas and fish aggregating devices (FADs) are also used in the region. Diving gears (including compressors and SCUBA tanks) are also used in the capture of fish.

The region’s marine fisheries have been grouped according to habitat and the following categories of fisheries have traditionally been acknowledged by the CRFM region: small coastal pelagic fishery, small offshore pelagic fishery, large offshore pelagic fishery, shallow shelf and reef finfish fishery, shallow shelf and reef lobster fishery, shelf and deep slope fishery, shrimp fishery, conch fishery, echinoderms fishery (locally called the sea urchin or sea cucumber fishery), sea turtle fishery and fishery for sea mammals. A brief description of the fisheries categories and the main families or species of interest in the region can be found in Table 6. The number of Member States exploiting each fishery can be seen in Table 7.

The fisheries are exploited by various sectors of the society, and these include the following:

1. Citizens or authorized persons who exploit the fisheries as their primary source of income - commercial exploitation or commercial capture fisheries.
2. Citizens or authorized persons who exploit the fisheries as a recreational activity - recreational exploitation or recreational fisheries.
3. Citizens or authorized persons who exploit the fisheries under sporting activities - sports fisheries.
4. Citizens or authorized persons who exploit the fisheries as a primary source of protein for dependents - subsistence fisheries.

**Table 6: Fishery category and the habitat to which the category is linked, description of the category and some of the main families or species of interest in the CRFM region**

Habitat	Fishery category	Description	Some of the main families or species of interest in the CRFM region
Pelagic waters	Small coastal pelagic fishery	Small fish (generally silvery in appearance) living in the water column directly above continental shelves near the shoreline (coastal waters)	Jacks (Carangidae) Herring (Clupeidae) Silverside (Atherinidae) Anchovy (Engraulidae) Ballyhoo ( <i>Hemiramphus</i> spp.) Scads ( <i>Decapterus</i> spp.) Four winged flyingfish ( <i>Hirundichthys affinis</i> )
	Small offshore pelagic	Medium sized fish (generally tuna and tuna like species) living in the open waters of the oceans (moving between coastal and oceanic waters)	Blackfin tuna ( <i>Thunnus atlanticus</i> ) Cero mackerel ( <i>Scomberomorus regalis</i> ) Dolphinfish ( <i>Coryphaena hippurus</i> ) Wahoo ( <i>Acanthocybium solandri</i> ) Frigate tuna ( <i>Auxis thazard thazard</i> ) Bullet tunas ( <i>Auxis rochei</i> ) King mackerel ( <i>Scomberomorus cavalla</i> ) Little tunny ( <i>Euthynnus alletteratus</i> ) Serra Spanish mackerel ( <i>Scomberomorus brasiliensis</i> )
	Large offshore pelagic	Large, fast-swimming, highly migratory fish species living in the deep open waters of the oceans (oceanic waters)	Albacore ( <i>Thunnus alalunga</i> ) Blue marlin ( <i>Makaira nigricans</i> ) Atlantic bonito ( <i>Sarda sarda</i> ) Atlantic sailfish ( <i>Istiophorus albicans</i> ) White marlin ( <i>Tetrapturus albidus</i> ) Bigeye tuna ( <i>Thunnus obesus</i> ) Black marlin ( <i>Makaira indica</i> ) Longbill spearfish ( <i>Tetrapturus pfluegeri</i> ) Northern bluefin tuna ( <i>Thunnus thynnus thynnus</i> ) Skipjack tuna ( <i>Katsuwonus pelamis</i> ) Swordfish ( <i>Xiphias gladius</i> ) Yellowfin tuna ( <i>Thunnus albacares</i> )
Coral reefs	Shallow shelf and reef finfish fishery	Species living on or over coral reefs or associated with coral reefs	Parrotfishes (Scaridae) Squirrelfishes (Holocentridae) Grunts (Pomadouridae), Surgeonfishes (Acanthuridae), Triggerfish (Balistidae) The Serranidae family (particularly hinds, sea-basses, and small groupers), Snappers (Lutjanidae)
	Shallow shelf and reef lobster fishery	Lobsters are large marine crustaceans with hard exoskeletons. The species targeted in the region generally live in crevices on coral reefs and are specifically targeted or captured as a part of the reef fisheries	Caribbean spiny lobster ( <i>Panulirus argus</i> ) Spotted spiny lobster ( <i>Panulirus guttatus</i> ) Sculptured slipper lobster ( <i>Parribacus antarcticus</i> ) Spanish slipper lobster ( <i>Scyllarides aequinoctialis</i> )
The continental slope; In the outer reaches of the continental shelf to the continental drop-off	Shelf and deep slope fishery	The main targets of this fishery are deep water snappers and groupers	Silk snapper ( <i>Lutjanus vivanus</i> ) Queen snapper ( <i>Etelis oculatus</i> ) Jewfish ( <i>Epinephelus itajara</i> ) Red hinds ( <i>Epinephelus guttatus</i> )

Habitat	Fishery category	Description	Some of the main families or species of interest in the CRFM region
point (where the shelf descends toward the deep ocean floor)			Nassau grouper ( <i>Epinephelus striatus</i> )
Seafloor habitat – soft substrate demersal	Shrimp fishery	Shrimp are stalk-eyed swimming crustaceans with long narrow muscular abdomens (called tails). Most of the commercially valuable shrimps in the region are from the family Penaeidae	Atlantic seabob ( <i>Xiphopenaeus kroyeri</i> ) Southern white shrimp ( <i>Litopenaeus schmitti</i> ) Southern brown shrimp ( <i>Farfantepenaeus subtilis</i> ) Southern pink shrimp ( <i>Farfantepenaeus notialis</i> ) Redspotted shrimp ( <i>Farfantepenaeus brasiliensis</i> )
Seafloor habitat – soft substrate demersal (sand or mud near seagrass beds)	Conch fishery	Fishery specifically for the gastropods from the family Strombidae	Queen conch ( <i>Strombus gigas</i> )
Seafloor habitat – soft substrate demersal. Beds of seagrass ( <i>Thalassia</i> spp.), sand or mangroves, but could also be in the cervices of reefs.	Echinoderms fishery (locally called sea urchin or sea cucumber fishery)	The white sea urchin and the sea cucumber are harvested in some countries for the export market, but in St. Lucia and Barbados, when harvested, are mainly used locally	White sea urchin ( <i>Tripneustes ventricosus</i> ) Donkey dung sea cucumber ( <i>Holothuria mexicana</i> )
Shallow waters along coast and around islands	Sea turtles	Sea turtles are marine reptiles targeted by net or harpoon	The green turtle ( <i>Chelonia mydas</i> ) The hawksbill turtle ( <i>Eretmochelys imbricata</i> ) The leatherback ( <i>Dennochelys coriacea</i> ) The loggerhead turtle ( <i>Caretta caretta</i> )
Deep oceanic waters	Mammals	Mainly small cetaceans (porpoises, dolphins and pilot whales) There is also aboriginal/ traditional capture of humpback whales	Short-finned Pilot Whale ( <i>Globicephala macrorhynchus</i> ) Humpback whale ( <i>Megaptera novaeangliae</i> )

**Table 7: The number of fishery categories exploited by each Member State of the CRFM**

Member States	Small coastal pelagic fishery - jacks, scads, herrings, balao, flying fish etc.	Small offshore pelagic fishery - black-fin tuna dolphin-fish, wahoo, etc.	Large offshore pelagic fishery – yellow-fin tunas, billfishes swordfish etc.	Shallow shelf and reef finfish fishery - grunts, snappers, doctorfish etc.	Shallow shelf and reef lobster fishery	Shelf and deep slope fishery- deep water snappers, groupers, etc.	Shrimp/ prawn fishery	Conch fishery - queen conch	Echinoderms fishery – white sea urchin, sea cucumber	Sea turtles fishery	Mammals - pilot whales, dolphins, porpoises
Anguilla	1	1		1	1	1		1		Moratorium	
Antigua and Barbuda	1	1	1	1 <sup>12</sup>	1 <sup>13</sup>	1 <sup>14</sup>		1 <sup>15</sup>	1 <sup>16</sup>	1 <sup>17</sup>	
Bahamas	1	1	1 <sup>18</sup>	1 <sup>19</sup>	1 <sup>20</sup>	1 <sup>21</sup>		1		Fishery closed <sup>22</sup>	Fishery banned <sup>23</sup>
Barbados	1	1	1	1	1	1		1 <sup>24</sup>	1 <sup>25</sup>	Capture prohibited <sup>26</sup>	

<sup>12</sup> Closed season for parrotfish (Scaridae), all species; May 1<sup>st</sup> - July 31<sup>st</sup> annually (Government of Antigua and Barbuda, 2013).

<sup>13</sup> Closed season for spiny lobster (Panulirus argus); May 1<sup>st</sup> - June 30<sup>th</sup> annually (Government of Antigua and Barbuda, 2013).

<sup>14</sup> Closed season for Nassau grouper (Epinephelus striatus), red hind (Epinephelus guttatus) and coney (Cephalopholis fulvus); January 1<sup>st</sup> - March 31<sup>st</sup> annually (Government of Antigua and Barbuda, 2013).

<sup>15</sup> Closed season for queen conch (Strombus gigas); July 1<sup>st</sup> - August 31<sup>st</sup> annually (Government of Antigua and Barbuda, 2013).

<sup>16</sup> Sea urchin and sea cucumber fisheries are currently subsistent fisheries (Horsford, 2014; I. Horsford (personal communication , 11August 2017))

<sup>17</sup> The Minister may by notice in the Gazette declare an open season for turtle. However no open season was declared 2017 - 2018 (Government of Antigua and Barbuda, 2013; Fisheries Division Antigua and Barbuda, 2020).

<sup>18</sup> Prohibition on possessing, fishing for or landing shark or shark parts; on the sale of shark, shark parts or shark products. (Government of The Bahamas, 2011).

<sup>19</sup> Closed season for stone crab; 1<sup>st</sup> June - 15<sup>th</sup> October (inclusive) annually. Minimum harvestable claw is 4". Harvesting of females is prohibited (Government of The Bahamas, 2009).

<sup>20</sup> Closed season for crawfish; annual closed season for crawfish extending from 1<sup>st</sup> April - 31<sup>st</sup> July (inclusive). (Government of The Bahamas, 2009).

<sup>21</sup> Closed season for the Nassau grouper; December 1<sup>st</sup> - February 28<sup>th</sup> of the following year (Government of The Bahamas, 2015).

<sup>22</sup> Prohibition on taking, possessing, buying or selling of marine turtles, marine turtle parts or marine turtle eggs. (Government of The Bahamas, 2009).

<sup>23</sup> No person shall, within the exclusive fishery zone, fish for, molest or otherwise interfere with any marine mammal (does not apply to a person who has the prior written permission of the Minister to capture marine mammals for scientific, educational or exhibition purposes (Government of The Bahamas, 2009).

<sup>24</sup> Conchs are now mainly harvested for their shells which are polished and sold as souvenirs to tourists (FAO, 2016-2020).

<sup>25</sup> Fishery closed in year 2017. The annual sea egg survey for 2017 indicated that the sea egg stock around the island was very low. The government could not support the opening of a fishing season of any reasonable duration in 2017. (Caribbean National Weekly.com, 2017).

<sup>26</sup> Regulation prohibits the capture, possession or sale of marine turtles, turtle eggs and turtle parts (Government of Barbados, 1998).

Member States	Small coastal pelagic fishery - jacks, scads, herrings, balao, flying fish etc.	Small offshore pelagic fishery - black-fin tuna dolphin-fish, wahoo, etc.	Large offshore pelagic fishery – yellow-fin tunas, billfishes swordfish etc.	Shallow shelf and reef finfish fishery - grunts, snappers, doctorfish etc.	Shallow shelf and reef lobster fishery	Shelf and deep slope fishery- deep water snappers, groupers, etc.	Shrimp/ prawn fishery	Conch fishery - queen conch	Echinoderms fishery – white sea urchin, sea cucumber	Sea turtles fishery	Mammals - pilot whales, dolphins, porpoises
<b>Belize</b>	1	1	1	1 <sup>27</sup>	1 <sup>28</sup>	1 <sup>29</sup>	1 <sup>30</sup>	1 <sup>31</sup>	1	All protected since 2002 <sup>32</sup>	Protection for marine mammals <sup>33</sup>
<b>Dominica</b>	1	1	1	1	1	1				1 <sup>34</sup>	
<b>Grenada</b>	1	1	1	1	1 <sup>35</sup>	1		1	1 <sup>36</sup>	1 <sup>37</sup>	
<b>Guyana</b>			1			1	1 <sup>38</sup>				
<b>Haiti</b>	1	1	1	1	1	1	1	1	1	NA <sup>39</sup>	NA

<sup>27</sup> Complete ban on all parrotfish, blue tang, surgeon fish; No person shall take in the waters of Belize, or buy, sell or have in possession any grazers, ‘grazers’ means any fish of the Scaridae family, including the genus *Scarus* and *Sparisoma*, any fish of the Acanthuridae family (Government of Belize, 2009a). Tarpon (*Megalops atlanticus*), permit (*Trachinotus falcatus*) and bonefish (*Albula vulpes*) are intended for ‘catch and release’ fishing only (Government of Belize, 2009b).

<sup>28</sup> No person shall take in the waters of Belize or buy, sell or have in his possession crawfish (genus *Panulirus*) - between the 15<sup>th</sup> February and the 14<sup>th</sup> June, inclusive, in any year; (Government of Belize, 2003).

<sup>29</sup> Closed season for Nassau grouper (*Epinephelus striatus*); 1<sup>st</sup> December - 31<sup>st</sup> March inclusive in any year (Government of Belize, 2009a). No whale shark, shall be caught or killed in the waters of Belize (Government of Belize, 2003).

<sup>30</sup> Regulations of 2011 ended the shrimp trawl fishery in Belize; No person shall engage in any form of trawling in the internal waters, territorial sea, exclusive economic zone (Government of Belize, 2011). The shrimp capture fishery is now small scale artisanal. Shrimp season (for wild shrimp) will officially open on July 15<sup>th</sup> of any year inclusive, for a period not exceeding eight months in any one year, but which period may be less than eight months provided that one month’s notice is given in advance (Government of Belize, 2003).

<sup>31</sup> Closed season for conch; 1<sup>st</sup> July - 30<sup>th</sup> September, inclusive, in any year (Government of Belize, 2003).

<sup>32</sup> No person shall fish for in the waters of Belize or buy, sell or have in his possession any hawksbill, loggerhead, leatherback, Kemp’s ridley, olive ridley or green turtle (Government of Belize, 2003).

<sup>33</sup> Hunting of whales (all species), dolphins (all species) and manatee prohibited (Government of Belize, 2000).

<sup>34</sup> Sea turtle closed season; 1<sup>st</sup> June - 30<sup>th</sup> September both dates inclusive (Government of Dominica, 1976).

<sup>35</sup> Lobster closed season; 1<sup>st</sup> May - 31<sup>st</sup> August (ACP Fish II, 2012).

<sup>36</sup> Grenada sea urchins (sea eggs) fishery is closed - total ban (ACP Fish II, 2012).

<sup>37</sup> Closed season for turtles; 1<sup>st</sup> May - 31<sup>st</sup> August (ACP Fish II, 2012).

<sup>38</sup> A closed season was implemented in 2014 for the seabob (shrimp) fishery and the prawn fishery. Closure was 8<sup>th</sup> September - 26<sup>th</sup> October 2014 (6 weeks), both dates inclusive (CRFM website, 2014).

<sup>39</sup> NA=Not Available



Member States	Small coastal pelagic fishery - jacks, scads, herrings, balao, flying fish etc.	Small offshore pelagic fishery - black-fin tuna dolphin-fish, wahoo, etc.	Large offshore pelagic fishery – yellow-fin tunas, billfishes swordfish etc.	Shallow shelf and reef finfish fishery - grunts, snappers, doctorfish etc.	Shallow shelf and reef lobster fishery	Shelf and deep slope fishery- deep water snappers, groupers, etc.	Shrimp/ prawn fishery	Conch fishery - queen conch	Echinoderms fishery – white sea urchin, sea cucumber	Sea turtles fishery	Mammals - pilot whales, dolphins, porpoises
Jamaica	1	1	1	1	1 <sup>40</sup>	1	1	1 <sup>41</sup>	1 <sup>42</sup>	Fishery closed since 1982 <sup>43</sup>	Protection for some marine mammals <sup>44</sup>
Montserrat	1	1	1	1		1					
St. Kitts and Nevis	1	1	1	1	1 <sup>45</sup>	1		1		1 <sup>46</sup>	
St. Lucia	1	1	1	1	1 <sup>47</sup>	1		1	1	1 <sup>48</sup>	
St. Vincent and the Grenadines	1	1	1	1	1 <sup>49</sup>	1		1		1 <sup>50</sup>	1 <sup>51</sup>
Suriname		1	1	1		1	1				
Trinidad and Tobago	1	1	1	1	1	1	1	1		Prohibition on killing of any turtle <sup>52</sup>	

<sup>40</sup> Lobster closed season; 1<sup>st</sup> April - 30<sup>th</sup> June each year (Government of Jamaica, 1987).

<sup>41</sup> Conch closed season 2017/2018 (declared); 1<sup>st</sup> September 2017 – April 1<sup>st</sup> 2018, (Jamaica Information Service (JIS), 2017).

<sup>42</sup> In 2013 there was a closed season for sea cucumbers; 18<sup>th</sup> July - 30<sup>th</sup> September 2013, as a precautionary measure until a structured management regime could be developed (Kong, 2015; Government of Jamaica, 2015).

<sup>43</sup> Green turtle, hawksbill turtle, loggerhead turtle, Atlantic ridley, Atlantic leatherback all protected (Government of Jamaica, 1945).

<sup>44</sup> Manatee, Pedro seal, bottlenose dolphin, sperm whale, spotted dolphin, Baird's beaked whale, short-finned pilot whale, humpback whale protected (Government of Jamaica, 1945).

<sup>45</sup> The Minister may by notice published in the Gazette declare the period 1<sup>st</sup> May to 31<sup>st</sup> August in any year as a closed season (Government of St. Kitts and Nevis, 1995).

<sup>46</sup> Closed season for sea turtles; 28<sup>th</sup> February - 1<sup>st</sup> October annually (Government of St. Kitts and Nevis, 1995).

<sup>47</sup> Lobster closed season 30<sup>th</sup> April - 1<sup>st</sup> September in each year (Government of St. Lucia, 1985).

<sup>48</sup> Marine turtles closed season; 28<sup>th</sup> February - 1<sup>st</sup> October in each year. Only hawksbill turtles weighing 60 lbs or more; green or loggerhead turtle weighing 75 lbs or more are permitted to be fished during the open season (Government of St. Lucia, 1985).

<sup>49</sup> Close season for lobster; 1<sup>st</sup> May - 31<sup>st</sup> August annually (Government of St. Vincent and the Grenadines, 1989).

<sup>50</sup> Closed season for turtle; 1<sup>st</sup> March to 31<sup>st</sup> July (Government of St. Vincent and the Grenadines, 1987).

<sup>51</sup> The fishery captures pilot whales and humpback whales. For the seasons 2013 - 2018 the number of humpback whales to be taken shall not exceed 24 (International Whaling Commission, 2016).

<sup>52</sup> Prohibition on killing, harpooning or selling of any turtle (Government of the Republic of Trinidad and Tobago, 2011).

Member States	Small coastal pelagic fishery - jacks, scads, herrings, balao, flying fish etc.	Small offshore pelagic fishery - black-fin tuna dolphin-fish, wahoo, etc.	Large offshore pelagic fishery – yellow-fin tunas, billfishes swordfish etc.	Shallow shelf and reef finfish fishery - grunts, snappers, doctorfish etc.	Shallow shelf and reef lobster fishery	Shelf and deep slope fishery- deep water snappers, groupers, etc.	Shrimp/ prawn fishery	Conch fishery - queen conch	Echinoderms fishery – white sea urchin, sea cucumber	Sea turtles fishery	Mammals - pilot whales, dolphins, porpoises
<b>Turks and Caicos Islands</b>	1	1	1	1 <sup>53</sup>	1 <sup>54</sup>	1		1 <sup>55</sup>		1 <sup>56</sup>	Restrictions relating to marine mammals <sup>57</sup>
<b>Totals</b>	<b>15</b>	<b>16</b>	<b>16</b>	<b>16</b>	<b>14</b>	<b>17</b>	<b>6</b>	<b>13</b>	<b>7</b>	<b>7</b>	<b>1</b>

<sup>53</sup> Restriction relating to parrot fish; No person shall take, have in his possession buy or sell any parrot fish (Government of Turks and Caicos, 2014a)

<sup>54</sup> Closed season in relation to crawfish shall be the period from the first day of April to the thirty-first day of July (inclusive) in each year or such other dates as may, from time to time, be appointed by the Governor in the Gazette (Government of Turks and Caicos Islands, 2014a).

<sup>55</sup> Closed season (on exports) for queen conch; No person shall export queen conch during the period 15<sup>th</sup> July - 15<sup>th</sup> October each year (Government of the Turks and Caicos Islands, 2014a).

<sup>56</sup> Closed season for hawksbill turtles 1<sup>st</sup> August - 31<sup>st</sup> March inclusive each year (Government of the Turks and Caicos Islands, 2014b). No person shall take any turtle on any beach or at any place above low water mark; take any turtle of the species Kemp's ridley turtle or leatherback turtle or olive ridley turtle (Government of the Turks and Caicos Islands, 2014a).

<sup>57</sup> No person shall engage in fishing for, molest or otherwise interfere with any marine mammal (Government of the Turks and Caicos Island, 2014a).

## **CHAPTER 2: THE FISHING FLEET OF THE CRFM REGION**

### **2.1 Fishing vessels operating in CRFM Member States**

Most fishery exploitation activities in the region employ the use of vessels (vessels used in aquaculture facilities were not included as a part of the fishing fleet of the region).

Vessels are used in almost all categories of fish exploitation, including:

- (i) Recreational exploitation - recreational fisheries
- (ii) Sporting exploitation - sports fisheries
- (iii) Subsistence exploitation - subsistence fisheries
- (iv) Commercial exploitation - commercial capture fisheries

Data and information on vessels used exclusively for recreational fishing, sports fishing and subsistence fishing (where these vessels were not registered by the fisheries authority of Member States) were not included in this report at this time<sup>58</sup>. In some cases vessels are used interchangeable between fishery types and categories. The fisheries authorities of Member States had available, records of the vessels used in commercial capture fisheries.

### **2.2 Quantity of vessels operating in the commercial capture fisheries of the CRFM region**

Very few Member States conduct annual fishing vessel censuses. Where timely vessel censuses are not carried out, information on destroyed or inactive vessels are usually not available and thus vessels that no longer exist or are no longer operating are often not removed from the vessel registries of the Fisheries Divisions / Departments. The number of registered vessels therefore may not in all cases reflect the exact number of vessels operating in the fishing industry of the Member States. It does serve however as an indicator of the possible number of vessels in operation.

The total number of fishing vessels operating in the commercial capture fisheries of CRFM Member States was estimated at 31,872 in 2017 and 32,819 in 2018 (average 32,346 per year 2017/2018). Of note is that the Bahamas revised the number of fishing vessels down from the last estimate of 4,000 to 975. The 975 are those vessels 20 feet and over, which have been licensed for commercial fishing purposes by the Department of Marine Resources and the Port Department (dinghies) (Personal Communication, Ferguson/Masters 2020). The figures reported from Haiti of an increase of 5,565 vessels between 2014 and 2016 were not updated for 2017/2018 as no new figures were provided (Table 8).

The three Member States with fishing vessels registered on open registries in 2017/2018 were: Belize, St. Kitts and Nevis and St. Vincent and the Grenadines. The number of vessels fishing on the high seas and registered in Member States of the CRFM during 2017 and 2018 was estimated at 95 and 63 respectively (Table 9). There was a major reduction in the St. Vincent and the Grenadines high seas registered vessels, down to 5 vessels in 2018 from 33 in 2016. St. Kitts and Nevis reported that as of 11 December 2018, they had no fishing vessels on their register (personal communication Ryan/Masters, 27 April 2020).

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<sup>58</sup> *Subsequent volumes of this publication will seek to provide this data*

**Table 8: Number of fishing vessels operating in the commercial capture fishery of CRFM Member States for period 2013 – 2018**

Member States	2013	2014	2015	2016	2017	2018P	Sources 2017 and 2018 data
<b>Anguilla</b>	105	136	65	122	153	153	Department of Fisheries and Marine Resources Anguilla, 2018
<b>Antigua and Barbuda</b>	337	338	332	332	332	332 <sup>59</sup>	Fisheries Division Antigua and Barbuda, 2015
<b>Bahamas</b>	4 000	4 000	4 000	4 000	975 <sup>60</sup>	975 <sup>61</sup>	Department of Marine Resources Bahamas <sup>62</sup>
<b>Barbados</b>	1 090	1 034	1 059	1 146	1 146 <sup>63</sup>	1 146 <sup>64</sup>	Government of Barbados, 2017
<b>Belize</b>	560	560	510	510	760	623	CRFM, 2015 & Belize Fisheries Department 2018
<b>Dominica<sup>65</sup></b>	434	434	434	434	457	339	Fisheries Division Dominica, 2020
<b>Grenada</b>	1 812	1 812	1 933	2 028	2 028 <sup>66</sup>	2 028 <sup>67</sup>	Fisheries Division Grenada, 2017
<b>Guyana</b>	1 450	1 450	827	778	1 473	1 492	Fisheries Department Guyana, 2018
<b>Haiti<sup>68</sup></b>	5 630	5 630	11 600	11 600	11 600	11 600	Fisheries Department Haiti, 2017
<b>Jamaica</b>	6 481	6 955	7 353	7 143	7 102	8 032	Fisheries Division Jamaica, 2019
<b>Montserrat</b>	32	37	31	21	18	18	Department of Fisheries Montserrat, 2018
<b>St. Kitts and Nevis</b>	375	375	385	408	239	221	Department of Marine Resources St. Kitts and Nevis, 2019
<b>St. Lucia</b>	719	760	796	822	873	891	Department of Fisheries St. Lucia, 2019
<b>St. Vincent and the Grenadines</b>	790	790	882	882	900	900	Fisheries Division St. Vincent and the Grenadines, 2019
<b>Suriname</b>	1 146	1 273	936	936	936	1 369	Department of Fisheries Suriname, 2020
<b>Trinidad and Tobago<sup>69</sup></b>	1 609	2 159	2 159	2 440	2 708	2 539	Fisheries Division Trinidad and Tobago, 2020
<b>Turks and Caicos Islands<sup>70</sup></b>	148	123	156	179	172	161	Department of Environment and Coastal Resources Turks and Caicos Island, 2020

<sup>59</sup> Last available estimate was in 2015

<sup>60</sup> New revised figures provided by the Department of Marine Resources Bahamas. The 975 vessels reflect those which have been licensed for commercial fishing purposes (vessels 20 feet and over) by Department of Marine Resources and those which licensed by the Port Department (dinghies (Personal Communication, Ferguson/Masters 2020 )

<sup>61</sup> New revised figures provided by the Department of Marine Resources Bahamas, 2017 estimate.

<sup>62</sup> Data for 2013 – 2016 from the last Bahamas fisheries census conducted in 1995(Deleveaux and Higgs, 1995). Preliminary results of the 1995 Fisheries Census showed that there were 4,050 Bahamian vessels active in the commercial fishery - figure was rounder off to 4000 by the Department of Marine Resources Bahamas

<sup>63</sup> 2016 estimate

<sup>64</sup> 2016 estimate

<sup>65</sup> Data available for 2013 -2016 were reported during the 2011 Dominica Fisheries Industry Census (CRFM, 2012a)

<sup>66</sup> 2016 estimate

<sup>67</sup> 2016 estimate

<sup>68</sup> 2008 estimate used for 2013 to 2014. All other estimates are 2015/2016 estimates

<sup>69</sup> Estimates for all years were revised

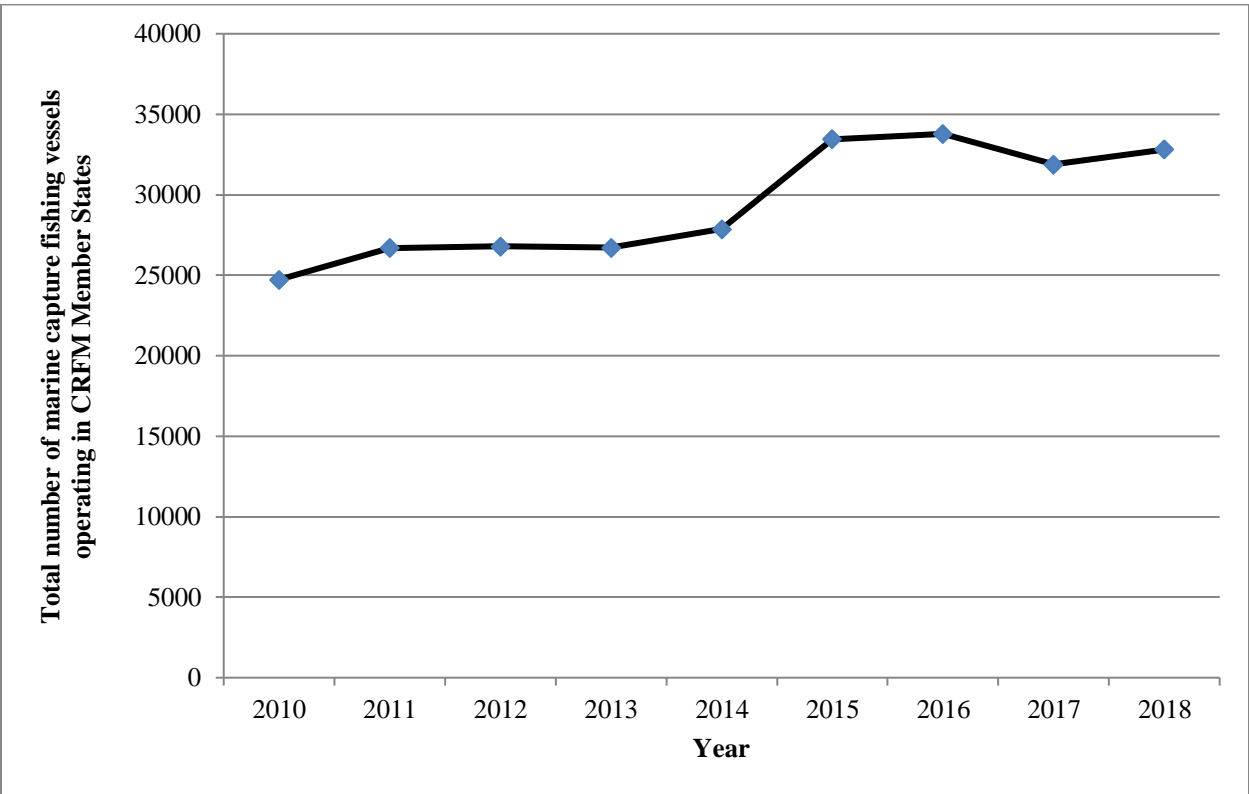
<sup>70</sup> All estimates for all years were revised

Totals	26 718	27 866	33 458	33 781	31 872	32 819	
Average total for period 2017– 2018	32 346						

*P =Provisional; subject to change.*

**Table 9: Number of fishing vessels operating under open registries of CRFM Member States 2015 and 2018**

Member States from the CRFM region.	Number of fishing vessels operating under open registries (2015)	Number of fishing vessels operating under open registries (2016)	Number of fishing vessels operating under open registries (2017)	Number of fishing vessels operating under open registries (2018)	References / Source
Belize	31	39	45	41	Belize High Seas Fisheries Unit, 2020
St. Kitts and Nevis	40	35	17 <sup>71</sup>	17 <sup>72</sup>	Department of Maritime Affairs St. Kitts and Nevis, 2018
St. Vincent and the Grenadines	34	32	33	5	Fisheries Division St. Vincent and the Grenadine, 2017-2019
Total	105	98	95	63	



**Figure 2: Total number of commercial capture fishing vessels operating in CRFM Member States 2010 -2018.**

<sup>71</sup> Were on the register as of 02 January 2018,  
<sup>72</sup>Vessels only operated for a portion of 2018. As of 11 December 2018, St. Kitts and Nevis had 7 reefers and no fishing vessels registered.

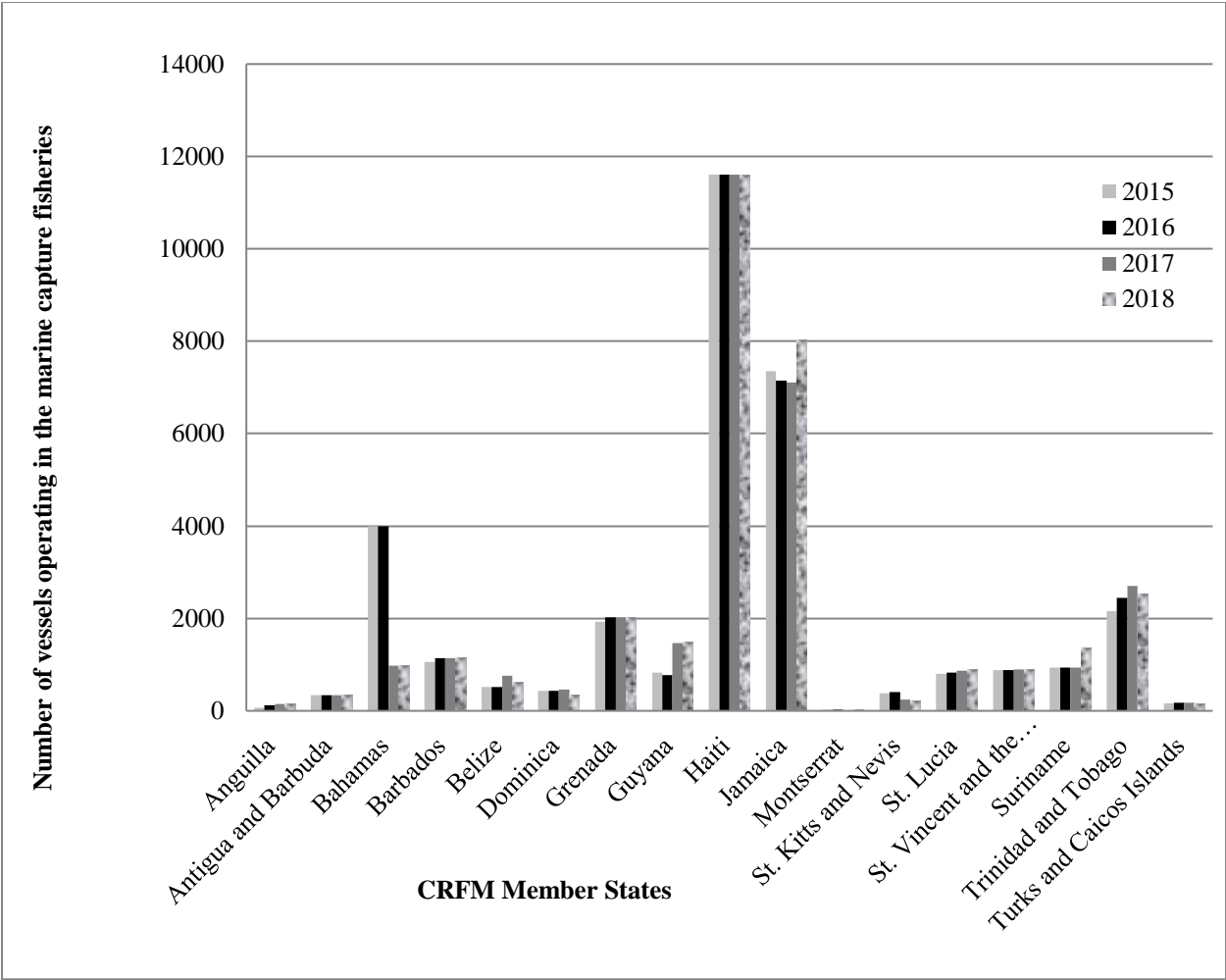


Figure 3: Number of vessels operating in the commercial capture fisheries of CRFM Member States for period 2015– 2018.

2.3 Types and categories of fishing vessels operating in the commercial capture fisheries of CRFM Member States

Most of the CRFM Member States described their commercial capture fishery fishing fleets as artisanal fleets. Table 10 provides a summary of the types and categories of fishing vessels used in the commercial capture fishery of CRFM Member States, and it indicates that many traditional fishing vessels such as canoes (small dugout and planked canoes) dories and pirogues are still in use in the CRFM region. Table 11 shows that in 2017 of 4,864 vessels from the commercial capture fishery fishing fleet examined approximately 20% attained a length of up to 5.9 metres length overall and approximately 73% were between 6 – 11.9 metres length overall. Approximately 7% of the fleet was above 12 metres length overall.

Table 10: Summary description of the commercial capture fishery fishing fleets of CRFM Member States

CRFM Member States	Summary description of the fishing fleet (length of vessels is length overall - LOA)	Source / Reference
Anguilla	On the island, there are 4 trawlers that are over 30ft, and powered by inboard engines. Besides those, the majority of the boats are primarily wood and fiberglass, open hull vessels, powered by outboard engines. The sizes of those vessels range from 16 – 49ft, most of which are locally built.	Gumbs and Johnson, 2018
Antigua and Barbuda	The fleet has transitioned from wooden sloops and dories, which dominated the fleet in the 1970s, to fibreglass launches and pirogues. Categories of vessels include: 1. Sloops and dories; small wooden boats up to 5.9 metres 2. Launches and pirogues; usually made from fibreglass, length 6.72 metres	Horsford, 2004
Bahamas	Commercial fishing vessels range in size from 3.35 metres to 30.5 metres. In many instances <i>dinghy</i> (small vessels < 6 metres long) work in conjunction with a larger motorized <i>mothership</i> that acts as a base for operations (primarily in the lobster and conch fishery). Categories of vessels include:	CRFM, 2006 CRFM, 2008

CRFM Member States	Summary description of the fishing fleet (length of vessels is length overall - LOA)	Source / Reference
	<ol style="list-style-type: none"> <li>1. The <i>dinghy</i> (small vessels &lt; 6 m in length) which forms the majority of the fleet.</li> <li>2. Small scale fishing vessels 6 – 16 metres in length</li> <li>3. Large motorized vessels “mothership” (up to 30.5 m in length) that acts as a base for operations</li> </ol>	
<b>Barbados</b>	<p>The fleet range from small open rowboats (less than 6 metres) to inboard-engine powered longliners (over 22 metres).</p> <p>Categories of vessels include:</p> <ol style="list-style-type: none"> <li>1. <i>Moses</i>; open boats 3 - 6 metres</li> <li>2. <i>Dayboats/Launches</i>: mostly wooden vessels 6 - 12 metres, fitted with a cabin</li> <li>3. <i>Iceboats and Longliners</i>: characterized by a fitted insulated ice hold; carry a cabin; usually greater than 12 metres</li> </ol>	Government of Barbados, 2004
<b>Belize</b>	<p>Most fishing vessels range between 3.6 metres to 9.14 metres in length and are wooden or fibreglass fishing vessels fitted with outboard engines (15-75 hp) or sail. Vessels are used to exploit both freshwater systems and the marine environment.</p> <p>Categories of vessels include:</p> <ol style="list-style-type: none"> <li>1. Outboard powered skiffs and canoes.</li> <li>2. Round bilged sailing boats</li> </ol>	Villanueva, 2009
<b>Dominica</b>	<p>Keel-type vessels account for approximately half of the fishing fleet.</p> <p>Categories of vessels include:</p> <ol style="list-style-type: none"> <li>1. Canoes</li> <li>2. keel-type boats and pirogues</li> </ol>	Theophille, 2012
<b>Grenada</b>	<p>Pirogues and small open vessels are the main types of vessels used. The range in boat sizes have increased from 4.9 - 9.1 metres to 4.9 - 16.8 metres in recent years.</p> <p>Categories of vessels include:</p> <ol style="list-style-type: none"> <li>1. Small open boats; canoes and small pirogues</li> <li>2. Open and decked pirogues</li> <li>3. Longliners</li> </ol>	FAO, 2007a; CRFM, 2011b
<b>Guyana</b>	<p>The marine capture fisheries are exploited by:</p> <ol style="list-style-type: none"> <li>1. Shrimp trawlers; 21 metres in length. (Gulf of Mexico standard steel-hulled vessels with twin otter trawl nets).</li> <li>2. Finfish trawlers (these are usually smaller than the shrimp trawlers).</li> <li>3. The artisanal fishing fleet which consist of wooden flat-bottomed dory type vessels ranging in size from 6 to 18 metres.</li> </ol> <p>The inland freshwater fisheries are exploited using small, flat-bottomed, dory type vessels</p>	CRFM, 2008; JICA and IC Net Limited, 2012
<b>Haiti</b>	<p>Vessels are artisanal vessels ranging from 3 - 6 metres</p> <p>Categories of vessels include:</p> <ol style="list-style-type: none"> <li>1. Rowboats (<i>canots à quille</i>); length 3.3 to 6 metres</li> <li>2. Flat-bottomed boats (<i>corallins</i>); length 3.3 – 5 metres</li> <li>3. Dugout wooden boats (<i>pirogues monoxyles</i>); length 3.3 – 4 metres</li> </ol>	JICA and IC Net Limited, 2012
<b>Jamaica</b>	<p>The fishing fleet consist principally of open glass-fibre reinforced plastic, (GFRP) canoes.</p> <p>Categories of vessels include:</p> <ol style="list-style-type: none"> <li>1. Dugout wood canoes and other small open canoes</li> <li>2. Open reinforced fibreglass plastic (FRP) canoes most of which are 8.5 metres, large size wooden boats locally called <i>big head</i></li> <li>3. Fish trading vessels locally called <i>packer boats</i></li> <li>4. Steel or aluminium hull vessels operating as “mothership” on offshore banks</li> </ol>	FAO, 2004-2013b; Kong, 2003
<b>Montserrat</b>	<p>The length of vessels in the fleet range from 3.7 - 9.1 metres</p> <p>The fleet consist of:</p>	CRFM, 2011b

<b>CRFM Member States</b>	<b>Summary description of the fishing fleet (length of vessels is length overall - LOA)</b>	<b>Source / Reference</b>
	<ol style="list-style-type: none"> <li>1. Traditional wooden boats.</li> <li>2. Open fibreglass reinforced pirogues (largest category)</li> </ol>	
<b>St. Kitts and Nevis</b>	Approximately 80% of the fleet are open pirogues between 5 to 12 metres in length	CRFM, 2006
<b>St. Lucia</b>	<p>Fishing vessels engaged in the fishery in Saint Lucia range between 5 - 9 meters and are propelled mainly by outboard engines.</p> <p>Categories of vessels include:</p> <ol style="list-style-type: none"> <li>1. Small wooden canoes and pirogues</li> <li>2. Open and decked pirogues, transom, and shallop</li> <li>3. Longliners and whalers</li> </ol>	CRFM, 2009
<b>St. Vincent and the Grenadines</b>	<p>Most fishing vessels are open and powered by outboard engines.</p> <p>Categories of vessels include:</p> <ol style="list-style-type: none"> <li>1. Flat Transoms locally called <i>bow stern</i> or <i>dories</i> (open boats of 3 - 6 metres in length) and other small canoes and rowboats</li> <li>2. Fiberglas pirogues , ranging from 7 - 10 metres in length</li> <li>3. Double enders or “<i>two bows</i>” ; open wooden boats ranging from 3 - 9 metres in length</li> <li>4. Longliner type multipurpose boats ranging in length from 10.6 - 14.8 metres</li> </ol>	CRFM, 2012b
<b>Suriname</b>	<p>Fishing vessels operate in Suriname’s marine, brackish and inland waters.</p> <p>The marine resources are exploited by:</p> <ol style="list-style-type: none"> <li>1. Shrimp trawling vessels</li> <li>2. Finfish trawling vessels</li> <li>3. Longliners</li> <li>4. Large canoe type vessels with inboard engines</li> </ol> <p>The fish resources of inland waters are exploited by canoe type vessels</p>	FAO, 2008; CRFM, 2008
<b>Trinidad and Tobago</b>	<p>The 2003 fishing vessel census for Trinidad found that about 96% of the vessels were artisanal (including trawlers) about 2% were semi-industrial multi-gear vessels and 1% were semi - industrial longliners.</p> <p>Categories of vessels include:</p> <ol style="list-style-type: none"> <li>1. Pirogues usually 7 - 12 metres in length including artisanal trawlers (though pirogues could be as small as 4 metres)</li> <li>2. Semi industrial longliners, semi-industrial fishpot/line vessels, semi-industrial and industrial trawlers 10 - 24 metres in length</li> </ol>	CRFM, 2008; Fisheries Division Trinidad and Tobago, 2011
<b>Turks and Caicos Islands</b>	<p>The vessels used are artisanal vessels between 5 - 6 metres in length.</p> <p>Categories of vessels include:</p> <ol style="list-style-type: none"> <li>1. small open boats with a ‘V’ shaped hulls</li> </ol>	CRFM, 2008



Table 11: Categorization of vessel operating in the commercial capture fisheries by vessel length overall (LOA) classes (meters) as at 2017 or the latest estimates available for CRFM Member States

CRFM Member States	Vessel size by length overall (LOA) classes <sup>73</sup> (meters)							Totals	Totals for 2017
	Up to 5.9	6 - 11.9	12 - 17.9	18 - 23.9	24- 29.9	30 - 35.9	Unknown		
Anguilla	27	105	19	2	0	0	0	153	153
Antigua and Barbuda	75	226	31	0	0	0	0	332	332
Bahamas	534	259	79	84	15	4	0	975	975
Barbados	NA	NA	NA	NA	NA	NA	NA		1 146
Belize	NA	NA	NA	NA	NA	NA	NA		760
Dominica	243	214	0	0	0	0	0	457	457
Grenada	NA	NA	NA	NA	NA	NA	NA		2 028
Guyana	NA	NA	NA	NA	NA	NA	NA		1 473
Haiti	NA	NA	NA	NA	NA	NA	NA		11 600
Jamaica	NA	NA	NA	NA	NA	NA	NA		7 102
Montserrat	NA	NA	NA	NA	NA	NA	NA		18
St. Kitts and Nevis	98	137	4	0	0	0	0	239	239
St. Lucia	NA	NA	NA	NA	NA	NA	NA		873
St. Vincent and the Grenadines	NA	NA	NA	NA	NA	NA	NA		900
Suriname	NA	NA	NA	NA	NA	NA	NA		936
Trinidad and Tobago	2	2 609	14	45	16	2	20	2 708	2 708
Turks and Caicos Islands	NA	NA	NA	NA	NA	NA	NA		172
Totals	979	3 550	147	131	31	6	20	4 864	31 872
Percentage (%)	20.1	73.0	3.0	2.7	0.6	0.1	0.4	100.0	

NA=Not available.

<sup>73</sup> International Standard Statistical Classification of Vessels by Length Classes, approved at the eleventh session of the CWP (Coordinating Working Party on Atlantic Fishery Statistics, 1982).

**CHAPTER 3: FISH PRODUCTION OF THE CRFM MEMBER STATES**

Fish harvesting activities occur in the recreational fisheries, sports fisheries, subsistence fisheries, commercial capture fisheries (including the bait fishery) and aquaculture.

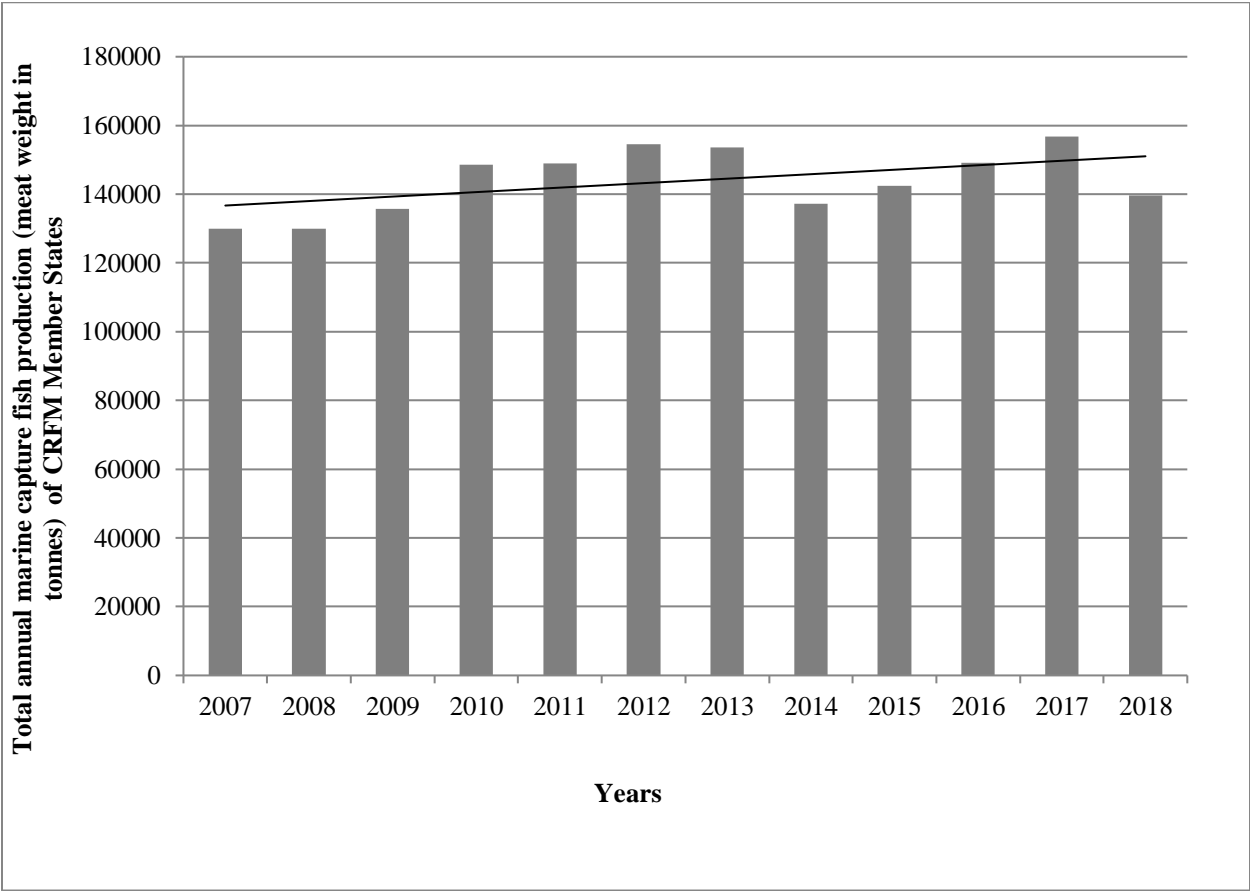
Data and information on fish production exclusively from recreational fishing, sports fishing and subsistence fishing in the region were limited, as in most cases data were not collected from these sub-sectors. Fish production statistics from these sub-sectors were not included in this report at this time. During the period the fisheries authorities of the CRFM Member States consistently collected data from the commercial capture fisheries and aquaculture facilities. However, the region’s data collection systems tended to be more geared towards the collection of data from marine commercial capture fisheries, and in most cases data and statistics on commercial capture of fish from inland fresh water systems were also limited (see section 1.2.1).

**3.1 Production of the marine capture fisheries of CRFM Member States**

Annual average production for the period 2007 to 2018 was 161,124 t live weight / 143,872 t meat weight. Peak production was between the years 2010 to 2013 attaining the highest production of 174,665 t live weight / 154,309 t meat weight in 2012. The total production for 2017 was 156,691 t (meat weight) surpassing the meat weight production of 2012, but this was not sustained and production fell again in 2018 to 139,730 t. The fall in production in 2018 was mainly due to fall in production of Guyana (1,447 t decrease), Jamaica (4,049 t decrease), and Suriname (11,022 t decrease) (Figure 4, Table 12, Table 13).

Since 2014 Suriname has been the top producer of marine capture fisheries of the region (excepting in 2018 when Guyana was the top producer). Over the period 2014-2018 Suriname produced an average of 41,992 t of fish annually. However over the longer time period of 2007 – 2018 Guyana’s annual production of 43,137 t meat weight annually is higher than that of Suriname (36,119 t meat weight annually) Table 15 and Figure 5.

The production of the high seas fleets of Belize, St. Kitts and Nevis and St. Vincent and the Grenadines produced 107,423 t of fish in 2017 an increase of 28% over the 84,115 t produced in 2016 (Table 14).



*Figure 4. Annual total capture fish production (meat weight in tonnes) of CRFM States for period 2007 – 2018.*

**Table 12: Annual marine capture fish production (live weight <sup>74</sup>in tonnes) and period average of CRFM Member States for the period 2007– 2018**

Member States	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017 P <sup>75</sup>	2018 P <sup>76</sup>	Average 2007-2018
<b>Anguilla</b>	250	760	681	701	1 007	1 118	858	940	872	1 013	1 310	1 310	902
<b>Antigua and Barbuda</b>	3 092	3 521	2 490	2 293	3 191	5 951	4 606	3 114	3 165	3 165	3 165	3 164	3 410
<b>Bahamas</b>	10 809	14 704	13 731	16 190	15 164	16 557	12 734	11 795	11 297	11 620	11 593	11 140	13 111
<b>Barbados</b>	2 391	3 220	3 467	3 229	1 773	1 300	2 735	2 153	1 246	1 436	1 436	1 436	2 152
<b>Belize</b>	4 195	4 205	4 922	4 529	4 930	5 835	4 720	3 887	3 764	4 053	4 486	6 517	4 670
<b>Dominica</b>	824	732	686	560	662	625	528	730	945	770	703	763	711
<b>Grenada</b>	2 393	2 407	2 387	2 458	2 451	2 445	2 952	3 028	2 904	2 982	2 636	2 636	2 640
<b>Guyana</b>	42 615	41 366	42 056	46 040	44 364	53 093	49 576	36 946	35 835	41 808	42 694	41 247	43 137
<b>Haiti</b>	11 950	17 950	17 950	17 950	17 800	17 800	17 800	17 800	17 300	18 500	18 580	18 580	17 497
<b>Jamaica</b>	15 998	12 625	15 805	15 174	17 507	14 518	17 513	14 506	16 327	16 240	18 381	14 333	15 744
<b>Montserrat</b>	22	31	37	24	33	37	40	37	37	27	27	27	32
<b>St. Kitts and Nevis</b>	1 154	1 171	1 213	1 093	1 155	1 155	383	423	896	945	861	1 047	958
<b>St. Lucia</b>	1 776	2 069	2 078	1 983	1 946	2 116	1 895	2 162	2 245	2 299	2 349	2 148	2 089
<b>St. Vincent and the Grenadines</b>	982	636	971	819	848	746	1 021	1 075	1 029	892	2 386	2 232	1 136
<b>Suriname</b>	2 9013	23 449	25 575	33 842	36 225	36 650	38 719	37 708	43 915	42 197	48 580	37 558	36 119
<b>Trinidad and Tobago (R)</b>	13 204	13 834	13854	13 930	13 107	12 062	13 138	13 201	13 271	13 045	12 899	13 234	13 231
<b>Turks and Caicos Islands</b>	5 006	6 044	6558	5 262	2 998	2 977	2 978	2 978	2 796	3 093	918 <sup>77</sup>	1 424 <sup>78</sup>	3 586
<b>Totals</b>	<b>145 674</b>	<b>148 723</b>	<b>154 461</b>	<b>166 077</b>	<b>165 160</b>	<b>174 984</b>	<b>172 196</b>	<b>152 483</b>	<b>157 843</b>	<b>164 083</b>	<b>173 004</b>	<b>158 796</b>	<b>161 124</b>

*P = Provisional data*

*Haiti 17,800\*– 2011 estimate; St .Kitts and Nevis 1,155\* - 2011 estimate.*

*Turks and Caicos Islands 2,978\* - 2012 estimate*

*Source: Obtained directly from the fisheries authority in the respective Member States, national reports presented at the Annual CRFM Scientific Meetings, and literature searches*

<sup>74</sup> Conversion factor for meat weight/50% clean to live weight is x 7.9 (Prada et al., 2017) except for Antigua and Barbuda conversion factor 6.77 (Horsford et al., 2011)

<sup>75</sup> Provisional estimates used for 2017: Haiti, Barbados and Montserrat - 2016 est.; Antigua and Barbuda 2015 est.

<sup>76</sup> Provisional estimates used for 2018: Haiti, Barbados and Montserrat - 2016 est.; Anguilla and Grenada - 2017 est.; Antigua and Barbuda 2015 est.

<sup>77</sup> Estimate does not include finfish production

<sup>78</sup> Estimate does not include finfish production

**Table 13: Annual marine capture fish production (meat weight in tonnes) of CRFM Member States for the period 2007 – 2018**

Member States	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017 P <sup>79</sup>	2018P <sup>80</sup>	Average 2007-2018
<b>Anguilla</b>	250	702	493	461	643	706	655	752	694	733	758	758	<b>634</b>
<b>Antigua and Barbuda</b>	2 644	2 345	1 833	1 631	1 975	2 596	1 752	1 709	1 815	1 815	1 815	1 815	<b>1 979</b>
<b>Bahamas</b>	8 345	9 127	9 025	11 621	10 289	11 451	7 845	8 176	7 783	9 286	8 567	7 434	<b>9 079</b>
<b>Barbados</b>	2 391	3 220	3 467	3 229	1 773	1 300	2 735	2 153	1 246	1 436	1 436	1 436	<b>2 152</b>
<b>Belize</b>	2 489	2 592	2 926	2 618	2 401	2 635	1 874	1 755	1 548	1 548	1 421	1 590	<b>2 116</b>
<b>Dominica</b>	824	732	686	700	662	625	528	730	945	770	703	763	<b>722</b>
<b>Grenada</b>	2 211	2 387	2 374	2 451	2 321	2 266	2 698	2 854	2 711	2 823	2 472	2 472	<b>2 503</b>
<b>Guyana</b>	42 615	41 366	42 056	46 040	44 364	53 093	49 576	36 946	35 835	41 808	42 694	41 247	<b>43 137</b>
<b>Haiti</b>	10 000	16 000	16 000	16 000	16 500	16 500	16 500	16 500	16 000	17 200	17 200	17 200	<b>15 967</b>
<b>Jamaica</b>	11 838	10 025	13 205	12 314	14 907	10 943	14 263	11 256	13 077	12 990	14 931	10 883	<b>12 553</b>
<b>Montserrat</b>	22	31	37	24	33	37	40	37	37	27	27	27	<b>32</b>
<b>St. Kitts and Nevis</b>	517	540	589	475	654	654	383	423	454	412	454	585	<b>512</b>
<b>St. Lucia</b>	1 509	1 809	1 857	1 801	1 693	1 709	1 639	1 695	1 616	1 702	1 669	1 633	<b>1 694</b>
<b>St. Vincent and the Grenadines</b>	982	636	971	819	783	668	714	732	809	649	815	802	<b>782</b>
<b>Suriname</b>	29 013	23 449	25 575	33 842	36 225	36 650	38 719	37 708	43 915	42 197	48 580	37 558	<b>36 119</b>
<b>Trinidad and Tobago (R)</b>	13 204	13 834	13 854	13 930	13 107	12 062	13 138	13 201	13 271	13 045	12 899	13 234	<b>13 231</b>
<b>Turks and Caicos Islands</b>	1 200	1 110	865	681	638	559	559	559	605	610	250 <sup>81</sup>	293 <sup>82</sup>	<b>661</b>
<b>Annual Totals for CRFM region</b>	<b>130 054</b>	<b>129 905</b>	<b>135 813</b>	<b>148 637</b>	<b>148 969</b>	<b>154 453</b>	<b>153 618</b>	<b>137 186</b>	<b>142 361</b>	<b>149 052</b>	<b>156 691</b>	<b>139 730</b>	<b>143 872</b>

*P = Provisional data,*

*R = Revised.*

*Haiti 16,500\*– 2011 estimate; St .Kitts and Nevis 654\* - 2011 estimate*

*Turks and Caicos Islands 559\* - 2012 estimate*

*Source: Obtained directly from the Fisheries Authority in the respective Member States, National Reports presented at the Annual CRFM Scientific Meetings, and literature searches*

<sup>79</sup> Provisional estimates used for 2017: Haiti, Barbados and Montserrat - 2016 est.; Antigua and Barbuda 2015 est.

<sup>80</sup> Provisional estimates used for 2018: Haiti and Barbados and Montserrat - 2016 est.; Anguilla and Grenada - 2017 est.; Antigua and Barbuda 2015 est.

<sup>81</sup> Estimate does not include finfish production

<sup>82</sup> Estimate does not include finfish production

*Table 14: Marine capture fish production (meat weight in tonnes) of high seas fleets from the CRFM region for 2011 – 2018*

Member States from the CRFM region	High seas fishery production (t) 2011	High seas fishery production (t) 2012	High seas fishery production (t) 2013	High seas fishery production (t) 2014	High seas fishery production (t) 2015	High seas fishery production (t) 2016	High seas fishery production (t) 2017	High seas fishery production (t) 2018	Source of data
<b>Belize</b>	16 949	24 844	18 089	21 536	22 883	17 556	20 432	33 208	Belize High Seas Fisheries Unit (personal communication Lanza/Masters, 10 Feb. 2020)
<b>St. Kitts and Nevis</b>	29 261	19 703	15 900	65 401	99 506	64 756	84 502	NA	Department of Marine Resources, St. Kitts and Nevis (personal communication Browne/Masters, 15 Jan. 2020)
<b>St. Vincent and the Grenadines</b>	1 715	1 158	851	2 212	1 198	1 803	2 489	1365	Fisheries Division St. Vincent and the Grenadines (personal communication Jackson/Masters, 6 Sep. 2018)
<b>Totals</b>	<b>47 925</b>	<b>45 705</b>	<b>34 840</b>	<b>89 149</b>	<b>123 587</b>	<b>84 115</b>	<b>107 423</b>	<b>34 573</b>	

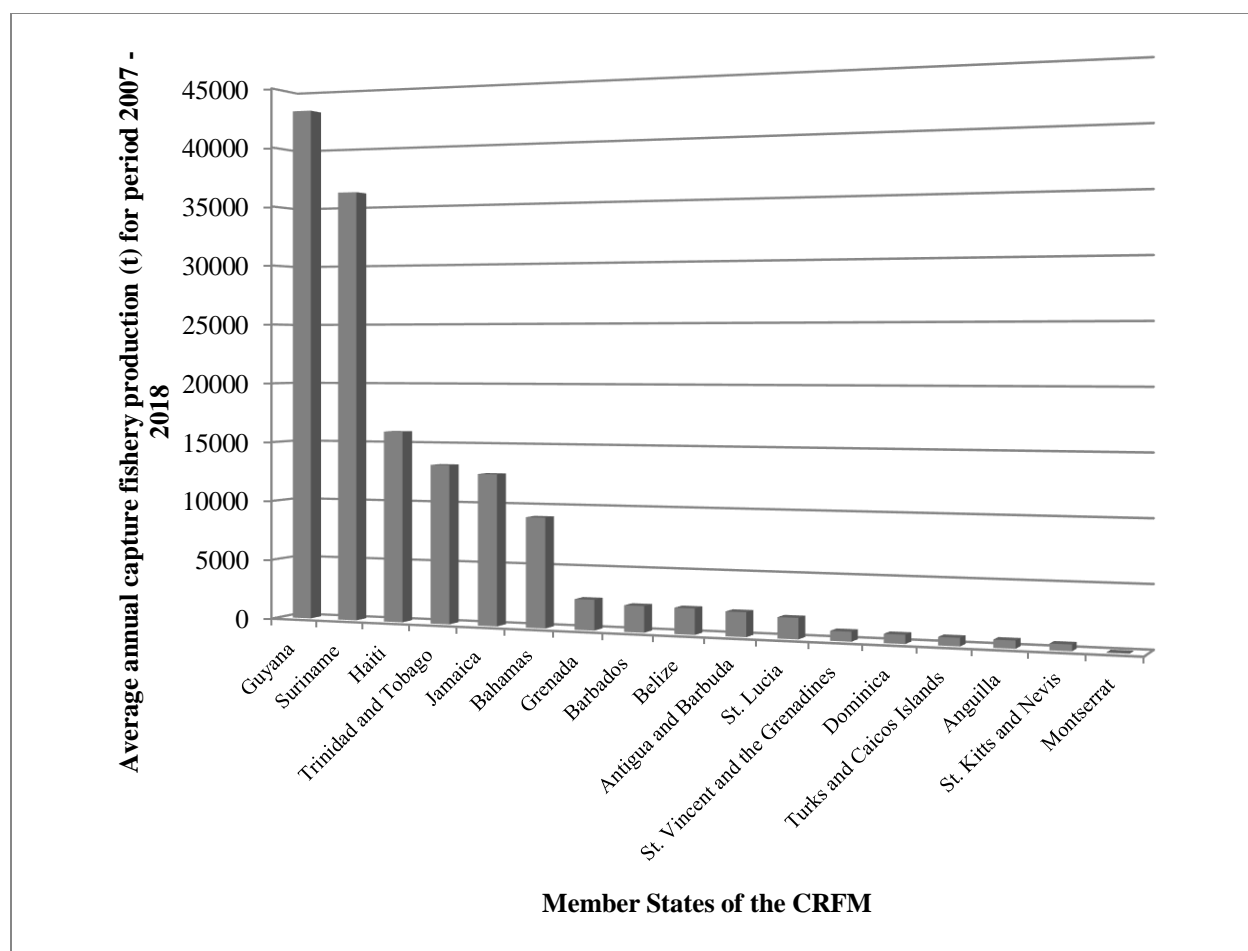
**Table 15: The production<sup>83</sup> (Prod.) in tonnes (t) of the six highest marine capture fish producers (in descending order) from among the CRFM Member States for the period 2013 – 2018**

Order of Member State	Member States	Prod. (t) 2013	Member States	Prod. (t) 2014	Member States	Prod. (t) 2015	Member States	Prod. (t) 2016	Member States	Prod. (t) 2017 <sup>84</sup>	Member States	Prod. <sup>85</sup> (t) 2018
1st	Guyana	49 576	Suriname	37 708	Suriname	43 915	Suriname	42 197	Suriname	48 580	Guyana	41 247
2nd	Suriname	38 719	Guyana	36 946	Guyana	35 835	Guyana	41 808	Guyana	42 694	Suriname	37 558
3rd	Haiti	16 500	Haiti	16 500	Haiti	16 000	Haiti	17 200	Haiti	17 200	Haiti	17 200
4th	Jamaica	14 263	Trinidad and Tobago	13 199	Trinidad and Tobago	13 271	Trinidad and Tobago	13 045	Jamaica	14 931	Trinidad and Tobago	13 234
5th	Trinidad and Tobago	13 199	Jamaica	11 256	Jamaica	13 077	Jamaica	12 990	Trinidad and Tobago	12 899	Jamaica	10 883
6th	Bahamas	7 845	Bahamas	8 175	Bahamas	7 783	Bahamas	9 286	Bahamas	8 567	Bahamas	7 434

<sup>83</sup> Calculations were based on meat weight.

<sup>84</sup> Provisional estimates used for 2017: Haiti, Barbados and Montserrat - 2016 est.; Antigua and Barbuda 2015 est.

<sup>85</sup> Provisional estimates used for 2018: Haiti and Barbados and Montserrat - 2016 est.; Anguilla and Grenada - 2017 est.; Antigua and Barbuda 2015 est.



**Figure 5: Average annual marine capture fisheries production (meat weight in tonnes) of CRFM Member States (in descending order) for period 2007 – 2018.**

Over the last two year period (2017 – 2018), Guyana, Suriname, Haiti, Trinidad and Tobago, Jamaica and the Bahamas (the top six meat weight producers respectively), produced approximately 92% of the average total meat weight of the marine fish production of the CRFM Member States<sup>86</sup>, and over the longer time period of 2007-2018 (12 years) they produced 90% of the total. Over the 12 year period Guyana's average annual contribution to the average total marine capture fish production of the region was approximately 30% of the annual total, that of Suriname approximately 25% and that of the other top producers between 6% and 11% and the other CRFM Member States combined, contributed approximately 10% annually (Table 16 and Figure 6).

Table 17 shows marine capture fish production (in tonnes) of CRFM Member States by fishery and species for 2017 (unless otherwise stated).

<sup>86</sup> Calculations were based on meat weight values

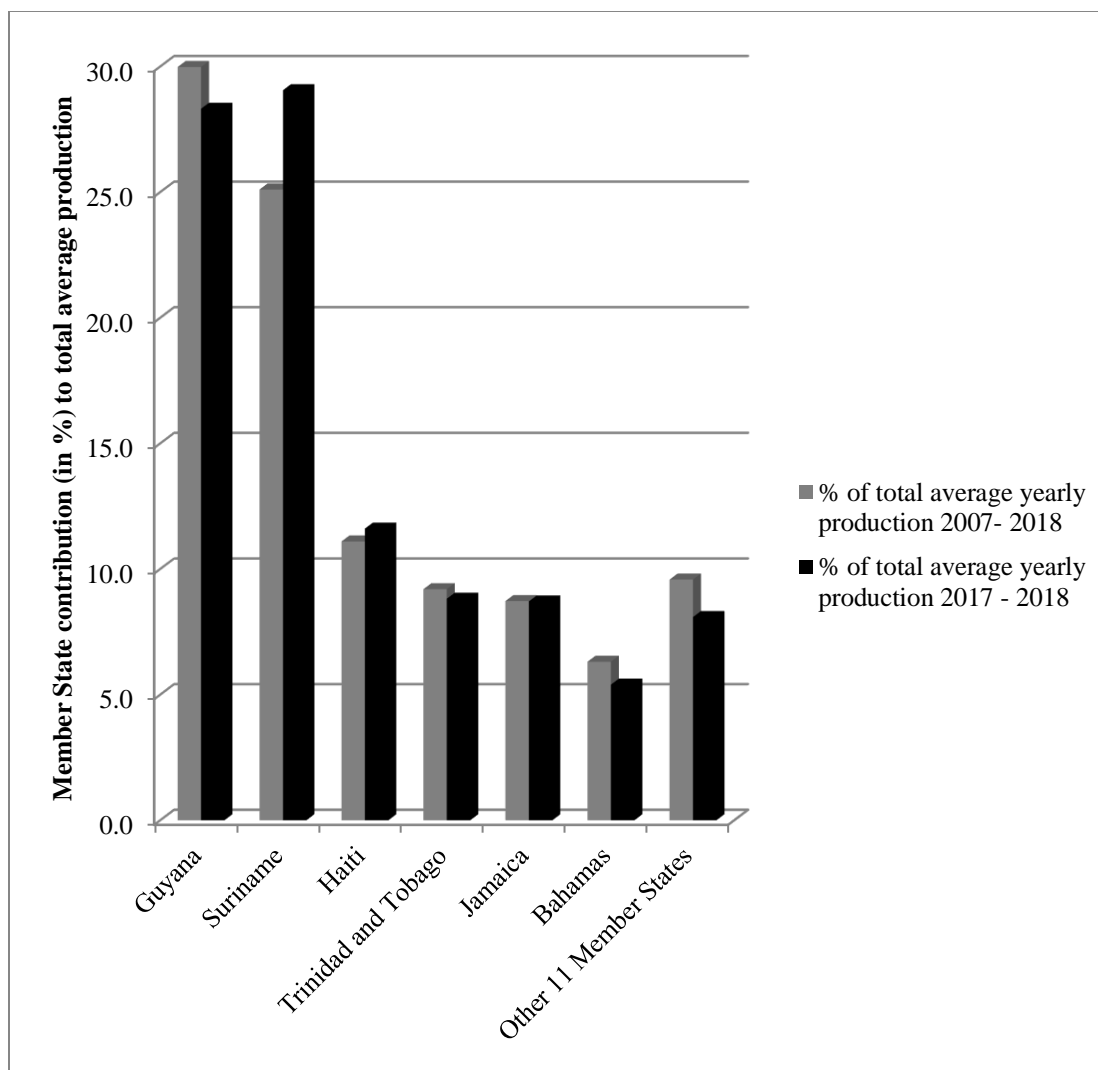
**Table 16: Average annual production and percentage contributions by CRFM Member States to the total average annual fish production (meat weight in tonnes) for the periods 2007 – 2018 and 2017 - 2018**

Member States	Average annual production (meat weight in t) 2007-2018	% contribution to the total average annual production (meat weight in t) 2007 - 2018	Member States	Average annual production (meat weight in t) 2017-2018	% contribution to the total average annual production (meat weight in t) 2017 – 2018
Guyana	43 137	30.0	Suriname	43 069	29.06
Suriname	36 119	25.1	Guyana	41 971	28.32
Haiti	15 967	11.1	Haiti	17 200	11.61
Trinidad and Tobago	13 231	9.2	Trinidad and Tobago	13 066	8.82
Jamaica	12 553	8.7	Jamaica	12 907	8.71
Bahamas	9 079	6.3	Bahamas	8 001	5.40
Grenada	2 503	1.7	Grenada	2 472	1.67
Barbados	2 152	1.5	Antigua and Barbuda	1 815	1.22
Belize	2 116	1.5	St. Lucia	1 651	1.11
Antigua and Barbuda	1 979	1.4	Belize	1 505	1.02
St. Lucia	1 694	1.2	Barbados	1 436	0.97
St. Vincent and the Grenadines	782	0.5	St. Vincent and the Grenadines	809	0.55
Dominica	722	0.5	Anguilla	758	0.51
Turks and Caicos Islands ( <i>est. does not include finfish</i> )	661	0.5	Dominica	733	0.49
Anguilla	634	0.4	St. Kitts and Nevis	520	0.35
St. Kitts and Nevis	512	0.36	Turks and Caicos Islands ( <i>est. does not include finfish</i> )	271	0.18
Montserrat	32	0.0	Montserrat	27	0.02
<b>Total average annual fish production (meat weight in t)</b>	<b>143 872 (2007-2018)</b>	100%		<b>148 210 (2017-2018)</b>	100.00 %

*Note - Provisional estimates used for 2017: Haiti and Barbados and Montserrat - 2016 est.; Antigua and Barbuda 2015 est.*

*Provisional estimates used for 2018: Haiti and Barbados and Montserrat - 2016 est.; Anguilla and Grenada - 2017 est.; Antigua and Barbuda 2015 est.*





**Figure 6: Percentage contributions to the total average annual fish production (meat weight in tonnes) for the period 2007 – 2018 and 2017-2018, of the six highest marine capture fisheries producers and all others combined, from CRFM Member States.**

**Table 17: Production (meat weight in tonnes) of the marine capture fishery of CRFM Member States by species and fishery for year 2017 (unless otherwise stated)**

Fishery	Species	AN	A&B <sup>87</sup>	BAH	BAR <sup>88</sup>	BEL	DOM	GRE	GUY	HAI <sup>89</sup>	JAM <sup>90</sup>	MONS <sup>91</sup>	SKN	SLU	SVG	SUR <sup>92</sup>	T&T	TCI <sup>93</sup>
SMALL COASTAL PELAGICS	Jacks							40.68				0.70			29.11		254.25	
	Scads							10.89					2.00		40.48			
	Carangids aggregated		15.00	21.00	43.00										0.00			
	Herrings & Shads														111.84		0.51	
	Needlefish / Gar							0.18				10.77	14.00		6.32			
	Flyingfish				469.00			0.88					9.00	0.71	0.02			
	Halfbeaks/Ballyhoo (Hemiramphus sp.)											0.90			30.97			
	Others aggregated																	
<b>Total ; Small coastal pelagic fishery</b>		0.00	15.00	21.00	512.00	0.00	0.00	52.63	0.00	0.00	0.00	12.37	25.00	0.71	218.74	0.00	254.76	0.00
SHALLOW SHELF AND REEF FISHERY	Snappers	52.00	333.00	192.00	31.00			87.31	950.00			3.63	47.00	34.77	26.33			
	Grunts		126.00	42.00				6.31					12.00		1.82			
	Red hind & Coney & Butterfish							130.13				2.40			52.87			
	Other groupers		163.00					1.64					52.00		0.01			
	Triggerfishes		119.00	9.64				2.90				1.20	13.00		0.93			
	Parrotfishes		53.00					94.64					47.00		7.52			
	Squirrelfishes		11.00					4.61				0.70	13.00		0.21			
	Angelfishes		19.00					0.64										
	Porgies, Seabreams		2.00												0.01			
	Surgeonfishes (doctorfishes)		151.00					2.56				0.90	16.00		0.21			
	Other marine fishes																	
	Other mollusks, oysters, squids							0.04										
	Crabs		1.00	28.33	0.00	1.78											50.16	

<sup>87</sup> 2015 estimates

<sup>88</sup> 2016 estimates

<sup>89</sup> 2011 estimates,

<sup>90</sup> Finfish species were not disaggregated

<sup>91</sup> 2014 breakdown as 2017 was not available

<sup>92</sup> Data for fin fish was not disaggregated

<sup>93</sup> Missing is the 2017 estimate of fin fish catch - not available

Fishery	Species	AN	A&B <sup>87</sup>	BAH	BAR <sup>88</sup>	BEL	DOM	GRE	GUY	HAI <sup>89</sup>	JAM <sup>90</sup>	MONS <sup>91</sup>	SKN	SLU	SVG	SUR <sup>92</sup>	T&T	TCI <sup>93</sup>
<b>Total; Shallow shelf and reef fishery</b>		52.00	978.00	271.97	31.00	1.78	0.00	330.77	950.00	0.00	0.00	8.83	200.00	34.77	89.92	0.00	50.16	0.00
<b>SHELF AND DEEP SLOPE</b>	Deep water snappers														2.11			
	Nassau groupers			51.10											0.01			
	Other groupers/seabasses			44.11											0.22			
	Others aggregated																	
<b>Total ; Shelf and deep slope fishery</b>		0.00	0.00	95.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.33	0.00	0.00	0.00
<b>LARGE OFFSHORE PELAGICS FISHERY</b>	Yellowfin tuna						135.90	1 257.60					30.00		58.21		889.91	
	Blackfin tuna						32.10	95.90							4.89		5.02	
	Wahoo						5.30	32.35				0.20	15.00	109.78	9.03		8.51	
	Common dolphinfish		22.00		405.00		228.30	122.76				0.10	65.00	403.09	44.45		7.56	
	Other tunas/ tuna-like fishes		20.00		307.00		31.80	113.69	417.00			0.03	7.00	537.80	48.31		442.13	
	Barracudas		4.00	3.50				103.89				0.10			19.77		0.01	
	Swordfish				16.00		0.50	36.28									35.61	
	Marlins						70.70	62.82					9.00	134.87	6.55		0.17	
	Sailfishes						2.60	165.15									63.50	
	Other mackerels				13.00			6.06							0.30		1 250.38	
	Others/aggregated				76.00			4.57							0.55			
	Sharks, rays, skates		22.00		13.00	24.36		18.14						5.15	6.80		531.39	
<b>Total; Large offshore pelagics fishery</b>		0.00	68.00	3.50	830.00	24.36	507.20	2 019.21	417.00	0.00	0.00	0.43	126.00	1 190.7	198.86	0.00	3 234.17	0.00
<b>MARINE MAMMAL FISHERY</b>	Pilot whales														7.83			
	Porpoises														2.52			
	Others aggregated														0.00			
<b>Total; Marine mammal fishery</b>		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.35	0.00	0.00	0.00
<b>LOBSTER FISHERY</b>	Caribbean spiny lobster	205.00	277.00	7 709.0		927.89		35.67			483.67		30.00	18.60	54.13		21.32	153.48
	Spanish slipper lobster	0.00																
	Others/aggregated	20.00								600.00					0.00			

Fishery	Species	AN	A&B <sup>87</sup>	BAH	BAR <sup>88</sup>	BEL	DOM	GRE	GUY	HAI <sup>89</sup>	JAM <sup>90</sup>	MONS <sup>91</sup>	SKN	SLU	SVG	SUR <sup>92</sup>	T&T	TCP <sup>93</sup>
<b>Total; Lobster Fishery</b>		225.00	277.00	7 709.0	0.00	927.89	0.00	35.67	0.00	600.00	483.67	0.00	30.00	18.60	54.13	0.00	21.32	153.48
<b>CONCH FISHERY</b>	Queen conch	80.00	233.83	438.53		444.25		23.74		200.00	500.00		59.00	98.58	227.68			96.8
	Others aggregated																	
<b>Total; Conch Fishery</b>		80.00	233.83	438.53	0.00	444.25	0.00	23.74	0.00	200.00	500.00	0.00	59.00	98.58	227.68	0.00	0.00	96.8
<b>SEA TURTLES FISHERY</b>	Sea turtles							1.06										
<b>Total; Sea turtles fishery</b>		0.00	0.00	0.00	0.00	0.00	0.00	1.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>ECHINODERM FISHERY</b>	White sea eggs																	
	Sea cucumber																	
<b>Total; Echinoderm fishery</b>		0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>SHRIMP FISHERY</b>	Seabob								21 765.00							8 272.00	687.12	
	Other shrimp								1 686.00	50.00						315.00		
<b>Total; Shrimp fishery</b>		0.00	0.00	0.00	0.00	0.00	0.00	0.00	23 451.00	50.00	0.00	0.00	0.00	0.00	0.00	8 587.00	687.12	0.00
<b>Marine fish nei<sup>94</sup></b>		401.0	244.0	28.2	63.0	22.5	195.7	8.6	17 876.0	15 650.0	13 947.8	15.6	14.0	325.3	9.1	39 993.0	8 651.3	
<b>TOTAL: ALL FISHERIES</b>		758.0	1 815.8	8 567.4	1 436.0	1 420.8	702.9	2 471.7	42 694.0	16 700.0	14 931.4	37.3	454.0	1 668.6	811.1 <sup>95</sup>	48 580.0	12 898.8	250 <sup>96</sup>

**Notes:**

*Marine fish nei - includes all marine fish which were not identified.*

<sup>94</sup> nei = not elsewhere included.  
<sup>95</sup> 3.9 t of *Sicydium plumieri* (Tri-tri) not included in this total as it was recorded under Inland Catches- see Table 3  
<sup>96</sup> Fin fish data were not available

### 3.2 Aquaculture fish production of CRFM Member States

During the period 2013 - 2018 the region produced approximately 8,749 t of fish annually from aquaculture systems. Belize was the largest aquaculture producer over the period 2013-2015, producing approximately 6,025 t annually (2013-2015). In 2017 new information received from the Fisheries Department of Haiti indicated that aquaculture production in 2016 was 6,400 t. (Haiti did not have available new estimates for 2017 and 2018) (Table 18). In 2015 and 2016 Belize experienced the occurrence of a shrimp disease (Early Mortality Syndrome - EMS) which caused production losses from which the industry has not yet fully recovered and Belize produced only 648 t in 2017 and 573 t in 2018. Jamaica's production has been increasing since 2016 (44% in 2016, 45% in 2017 and 13% in 2018). Jamaica reported that this resulted from the entrance of a large producer who has been responsible for approximately 50% of the total aquaculture production over these years. Additionally some veteran fish farmers have re-entered the production of tilapia in order to take advantage of an increasing demand for fresh fish, and some existing farmers have increased their production acreage. Also, 50 additional acres have been constructed in the last three years (personal communication Smikle/Masters, 2020). Table 19 shows total fish (meat weight) production (prod.) in tonnes (t) from marine capture fisheries (MCF) added to the aquaculture production (AC prod) for CRFM Member States for period 2013 - 2018.

**Table 18: Annual aquaculture production<sup>97</sup> (AC prod. in tonnes) and average annual aquaculture production of CRFM Member States for period 2013– 2018**

Member States	AC prod. (meat weight in t) 2013	AC prod. (meat weight in t) 2014	AC prod. (meat weight in t) 2015	AC prod. (meat weight in t) 2016	AC prod. (meat weight in t) 2017	AC prod. (meat weight in t) 2018
Anguilla	0	0	0	0	0	0
Antigua and Barbuda	NA	NA	NA	NA	NA	14.7
Bahamas	NA	NA	NA	NA	NA	NA
Barbados	0	0	0	0	0	0
Belize	6 834	6 489	4 752	1 109	648	573
Dominica	NA	NA	0	0	0	0
Grenada	NA	NA	NA	NA	NA	NA
Guyana	218	379	418	470	696.6	310.7
Haiti	560	560	2 600	6 400	6 400	6 400
Jamaica	836	698	646	927	1 340	1 511.63
Montserrat	0	0	0	0	0	0
St. Kitts and Nevis	NA	NA	NA	NA	NA	NA
St. Lucia	14	12	24	27	13.4	14.2
St. Vincent and the Grenadines	0	0	0	0	0	0
Suriname	79	80.37	122	122	81.75	58.4
Trinidad and Tobago	8	5.45	24	11	5.45	5.45
Turks and Caicos Islands	NA	NA	NA	NA	0	0
<b>Totals</b>	<b>8 549</b>	<b>8 224</b>	<b>8 585</b>	<b>9 067</b>	<b>9 185</b>	<b>8 888</b>

NA= Not Available

<sup>97</sup> Calculations were based on meat weight values

**Table 19: Total fish (meat weight) production (prod.) in tonnes (t) from marine capture fisheries (MCF) and aquaculture (AC) for CRFM Member States for period 2013-2018**

<b>Member States</b>	<b>MCF prod. + AC prod. (t) 2013</b>	<b>MCF prod. + AC prod. (t) 2014</b>	<b>MCF prod. + AC prod. (t) 2015</b>	<b>MCF prod. + AC prod. (t) 2016</b>	<b>MCF prod. + AC prod. (t) 2017</b>	<b>MCF prod. + AC prod. (t) 2018</b>
<b>Anguilla</b>	655	752	396	733	758	758
<b>Antigua and Barbuda</b>	1 752	1 709	1 709	1 709	1 815	1 830
<b>Bahamas</b>	7 845	8 176	7 783	9 286	8 567	7 434
<b>Barbados</b>	2 735	2 153	1 246	1 436	1 436	1 436
<b>Belize</b>	8 708	8 244	6 300	2 657	2 068	2 163
<b>Dominica</b>	479	479	479	479	703	763
<b>Grenada</b>	2 698	2 854	2 711	2 823	2 472	2 472
<b>Guyana</b>	49 794	37 325	36 253	42 278	43 391	41 558
<b>Haiti</b>	17 060	17 060	18 600	23 600	23 600	23 600
<b>Jamaica</b>	15 099	11 954	13 723	13 917	16 272	12 394
<b>Montserrat</b>	40	37	37	37	27	27
<b>St. Kitts and Nevis</b>	383	423	454	412	454	585
<b>St. Lucia</b>	1 653	1 707	1 639	1 729	1 682	1 647
<b>St. Vincent and the Grenadines</b>	714	732	809	649	815	802
<b>Suriname</b>	38 798	37 788	44 037	42 319	48 662	37 617
<b>Trinidad and Tobago</b>	13 207	13 205	13 295	13 056	12 904	13 239
<b>Turks and Caicos Islands</b>	559	559	605	610	250	293
<b>Totals</b>	<b>162 179</b>	<b>145 157</b>	<b>150 076</b>	<b>157 732</b>	<b>165 877</b>	<b>148 617</b>

*Note that - Provisional estimates used for MCF prod.2017: Haiti and Barbados and Montserrat - 2016 est.; Antigua and Barbuda 2015 est.*

*Provisional estimates used for MCF prod. 2018: Haiti and Barbados and Montserrat - 2016 est.; Anguilla and Grenada - 2017 est.; Antigua and Barbuda 2015 est.*

## CHAPTER 4: EMPLOYMENT IN THE FISHERIES SECTOR OF CRFM MEMBER STATES

### 4.1 Number of persons employed in direct production in the fisheries sector of the CRFM region

The number of persons employed in direct production in the commercial marine capture fisheries and aquaculture sub-sectors (including full time<sup>98</sup> and part time<sup>99</sup> fishers, harvesters and farmers engaged in, artisanal / subsistence<sup>100</sup> and commercial activities) in the CRFM region in 2018, was approximately ~123,540 persons (~118,811 persons employed in direct production in the marine capture fisheries and ~4,729 persons employed in direct production in aquaculture) (Table 20). The 2015/16 estimates were approximately 124,842 persons (~118,291 persons employed in direct production in the marine capture fisheries and ~6,551 persons employed in direct production in aquaculture). Fishers who harvest fish exclusively for recreation<sup>101</sup> and or sport as well as those fishers harvesting exclusively from inland freshwater systems (where these fishers were not registered by the fisheries authority of the Member State), were not accounted for as those data were not available. Member States with inland waters/fresh water systems that are of cultural and /or subsistence, and/or economic importance includes; Antigua and Barbuda, Belize, Dominica, Grenada, Guyana, Haiti, Jamaica, Montserrat, St. Vincent and the Grenadines and Trinidad and Tobago. However most of these Member States did not have available information on the number of persons employed in direct production from the inland waters and or freshwater systems (rivers, ponds, lakes etc.).

The fisheries sector also provides employment for many persons who supply services and goods to the primary producers. This includes persons engaged in processing, preserving, storing, transporting, marketing and distribution or selling fish or fish products, as well as other ancillary activities, such as net and gear making, ice production and supply, vessel construction and maintenance as well as persons involved in research, development and administration linked with the fisheries sector. Most CRFM Member States did not have available the number of person involved in supplying goods and services to the fishing industry. However according to FAO (2010), some estimates indicate that, for each person employed in capture fisheries and aquaculture production, about three jobs are produced in the secondary activities, including post-harvest. When this estimate was applied, the total number of persons employed in the fisheries sector of the CRFM region was estimated at approximately 494,160 in 2018 which was approximately 5.8% of the workforce of the region. However using the more conservative estimates provided by Member States, the total number of persons employed in the fisheries sector of the CRFM region was estimated at approximately 283,712 in 2018 which was approximately 3.3% of the workforce of the region (Table 21).

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<sup>98</sup> Full-time fishers receive at least 90% of their livelihood from fishing or spend at least 90% of their working time in that occupation (FAO, 2012a).

<sup>99</sup> Part-time fishers receive at least 30% but less than 90% of their livelihood from fishing or spend at least 30% but less than 90% of their working time in that occupation (FAO, 2012a).

<sup>100</sup> Artisanal fisheries are traditional fisheries involving fishing households (as opposed to commercial companies), using relatively small amount of capital and energy, relatively small fishing vessels (if any), making short fishing trips, close to shore, mainly for local consumption. In practice, definition varies between countries, e.g. from gleaning or a one-man canoe in poor developing countries, to more than 20-m. trawlers, seiners, or long-liners in developed ones. Artisanal fisheries can be subsistence or commercial fisheries, providing for local consumption or export. They are sometimes referred to as small-scale fisheries (FAO, 2005a).

<sup>101</sup> Recreational Fishery can be defined as a non-commercial (i.e. not for sale, barter, or trade) subset of capture/harvest fisheries; motivated by catching fish for fun, pleasure, or sport (Gaudin & De Young, 2007)

**Table 20: Number of persons employed in direct production in the marine capture fisheries, aquaculture and other fisheries dependent activities in Member States of the CRFM region in 2017 / 2018**

MEMBER STATES	Number of persons employed in direct production in the marine commercial capture fisheries <sup>102</sup>		Source (Year of estimate)	Number of persons employed in direct production in aquaculture		Source (Year of estimate)	Number of persons employed in other fisheries dependent activities 2018		Source (Year of estimate)	Fishing Sector Employment (2018 estimates)	
	2017	2018		2017	2018		Country provided estimates	Calculated after FAO, 2010**		Country provided estimates	Calculated after FAO, 2010**
<b>Anguilla</b>	207	207	Dept. of Fisheries & Marine Resources Anguilla, 2019* (2017 estimates)	0	0	Dept. of Fisheries & Marine Resources Anguilla 2019* (2017 estimates)	0	621	2017 estimates	207	828
<b>Antigua and Barbuda</b>	1 894	1 894	Fisheries Division Antigua and Barbuda, 2018* (2015 estimates)	2	2	Fisheries Division Antigua and Barbuda, 2018* (2015 estimates)	NA	5 688		1 896	7 584
<b>Bahamas</b>	9 000	9 000	Department of Marine Resources Bahamas, 2019 <sup>103</sup> * (2017 estimates)	4	4	Department of Marine Resources Bahamas, 2019* (2017 estimates)	NA	27 012		9 004	36 016
<b>Barbados</b>	2 200	2 200	Government of Barbados, 2004 (2002 estimate)	0	0	JICA & IC Net Limited, 2012 (2011 estimate)	3 800	6 600	Government of Barbados, 2004 (2002 estimate)	6 000	8 800
<b>Belize</b>	2 710	2 525	Fisheries Department Belize, 2020*	2 182	2 182	Statistical Institute of Belize, 2017* (2017 estimates)	1 000	14 121	Gongora, 2012 (2011 estimate)	5 707	18 828
<b>Dominica</b>	912	912	Fisheries Division Dominica, 2019* (2017 estimate)	5	5	Fisheries Division Dominica, 2019* (2017 estimate)	108	2 751	Fisheries Division Dominica, 2019* (2017 estimate)	1 025	3 668
<b>Grenada</b>	2 729	2 729	CRFM, 2014 (2013 estimate)	NA	NA		NA	8 187	(2013 estimates)	2 729	10 916

<sup>102</sup> The figures presented represent the Member State's registered fishers or the best estimate of number of marine capture fishers and aquaculture farmers provided by the Member State.

<sup>103</sup> Data from the last Bahamas fisheries census conducted in 1995 (Deleveaux and Higgs, 1995).



MEMBER STATES	Number of persons employed in direct production in the marine commercial capture fisheries <sup>102</sup>		Source (Year of estimate)	Number of persons employed in direct production in aquaculture		Source (Year of estimate)	Number of persons employed in other fisheries dependent activities 2018		Source (Year of estimate)	Fishing Sector Employment (2018 estimates)	
	2017	2018		2017	2018		Country provided estimates	Calculated after FAO, 2010**		Country provided estimates	Calculated after FAO, 2010**
<b>Guyana</b>	7 721	7 875	Fisheries Division Guyana, 2019*	54	45	Fisheries Division Guyana, 2019*	15 000	23 760	Suseran, 2012 (2011/2012 estimate)	22 920	31 680
<b>Haiti</b>	46 000	46 000	Fisheries Department Haiti, 2017* (2016 estimate)	2 034	2 034	Fisheries Department Haiti, 2017* (2016 estimate)	38 000	144 102	Study to determine poverty levels in CARICOM fishing communities, 2009*** (2007/2008 estimate)	86 034	192 136
<b>Jamaica</b>	24 469	26 382	National Fisheries Authority, 2019* and 2020	107	107	National Fisheries Authority, 2019*	100 000	79 467	Neufville, 2014 (2011-2012 estimate)	126 489	105 956
<b>Montserrat</b>	85	85	Department of Fisheries Montserrat, 2016* (2015 estimate)	0	0	Department of Fisheries Montserrat, 2014* (2013 estimate)	14	255	Statistics Department Montserrat, 2014* (2013 estimate)	99	340
<b>St. Kitts and Nevis</b>	677	696	Fisheries Division St. Kitts and Nevis, 2019*	4	17	Fisheries Division St. Kitts and Nevis, 2019*	167	2 139	Fisheries Division St. Kitts and Nevis, 2020*	880	2 852
<b>St. Lucia</b>	3 214	3 282	Department of Fisheries St. Lucia, 2019*	114	114	Department of Fisheries St. Lucia, 2019* (2017 estimates)	NA	10 188		3 396	13 584
<b>St. Vincent and the Grenadines</b>	1 142	1 142	Fisheries Division St. Vincent and the Grenadines, 2019* (2017 estimate)	0	0	CRFM, 2014 (2013 estimate)	500	3 426	CRFM, 2014 (2013 estimate)	1 642	4 568
<b>Suriname</b>	8 000	8 000	Department of Fisheries Suriname,	99	99	FAO, 2008 (taken as 2007/2008 estimate)	1 416	24 297	Department of Fisheries Suriname,	9 515	32 396

MEMBER STATES	Number of persons employed in direct production in the marine commercial capture fisheries <sup>102</sup>		Source (Year of estimate)	Number of persons employed in direct production in aquaculture		Source (Year of estimate)	Number of persons employed in other fisheries dependent activities 2018		Source (Year of estimate)	Fishing Sector Employment (2018 estimates)	
	2017	2018		2017	2018		Country provided estimates	Calculated after FAO, 2010**		Country provided estimates	Calculated after FAO, 2010**
			2017* (2017 estimate)						2014*(2008-2010 estimate)		
<b>Trinidad and Tobago</b>	NA	5 626	Fisheries Division Trinidad and Tobago, 2020*	150	120	Fisheries Division Trinidad and Tobago, 2019* and 2020*	NA	17 238		5 746	22 984
<b>Turks and Caicos Islands</b>	256	256	Department of Environment and Coastal Resources Turks and Caicos Island, 2014*(2012 /13 estimate)	0	0	Department of Environment and Coastal Resources Turks and Caicos Island, 2014*(2012/13 estimate)	167	768	Department of Environment and Coastal Resources Turks and Caicos Island, 2014*(2013 estimate)	423	1 024
<b>Totals</b>	<b>111 216</b>	<b>118 811</b>		<b>4 755</b>	<b>4 729</b>		<b>160 172</b>	<b>370 620</b>		<b>283 712</b>	<b>494 160</b>

\* Data collected directly from the Fisheries Data Unit or Statistics Unit in the Member State.

\*\*Calculated using "Some estimates indicate that, for each person employed in capture fisheries and aquaculture production, about three jobs are produced in the secondary activities" (FAO, 2010)

\*\*\*Data submitted to the CRFM Secretariat as part as part of the Diagnostic Study to Determine Poverty Levels in CARICOM Fishing Communities, 2009.

**Table 21: The labour force (in 2018 or latest estimates to 2018), estimated number of persons employed in the fisheries sector in 2018 and the percentage of the labour force employed in fisheries in 2018 for CRFM Member States**

Member States	Labour force 2018 (or latest estimate to 2018)	Estimated fishing sector employment 2018 (country provided estimates)	% of the labour force employed in fisheries 2018 (calculated from country provide estimates)	Estimated fishing sector employment 2018 (calculated after FAO, 2010*)	% of the labour force employed in fisheries 2018 (calculated estimates after FAO, 2010*)
Anguilla	6 049 <sup>(1)</sup> (2001 est.)	207	3.4	828	13.7
Antigua and Barbuda	30 000 <sup>(1)</sup> (2006 est.)	1 896	6.3	7 584	25.3
Bahamas	223 064 <sup>(2)</sup>	9 004	4.0	36 016	16.1
Barbados	155 314 <sup>(2)</sup>	6 000	3.9	8 800	5.7
Belize	173 515 <sup>(2)</sup>	5 707	3.3	18 828	10.9
Dominica	25 000 <sup>(1)</sup> 2003 estimate	1 025	4.1	3 668	14.7
Grenada	59 900 <sup>(1)</sup> 2013 estimate	2 729	4.6	10 916	18.2
Guyana	314 014 <sup>(2)</sup>	22 920	7.3	31 680	10.1
Haiti	4 975 289 <sup>(2)</sup>	86 034	1.7	192 136	3.9
Jamaica	1 473 383 <sup>(2)</sup>	126 489	8.6	105 956	7.2
Montserrat	4 521 <sup>(1)</sup> (2012 est.)	99	2.2	340	7.5
St. Kitts and Nevis	17 044 <sup>(3)</sup> (2001 est.)	880	5.2	2 852	16.7
St. Lucia	99 309 <sup>(2)</sup>	3 396	3.4	13 584	13.7
St. Vincent and the Grenadines	56 243 <sup>(2)</sup>	1 642	2.9	4 568	8.1
Suriname	214 906 <sup>(2)</sup>	9 515	4.4	32 396	15.1
Trinidad and Tobago	667 593 <sup>(2)</sup>	5 746	0.9	22 984	3.4
Turks and Caicos Islands	18 000 <sup>(4)</sup> (2015/2016 est.)	423	2.4	1 024	5.7
<b>Totals</b>	<b>8 513 144</b>	<b>283 712</b>	<b>3.3</b>	<b>494 160</b>	<b>5.8</b>
<b>% of the workforce involved in the fishing sector of the CRFM region</b>			<b>3.3</b>		<b>5.8</b>

Sources: <sup>(1)</sup> IndexMundi, 2015. Historical Data Graphs per Year, viewed at <http://www.indexmundi.com/g/g.aspx?v=72&c=av&l=en>

<sup>(2)</sup> The World Bank, 2019. Labour force, total, viewed 28/4/2020 at [https://data.worldbank.org/indicator/SL.TLF.TOTL.IN?end=2017&locations=JM&name\\_desc=false&start=1990](https://data.worldbank.org/indicator/SL.TLF.TOTL.IN?end=2017&locations=JM&name_desc=false&start=1990)

<sup>(3)</sup> Caribbean Community (CARICOM) Secretariat, 2011.

<sup>(4)</sup> Government of the Turks and Caicos Islands, 2016.

\*Calculated using "Some estimates indicate that, for each person employed in capture fisheries and aquaculture production, about three jobs are produced in the secondary activities" (FAO, 2010).

## CHAPTER 5: ECONOMIC IMPORTANCE OF FISHERIES TO THE CRFM REGION

### 5.1 Fisheries contribution to GDP

Table 22 shows the percentage contribution of the fisheries sector to GDP (in current prices) in CRFM Member States 2010 - 2018. The data indicates that, in 2017/2018 the fisheries sector contributed to the GDP of Member States from a low of 0.07% (Trinidad and Tobago 2018) to a high of 4.47% in Suriname 2018<sup>104</sup>.

### 5.2 Economic contribution to livelihoods

Mahon *et al* (2007), studied the value of Barbados' fisheries, and showed that as the fish moved through the various market pathways to the consumer it increases in value and contributes to livelihood, and that the overall additional value was 2.6 times the landed value of the fishery.

During the period 2017 - 2018, at ex-vessel prices (the point of first sale) the value of the marine capture fishery production for the region was estimated at approximately US\$518.7 million annually and the value of the aquaculture fishery was US\$46.5 million annually (Table 23 and Table 24), giving a total value of approximately US\$565.2 million annually over the period (Table 25).

**Table 22: Percentage contribution to gross domestic product (GDP) by the fishing industry of CRFM Member states (in current prices) 2010 – 2018**

Member States	2010	2011	2012	2013	2014	2015	2016	2017	2018	Source
Anguilla	1.7	2.2	2.28	2.02	1.96	1.91	2.72	1.59	3.14	Eastern Caribbean Central Bank, 2020
Antigua and Barbuda	0.91	1.11	1.17	1.25	0.80	0.98	0.96	0.96	0.95	Eastern Caribbean Central Bank, 2020
Bahamas	1.40	1.30	1.30	1.00	1.00	0.90	NA	NA	NA	Caribbean Community (CARICOM) Secretariat, 2016
Barbados	0.14	0.10	0.12	0.20	0.14	0.13	0.14	0.18	NA	Caribbean Community (CARICOM) Secretariat, 2018
Belize	2.60	2.10	2.40	3.60	3.50	2.70	1.40	1.26	1.20	Caribbean Community (CARICOM) Secretariat, 2018
Dominica	0.3	0.37	0.37	0.34	0.48	0.54	0.54	0.48	0.40	Eastern Caribbean Central Bank, 2020
Grenada	1.45	1.33	1.61	1.52	1.39	1.4	1.40	1.28	1.16	Eastern Caribbean Central Bank, 2020

<sup>104</sup> GDP for 2018 not available for The Bahamas, Barbados and Haiti.

Member States	2010	2011	2012	2013	2014	2015	2016	2017	2018	Source
<b>Guyana</b>	2.63	2.23	2.36	2.18	1.66	1.67	1.78	1.84	1.57	Caribbean Community (CARICOM) Secretariat, 2016 & 2018
<b>Haiti</b>		1.5	1.5	NA	NA	NA	NA	NA	NA	CRFM, 2011a
<b>Jamaica</b>	0.33	0.36	0.36	0.41	0.50	0.51	0.52	0.52	0.49	Caribbean Community (CARICOM) Secretariat, 2018
<b>Montserrat</b>	0.26	0.31	0.35	0.37	0.38	0.3	0.3	0.26	0.24	Eastern Caribbean Central Bank, 2020
<b>St. Kitts and Nevis</b>	0.43	0.51	0.49	0.39	0.44	0.47	0.36	0.46	0.51	Eastern Caribbean Central Bank, 2020
<b>St. Lucia</b>	0.59	0.57	0.57	0.60	0.56	0.53	0.55	0.49	0.55	Eastern Caribbean Central Bank, 2020
<b>St. Vincent and the Grenadines</b>	0.5	0.47	0.44	0.48	0.48	0.53	0.50	0.57	0.60	Eastern Caribbean Central Bank, 2020
<b>Suriname</b>	2.63	2.85	2.49	3.23	3.90	3.75	3.11	4.17	4.47	Caribbean Community (CARICOM) Secretariat, 2018
<b>Trinidad and Tobago</b>	0.05	0.04	0.04	0.03	0.04	0.05	0.06	0.07	0.07	Caribbean Community (CARICOM) Secretariat, 2018
<b>Turks and Caicos Islands</b>	0.58	0.61	0.42	0.54	0.51	0.58	0.57	0.56	0.56	Caribbean Community (CARICOM) Secretariat, 2018

*R. - Revised*

*P. - Preliminary*

*NA - Not Available*

**Table 23: Marine capture fish production (meat weight in tonnes), with corresponding ex-vessel value (in United States dollars) of Member States of the CRFM for period 2017 – 2018**

Member States	Marine capture fish production (meat weight in t) 2017	Value of marine capture fish production (in United States dollars) 2017	Sources for values	Marine capture fish production (meat weight in t) 2018	Value of marine capture fish production (in United States dollars) 2018	Source for values
<b>Anguilla</b>	758	10 040 000	Dept. of Fisheries and Marine Resources Anguilla, 2019	758 <sup>105</sup>	10 040 000	Dept. of Fisheries and Marine Resources Anguilla, 2019
<b>Antigua and Barbuda<sup>106</sup></b>	1 815	14 767 071	Fisheries Division Antigua and Barbuda, 2019	1815	14 767 071	Fisheries Division Antigua and Barbuda, 2019
<b>Bahamas</b>	8 567	67 383 478	Department of Marine Resources Bahamas, 2020	7 434	57 117 398	Department of Marine Resources Bahamas, 2020
<b>Barbados<sup>107</sup></b>	1 436	7 910 852	Calculated from rate from prices provided by Barbados Statistics Department, 2013 & Mahon <i>et al</i> , 2007	1 436	11 860 769	Calculated from rate from prices provided by Barbados Statistics Department, 2014 & Mahon <i>et al</i> , 2007
<b>Belize</b>	1 421	15 155 200	Belize Fisheries Department 2020	1 590	18 589 973	Belize Fisheries Department, 2020
<b>Dominica</b>	703	3 793 670	Fisheries Division Dominica, 2020	763	4 638 860	Fisheries Division Dominica, 2020
<b>Grenada</b>	2 472	13 809 151	Fisheries Division Grenada, 2019	2 472	13 809 151 <sup>108</sup>	Fisheries Division Grenada, 2019

<sup>105</sup> 2017 estimates

<sup>106</sup> 2015 estimates

<sup>107</sup> 2016 estimates

<sup>108</sup> 2017 estimate

<b>Member States</b>	<b>Marine capture fish production (meat weight in t) 2017</b>	<b>Value of marine capture fish production (in United States dollars) 2017</b>	<b>Sources for values</b>	<b>Marine capture fish production (meat weight in t) 2018</b>	<b>Value of marine capture fish production (in United States dollars) 2018</b>	<b>Source for values</b>
<b>Guyana</b>	42 694	187 859 450	Fisheries Department Guyana, 2019	41 247	176 829 593	Fisheries Department Guyana, 201
<b>Haiti<sup>109</sup></b>	17 200	54 000 000	Calculated using rate from CRFM, 2011a (2011 estimates)	17 200	54 000 000	Calculated using rate from CRFM, 2011a (2011 estimates)
<b>Jamaica</b>	14 931	53 287 811	National Fisheries Authority Jamaica, 2019	10 883	38 757 510	National Fisheries Authority Jamaica, 2019
<b>Montserrat<sup>110</sup></b>	27	203 053	Fisheries Division Montserrat, 2017	27	203 053	Fisheries Division Montserrat, 2017
<b>St. Kitts and Nevis</b>	454	4 310 449	Fisheries Division St. Kitts and Nevis, 2019	585	5 531 147	Fisheries Division St. Kitts and Nevis, 2019
<b>St. Lucia</b>	1 669	10 256 143	Fisheries Department St. Lucia, 2019	1 633	10 278 458	Fisheries Department St. Lucia, 2019
<b>St. Vincent and the Grenadines</b>	815	4 595 170	Fisheries Division St. Vincent and the Grenadines, 2019	802	7 084 487	Fisheries Division St. Vincent and the Grenadines, 2019
<b>Suriname</b>	48 580	48 370 620	Calculated using rate from Seijo (2013)	37 558	37 396 333	Calculated using rate from Seijo (2013)
<b>Trinidad and Tobago</b>	12 899	37 006 704	Fisheries Division Trinidad and Tobago, 2020	13 234	39 827 861	Fisheries Division Trinidad and Tobago, 2020

<sup>109</sup> 2016 estimates

<sup>110</sup> 2016 estimate

<b>Member States</b>	<b>Marine capture fish production (meat weight in t) 2017</b>	<b>Value of marine capture fish production (in United States dollars) 2017</b>	<b>Sources for values</b>	<b>Marine capture fish production (meat weight in t) 2018</b>	<b>Value of marine capture fish production (in United States dollars) 2018</b>	<b>Source for values</b>
<b>Turks and Caicos Islands<sup>111</sup></b>	250	1 825 666	Dept. of Environment and Coastal Resources, Turks and Caicos Island, 2019	293	2 006 657	Dept. of Environment and Coastal Resources, Turks and Caicos Islands, 2019
<b>Totals (t) / US\$</b>	156 691	534 574 488		139 730	502 738 321	
<b>Average for region 2017-2018</b>						<b>148 211 t 518 656 405 US\$</b>

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<sup>111</sup> Fin-fish data not included in the total



**Table 24: Aquaculture fish production (meat weight in tonnes), with corresponding value (in US\$) of Member States of the CRFM for period 2017-2018**

<b>Member States</b>	<b>Aquaculture fish production (meat weight in t) 2017</b>	<b>Value of aquaculture fish production (US\$) 2017</b>	<b>Aquaculture fish production (meat weight in t) 2018</b>	<b>Value of aquaculture fish production (US\$) 2018</b>
<b>Anguilla</b>	0.0	0	0.0	0
<b>Antigua and Barbuda</b>	0.0	0	14.7	131 852
<b>Bahamas</b>	0.0	0	0.0	0
<b>Barbados</b>	0.0	0	0.0	0
<b>Belize</b>	647.5	4 840 961	572.5	2 827 727
<b>Dominica</b>	0.0	0	0.0	0
<b>Grenada</b>	0.0	0	0.0	0
<b>Guyana</b>	696.6	3 214 472	310.7	573 164
<b>Haiti</b>	6 400.0	33 863 031	6 400.0	33 863 031
<b>Jamaica</b>	1 340.2	5 859 638	1 511.6	6 838 734
<b>Montserrat</b>	0.0	0	0.0	0
<b>St. Kitts and Nevis</b>	0.0	0	0.0	0
<b>St. Lucia</b>	13.4	51 102	14.2	50 789
<b>St. Vincent and the Grenadines</b>	0.0	0	0.0	0
<b>Suriname<sup>112</sup></b>	81.8	586 721	58.4	419 138
<b>Trinidad and Tobago</b>	5.5	26 184	5.5	26 184
<b>Turks and Caicos Islands</b>	0.0	0	0.0	0
<b>Totals</b>	<b>9 185.1</b>	<b>48 442 110</b>	<b>8 887.6</b>	<b>44 730 618</b>
<b>Average annual value (in US\$) 2017-2018</b>				<b>46 586 364</b>

NA- Not Available

<sup>112</sup>Values for Suriname calculated using 2016 average price over all species

**Table 25: Fish production (meat weight in tonnes) from marine capture fisheries (MCF) and aquaculture (AC) production (prod.) with corresponding value (US\$) of CRFM Member States for period 2015 -2016**

Member States	MCF prod. + AC prod. (meat weight in t) 2017	Value of MCF prod. + AC prod. (US\$) 2017	MCF prod. + AC Prod. (meat weight in t) 2018	Value of MCF prod. + AC prod. (US\$) 2018	Average Value of MCF prod. + AC prod. (US\$) 2017 – 2018	Average Value of MCF prod. + AC prod. (in millions of United States dollars) 2017 - 2018
<b>Anguilla</b>	758	10 040 000	758	10 040 000	10 040 000	10.0
<b>Antigua and Barbuda</b>	1 815	14 767 071	1 830	14 898 923	14 832 997	14.8
<b>Bahamas</b>	8 567	67 383 478	7 434	57 117 399	62 250 438	62.3
<b>Barbados</b>	1 436	7 910 852	1 436	11 860 769	9 885 811	9.9
<b>Belize</b>	2 068	19 996 161	2 163	21 417 700	20 706 930	20.7
<b>Dominica</b>	703	3 793 670	763	4 638 860	4 216 265	4.2
<b>Grenada</b>	2 472	13 809 151	2 472	13 809 151	13 809 151	13.8
<b>Guyana</b>	43 391	191 073 922	41 558	177 402 757	184 238 340	184.2
<b>Haiti</b>	23 600	87 863 031	23 600	87 863 031	87 863 031	87.9
<b>Jamaica</b>	16 272	59 147 449	12 394	45 596 244	52 371 847	52.4
<b>Montserrat</b>	27	203 053	27	203 053	203 053	0.2
<b>St. Kitts and Nevis</b>	454	4 310 449	585	5 531 147	4 920 798	4.9
<b>St. Lucia</b>	1 682	10 307 245	1 647	10 329 246	10 318 246	10.3
<b>St. Vincent and the Grenadines</b>	815	4 595 170	802	7 084 487	5 839 828	5.8
<b>Suriname</b>	48 662	48 957 341	37 617	37 815 471	43 386 406	43.4
<b>Trinidad and Tobago</b>	12 904	37 032 888	13 239	39 854 045	38 443 467	38.4
<b>Turks and Caicos Islands</b>	250	1 825 666	293	2 006 657	1 916 162	1.9
<b>Totals</b>	165 877	583 016 598	148 617	547 468 939	565 242 768	565.2
<b>Average of region 2017-2018</b>			<b>157 247</b>			<b>565.2 million US\$</b>

*Note that - Provisional estimates used for MCF prod.2017: Haiti and Barbados and Montserrat - 2016 est.; Antigua and Barbuda 2015 est.*

*Provisional estimates used for MCF prod. 2018: Haiti and Barbados and Montserrat - 2016 est.; Anguilla and Grenada - 2017 est.; Antigua and Barbuda 2015 est.*

## CHAPTER 6: TRADE IN FISH AND FISHERY PRODUCTS BY CRFM MEMBER STATES

### 6.1 Imports of fish into the CRFM region

In 2017 and 2018 total imports of fish for all CRFM Member States combined (including imports of fish for food, bait and live ornamental fish for breeding or rearing) was approximately 84,447 t (product weight) annually (81,059 t in 2017 and 87,835 t in 2018). Fish imported for food accounted for ~99.9% of the total. The total value of the fish imports for all Member States combined was ~US\$311.0 million in 2017 and ~US\$331.3 million in 2018 (an average of ~US\$321.15 million annually) Tables 26, 27 and 28.

**Table 26: Product weight (in tonnes) and value (in millions of United States dollars) of imports of fish for food bait and ornamental purposes by CRFM Member States 2017**

Member States	Weight of fish imports for food (t) 2017	Value of fish imports for food (in millions of United States dollars ) 2017	Weight of fish imports for ornamental purposes (t) 2017	Value of fish imports for ornamental purposes (in millions of United States dollars) 2017	Weight of fish imports for bait (t) 2017	Value of fish imports for bait (in millions of United States dollars) 2017	Total weight of fish imports for food, bait & ornamentals (t) 2017	Total value of fish imports for food, bait and ornamentals (in millions of United States dollars) 2017
<i>Anguilla (2010 est.)</i>	450	1.9	0.72	0.007	0.0	0.0	451	1.9
<b>Antigua and Barbuda</b>	1 825	7.45	2.04	0.016	0.0	0.0	1 827	7.5
<b>Bahamas</b>	3 539	29.6	14.62	0.109	43.9	0.3	3 597	30.1
<b>Barbados</b>	8 688	25.9	6.53	0.090	0.0	0.0	8 695	26.0
<b>Belize</b>	227	0.5	0.00	0.002	0.0	0.0	227	0.5
<b>Dominica</b>	467	1.7	0.36	0.003	0.0	0.0	468	1.7
<b>Grenada</b>	733	4.0	0.74	0.002	0.0	0.0	734	4.0
<b>Guyana</b>	1 529	2.8	1.50	0.011	0.0	0.0	1 530	2.9
<i>Haiti (2009 est. from the Fisheries Department)</i>	12 500	46.1	0.00	0.000	0.0	0.0	12 500	46.1
<b>Jamaica</b>	32 505	116.1	2.13	0.005	0.0	0.0	32 507	116.1
<i>Montserrat (2016 est.)</i>	66	0.40	0.00	0.0001	0.0	0.0	66	0.4
<b>St. Kitts and Nevis</b>	1 108	5.3	0.84	0.007	0.0	0.0	1 109	5.3
<b>St. Lucia</b>	1 907	9.6	1.74	0.009	0.0	0.0	1 909	9.6
<b>St. Vincent and the Grenadines</b>	443	2.4	0.91	0.003	0.0	0.0	444	2.4
<b>Suriname</b>	2 246	5.2	2.13	0.005	0.0	0.0	2 248	5.2
<b>Trinidad and Tobago</b>	11 166	44.2	1.14	0.024	0.0	0.0	11 167	44.2
<b>Turks and Caicos Islands (2016 est.)</b>	1 580	7.2	0.00	0.000	0.0	0.0	1 580	7.2
<b>Totals</b>	<b>80 979</b>	<b>310.4</b>	<b>35.41</b>	<b>0.294</b>	<b>43.9</b>	<b>0.3</b>	<b>81 059</b>	<b>311.0</b>

*Source: data collected directly from the Government Statistical Department of the Member State unless otherwise stated.*

**Table 27: Product weight (in tonnes) and value (in millions of United States dollars) of imports of fish for food, bait and ornamental purposes by CRFM Member States 2018**

Member States	Weight of fish imports for food (t) 2018	Value of fish imports for food (in millions of United States dollars) 2018	Weight of fish imports for ornamental purposes (t) 2018	Value of fish imports for ornamental purposes (in millions of United States dollars) 2018	Weight of fish imports for bait (t) 2018	Value of fish imports for bait (in millions of United States dollars) 2018	Total weight of fish imports for food, bait and ornamentals (t) 2018	Total value of fish imports for food, bait and ornamentals (in millions of United States dollars) 2018
Anguilla (2010 est.)	450	1.9	0.7	0.007	0.0	0.0	451	1.9
Antigua and Barbuda	1 964	8.2	1.7	0.011	0.0	0.0	1 966	8.2
Bahamas	5 614	39.6	46.9	0.392	49.1	0.3	5 710	40.2
Barbados	8 614	28.9	6.1	0.008	0.0	0.0	8 620	28.9
Belize	281	0.6	0.0	0.253	0.0	0.0	281	0.8
Dominica	570	2.1	0.2	0.000	0.0	0.0	570	2.1
Grenada	878	4.6	0.6	0.006	0.0	0.0	879	4.6
Guyana	2 126	3.6	1.5	0.010	0.0	0.0	2 128	3.6
Haiti (2009 est. from the Fisheries Department)	12 500	46.1	0.0	0.0	0.0	0.0	12 500	46.1
Jamaica	33 522	116.9	2.4	0.004	0.0	0.0	33 524	116.9
Montserrat (2016 est.)	66	0.4	0.00	0.000	0.0	0.0	66	0.4
St. Kitts and Nevis	1 251	6.2	0.9	0.007	0.0	0.0	1 252	6.2
St. Lucia	2 248	11.0	1.6	0.008	0.0	0.0	2 249	11.0
St. Vincent and the Grenadines	470	2.3	2.3	0.002	0.0	0.0	472	2.3
Suriname	4 547	6.1	2.1		0.0	0.0	4 549	6.1
Trinidad and Tobago	11 036	44.7	2.1	0.039	0.0	0.0	11 038	44.8
Turks and Caicos Islands (2016 est.)	1 580	7.2	0.0	0.0	0.0	0.0	1 580	7.2
<b>Totals</b>	<b>87 717</b>	<b>330.3</b>	<b>69.2</b>	<b>0.746</b>	<b>49.1</b>	<b>0.3</b>	<b>87 835</b>	<b>331.3</b>

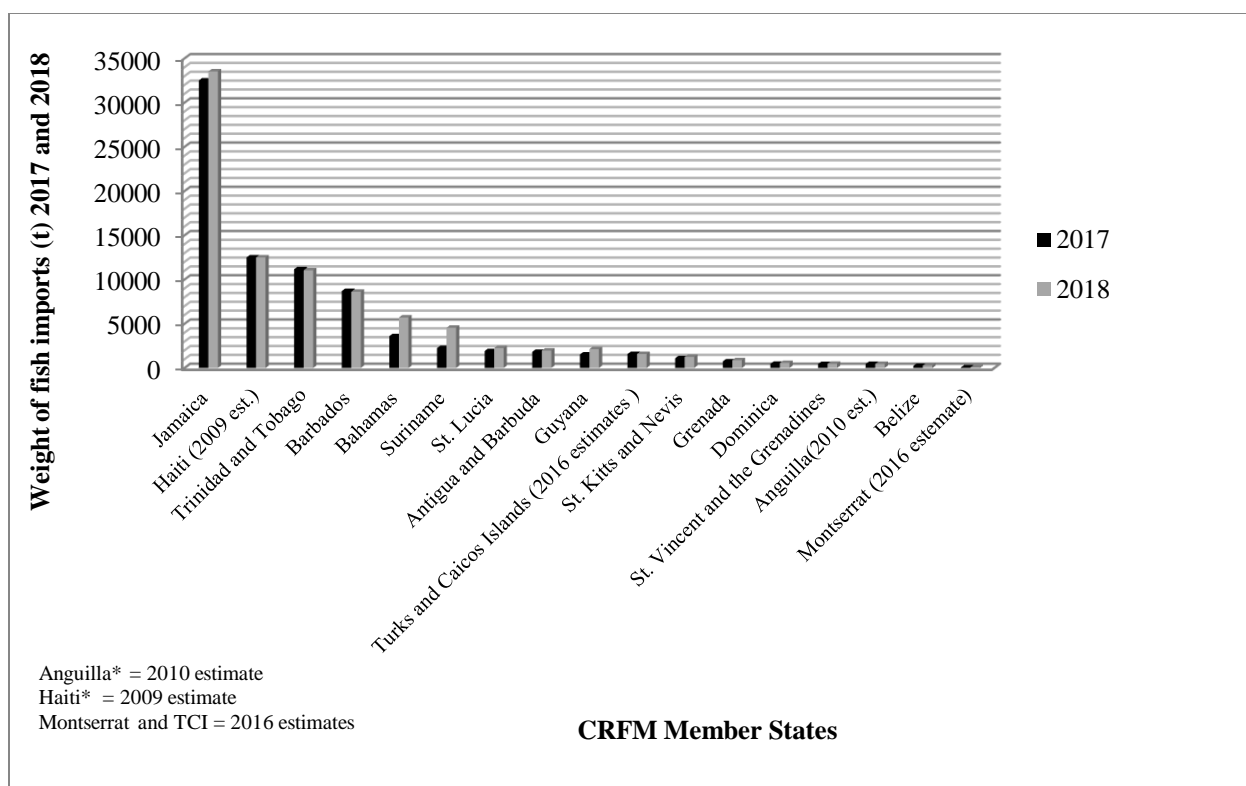
Source: data collected directly from the Government Statistical Department of the Member State unless otherwise stated.

A comparison of the product weight and value of the fish imported in 2017 and 2018 for each country showed that the product weight and value of imported fish remained fairly constant over the period although there was some increase in the 2018 figures particularly for Suriname and the Bahamas (Table 28 and Figure 7). The three largest importers of fish (tonnes of fish imported) among the CRFM Member States over the period were Jamaica, Haiti, and Trinidad and Tobago respectively (Table 28 and Figure 7).

Jamaica, Haiti and Trinidad and Tobago also had the highest values associated with the import of fish for food, bait and ornamentals (Table 29 and Figure 8).

**Table 28: Product weight of imports and average weight of imports of fish for food bait and ornamental purposes (product weight in tonnes) by CRFM Member States for the period 2017 – 2018**

<b>Member States</b>	<b>Weight of fish imports for food, bait and ornamentals (t) 2017</b>	<b>Weight of fish imports for food, bait and ornamentals (t) 2018</b>	<b>Average weight of fish imports for food, bait and ornamentals (t) 2017 -2018</b>
<b>Jamaica</b>	32 507	33 524	33 016
<b>Haiti (2009 est.)</b>	12 500	12 500	12 500
<b>Trinidad and Tobago</b>	11 167	11 038	11 103
<b>Barbados</b>	8 695	8 620	8 658
<b>Bahamas</b>	3 597	5 710	4 654
<b>Suriname</b>	2 248	4 549	3 399
<b>St. Lucia</b>	1 909	2 249	2 079
<b>Antigua and Barbuda</b>	1 827	1 966	1 896
<b>Guyana</b>	1 530	2 128	1 829
<b>Turks and Caicos Islands (2016 est.)</b>	1 580	1 580	1 580
<b>St. Kitts and Nevis</b>	1 109	1 252	1 180
<b>Grenada</b>	734	879	807
<b>Dominica</b>	468	570	519
<b>St. Vincent and the Grenadines</b>	444	472	458
<b>Anguilla (2010 est.)</b>	451	451	451
<b>Belize</b>	227	281	254
<b>Montserrat (2016 est.)</b>	66	66	66
<b>Totals</b>	<b>81 059</b>	<b>87 835</b>	<b>84 447</b>

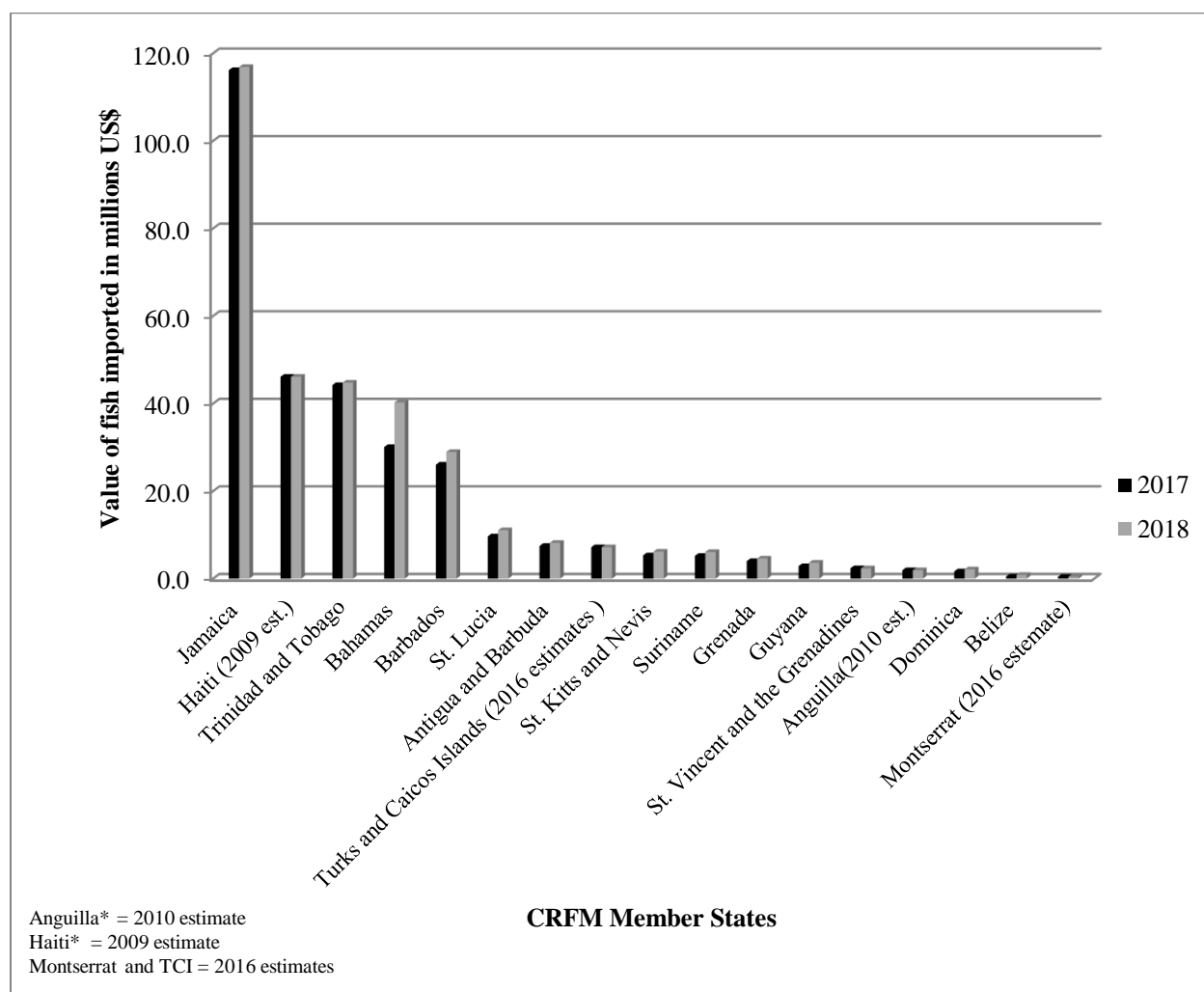


**Figure 7: Product weight of imports of fish for food, bait and ornamental purposes (in tonnes) by CRFM Member States for 2017 and 2018.**

**Table 29: Value and average value of fish imported for food, bait and ornamental purposes (in millions of United States dollars) by CRFM Member States for period 2017– 2018.**

Member States	Value of fish imported for food, bait and ornamentals (millions US\$) 2017	Value of fish imported for food, bait and ornamentals (millions US\$) 2018	Average value of fish imported for food, bait and ornamentals (millions US\$) 2017-2018
<b>Jamaica</b>	116.1	116.9	116.5
<b>Haiti (2009 est.)</b>	46.1	46.1	46.1
<b>Trinidad and Tobago</b>	44.2	44.8	44.5
<b>Bahamas</b>	30.1	40.2	35.2
<b>Barbados</b>	26.0	28.9	27.5
<b>St. Lucia</b>	9.6	11.0	10.3
<b>Antigua and Barbuda</b>	7.5	8.2	7.8
<b>Turks and Caicos Islands (2016 est.)</b>	7.2	7.2	7.2
<b>St. Kitts and Nevis</b>	5.3	6.2	5.7
<b>Suriname</b>	5.2	6.1	5.6
<b>Grenada</b>	4.0	4.6	4.3
<b>Guyana</b>	2.9	3.6	3.2

Member States	Value of fish imported for food, bait and ornamentals (millions US\$) 2017	Value of fish imported for food, bait and ornamentals (millions US\$) 2018	Average value of fish imported for food, bait and ornamentals (millions US\$) 2017-2018
<b>St. Vincent and the Grenadines</b>	2.4	2.3	2.3
<b>Anguilla (2010 est.)</b>	1.9	1.9	1.9
<b>Dominica</b>	1.7	2.1	1.9
<b>Belize</b>	0.5	0.8	0.7
<b>Montserrat (2016 est.)</b>	0.4	0.4	0.4
<b>Totals</b>	<b>311.0</b>	<b>331.3</b>	<b>321.1</b>



**Figure 8: Value (in millions of United States dollars) of fish imported for food, bait and ornamental purposes by CRFM Member States for period 2017 and 2018**

In 2017 and 2018 CRFM Member States imported an additional 49% and 59% respectively of the production from marine capture fisheries plus aquaculture production of the region that was fit for human consumption. Fish fit for human consumption included the categories chilled fresh or frozen fish, dried salted smoked pickled (cured) fish and canned fish. Imports of chilled/fresh or frozen fish accounted for 43% of the edible fish imported, canned fish accounted for approximately 40% while imports of dried, salted, smoked, pickled (cured) fish accounted for approximately 17% of product weight (Table 30 and 31; Figure 9,10 and 11). Table 30 and 31 shows the fish imports (product weight in tonnes) and values (millions US\$) by categories of chilled fresh or frozen; dried salted smoked pickled (cured); and canned imported by CRFM Member States in 2017 and 2018.

**Table 30: Fish imports (product weight in tonnes and value in millions US dollars) by categories of chilled, fresh or frozen, dried salted smoked pickled (cured) and canned, imported by CRFM Member States in 2017**

Member States	Imports of chilled fresh or frozen fish (t) 2017	Value of imports of chilled fresh or frozen fish (millions US\$) 2017	Imports of dried, salted, smoked, pickled (cured) (t) fish 2017	Value of imports of dried, salted, smoked, pickled (cured) fish (millions US\$) 2017	Imports of canned fish (t) 2017	Value of imports of canned fish (millions US\$) 2017	Total fish imports (t) 2017	Total value of fish imports (millions US\$) 2017
<b>Anguilla</b> (2010 est.)	262	1.2	65	0.3	123	0.4	450	1.9
<b>Antigua and Barbuda</b>	653	3.4	671	2.5	501	1.6	1 825	7.4
<b>Bahamas</b>	1 551	18.2	104	1.4	1 884	10.0	3 539	29.6
<b>Barbados</b>	4 499	13.3	803	2.9	3 386	9.8	8 688	25.9
<b>Belize</b>	38	0.1	1	0.0	189	0.3	228	0.5
<b>Dominica</b>	37	0.1	180	0.8	250	0.8	467	1.7
<b>Grenada</b>	55	0.7	301	1.8	378	1.5	733	4.0
<b>Guyana</b>	53	0.1	42	0.0	1 433	2.7	1 528	2.8
<b>Haiti</b> (2009 est. from the Fisheries Department )	NA	NA	NA	NA	NA	NA	12 500	46.1
<b>Jamaica</b>	14 124	41.2	4 803	20.3	13 578	54.7	32 505	116.1
<b>Montserrat</b> (2016 est.)	29	0.1	19	0.2	18	0.1	66	0.4
<b>St. Kitts and Nevis</b>	592	2.9	240	1.3	277	1.1	1 108	5.3
<b>St. Lucia</b>	491	2.6	458	2.4	958	4.6	1 907	9.6
<b>St. Vincent and the Grenadines</b>	26	0.3	284	1.3	134	0.8	443.1	2.4



Member States	Imports of chilled fresh or frozen fish (t) 2017	Value of imports of chilled fresh or frozen fish (millions US\$) 2017	Imports of dried, salted, smoked, pickled (cured) (t) fish 2017	Value of imports of dried, salted, smoked, pickled (cured) fish (millions US\$) 2017	Imports of canned fish (t) 2017	Value of imports of canned fish (millions US\$) 2017	Total fish imports (t) 2017	Total value of fish imports (millions US\$) 2017
Suriname	0	0.0	0	0.0	0	0.0	2 246	5.2
Trinidad and Tobago	4 918	18.9	2 790	11.9	3458	13.4	11 166	44.2
Turks and Caicos Islands (2016 est.)	1 132	6.1	201	0.3	247	0.8	1 580	7.2
<b>Totals</b>	<b>28 459</b>	<b>109</b>	<b>10 961</b>	<b>47.3</b>	<b>26 813</b>	<b>102.6</b>	<b>80 979</b>	<b>310.4</b>

*Table 31: Fish imports (product weight in tonnes and value in US dollars) by categories of chilled, fresh or frozen, dried salted smoked pickled (cured) and canned, imported by CRFM Member States in 2018*

Member States	Imports of chilled fresh or frozen fish (t) 2018	Value of imports of chilled fresh or frozen fish (millions US\$) 2018	Imports of dried, salted, smoked, pickled (cured) fish (t) 2018	Value of imports of dried, salted, smoked, pickled (cured) fish (millions US\$) 2018	Imports of canned fish (t) 2018	Value of imports of canned fish (millions US\$) 2018	Total fish imports (t) 2018	Total value of fish imports (millions US\$) 2018
Anguilla (2010 est.)	262	1.2	65	0.3	123	0.4	450	1.9
Antigua and Barbuda	687	3.9	698	2.4	579	1.8	1 964	8.2
Bahamas	2 840	26.7	189	2.1	2 585	10.8	5 614	39.6
Barbados	4 289	15.0	792	2.9	3 533	11.1	8 614	28.9
Belize	42	0.1	1	0.005	238	0.4	281	0.6
Dominica	39	0.1	223	1.0	307	1.0	570	2.1
Grenada	59	0.8	271	1.7	549	2.1	878	4.6
Guyana	607	0.6	17	0.033	1 502	3.0	2 126	3.6
Haiti (2009 est. from the Fisheries Department)	0	0.0	0	0.0	0	0.0	12 500	46.1
Jamaica	14 395	44.5	5387	21.3	13 739	51.1	33 522	116.9
Montserrat (2016 est.)	29	0.1	19	0.2	18	0.1	66	0.4

Member States	Imports of chilled fresh or frozen fish (t) 2018	Value of imports of chilled fresh or frozen fish (millions US\$) 2018	Imports of dried, salted, smoked, pickled (cured) fish (t) 2018	Value of imports of dried, salted, smoked, pickled (cured) fish (millions US\$) 2018	Imports of canned fish (t) 2018	Value of imports of canned fish (millions US\$) 2018	Total fish imports (t) 2018	Total value of fish imports (millions US) 2018
St. Kitts and Nevis	747	3.8	233	1.2	271	1.1	1 251	6.2
St. Lucia	761	2.6	438	2.5	1 049	5.9	2 248	11.0
St. Vincent and the Grenadines	38	0.3	253	1.2	178	0.8	470	2.3
Suriname	0	0.0	0	0.0	0	0.0	4 547	6.1
Trinidad and Tobago	4 698	19.1	2 551	10.5	3 787	15.1	11 036	44.7
Turks and Caicos Islands (2016 est.)	1 132	6.1	201	0.3	247	0.8	1 580	7.2
<b>Totals</b>	<b>30 624</b>	<b>125.0</b>	<b>11 340</b>	<b>47.51</b>	<b>28 705</b>	<b>105.6</b>	<b>87 717</b>	<b>330.3</b>

Source: data collected directly from the Government Statistical Department of the Member State unless otherwise stated.

NB: Import weights are product weights.

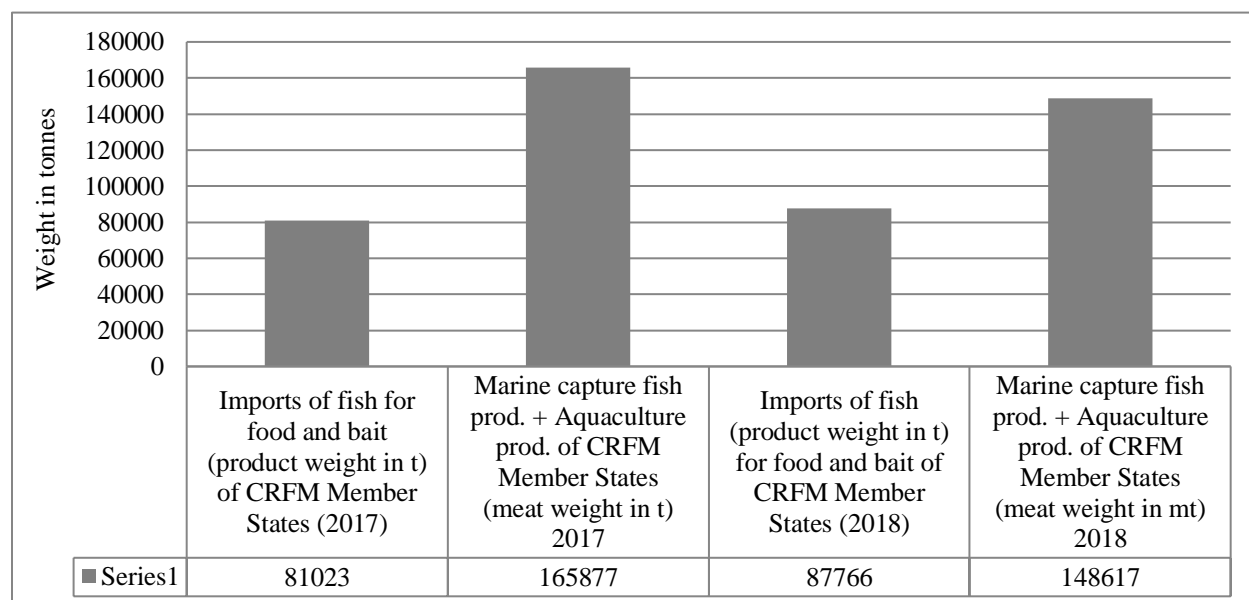
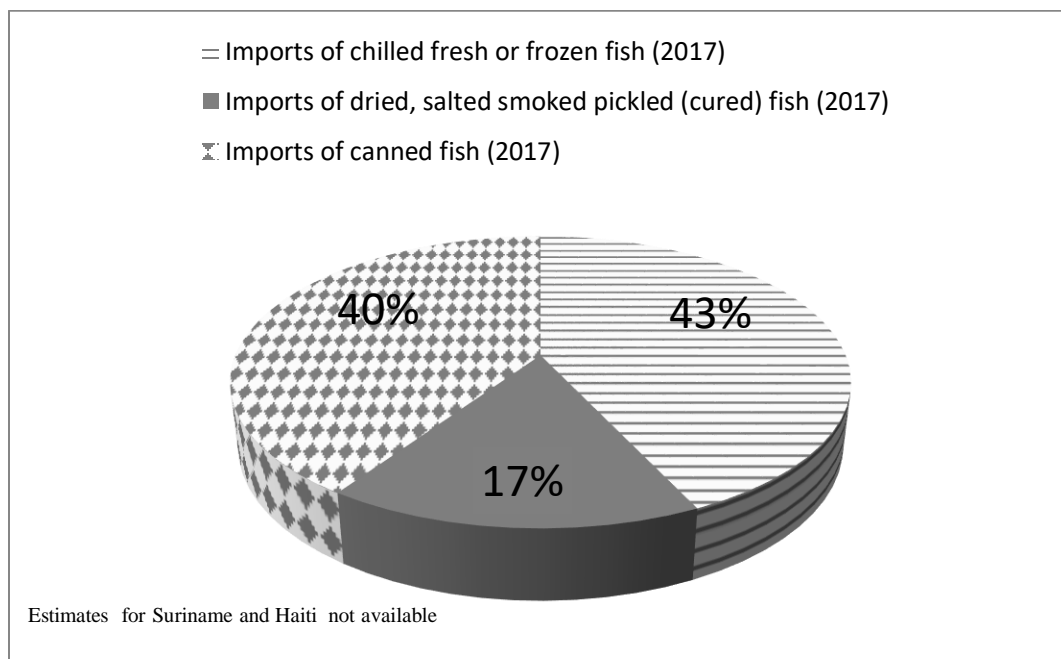
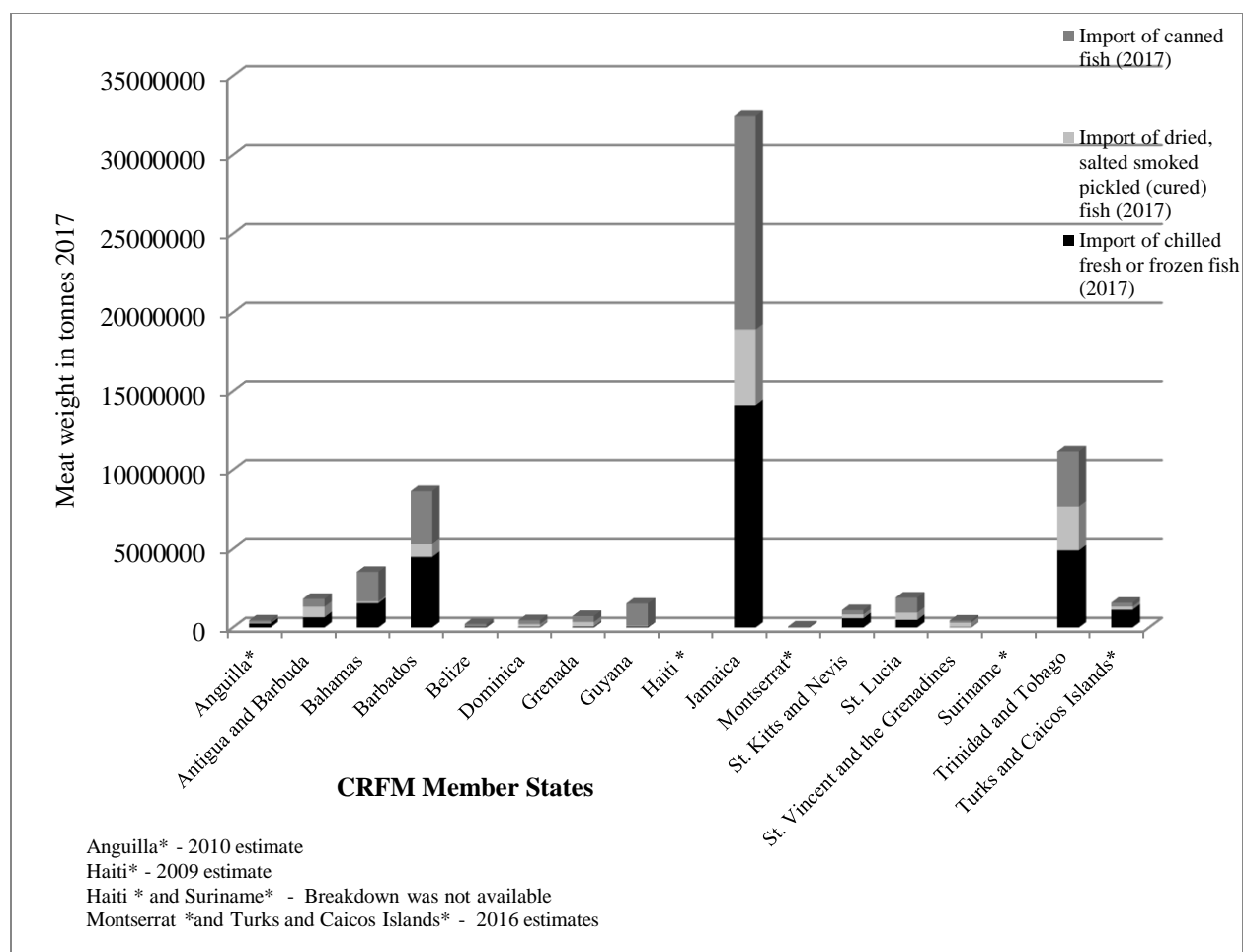


Figure 9: Fish imports for food and bait (product weight in tonnes) versus the total production from marine capture fisheries and aquaculture production (meat weight in tonnes) of the Member States of the CRFM in 2017& 2018.



**Figure 10: Categories of fish products (product weight) by percentage composition, imported into the CRFM region in 2017**



**Figure 11: Fish imports by categories of; chilled fresh or frozen, dried salted smoked pickled (cured) and canned (product weight in tonnes), imported by CRFM Member States in 2017**

Turks and Caicos Islands imported (for food) more than 600% (or greater than 6 times the amount) of the meat weight production from the marine capture fisheries and the aquaculture production in 2017. Other Member States that imported more than 100% of the meat weight production from the marine capture fisheries and the aquaculture production in 2017 included; Barbados, St. Kitts and Nevis, Montserrat, Jamaica, and St. Lucia (Table 32 and Figure 12).

**Table 32. Fish imports for food 2017 of the CRFM Member States expressed as a percentage of the marine capture fisheries (MCF) and the aquaculture production (AC prod.) 2017**

Member States	MCF prod. + AC prod. (meat weight in tonnes) 2017	Fish imports for food (product weight in tonnes) 2017	% of MCF prod. + AC prod. that was imported in 2017 (x100)
<b>Turks and Caicos Islands*</b>	250	1 580	6.32
<b>Barbados*</b>	1 436	8 688	6.05
<b>St. Kitts and Nevis</b>	454	1 108	2.44
<b>Montserrat*</b>	27	66	2.42
<b>Jamaica</b>	16 272	32 505	2.00
<b>St. Lucia</b>	1 682	1 907	1.13

<b>Member States</b>	<b>MCF prod. + AC prod. (meat weight in tonnes) 2017</b>	<b>Fish imports for food (product weight in tonnes) 2017</b>	<b>% of MCF prod. + AC prod. that was imported in 2017 (x100)</b>
<b>Antigua and Barbuda*</b>	1 815	1 825	1.01
<b>Trinidad and Tobago</b>	12 904	11 166	0.87
<b>Dominica</b>	703	467	0.67
<b>Anguilla*</b>	758	450	0.59
<b>St. Vincent and the Grenadines</b>	815	443	0.54
<b>Haiti *</b>	23 600	12 500	0.53
<b>Bahamas</b>	8 567	3 539	0.41
<b>Grenada</b>	2 472	733	0.30
<b>Belize</b>	2 068	227	0.11
<b>Suriname</b>	48 662	2 246	0.05
<b>Guyana</b>	43 391	1 529	0.04
<b>Totals</b>	<b>165 877</b>	<b>80 979</b>	<b>0.49</b>

*Turks and Caicos Islands\* - MCF prod. does not include finfish estimate and fish imports are 2016 estimates*

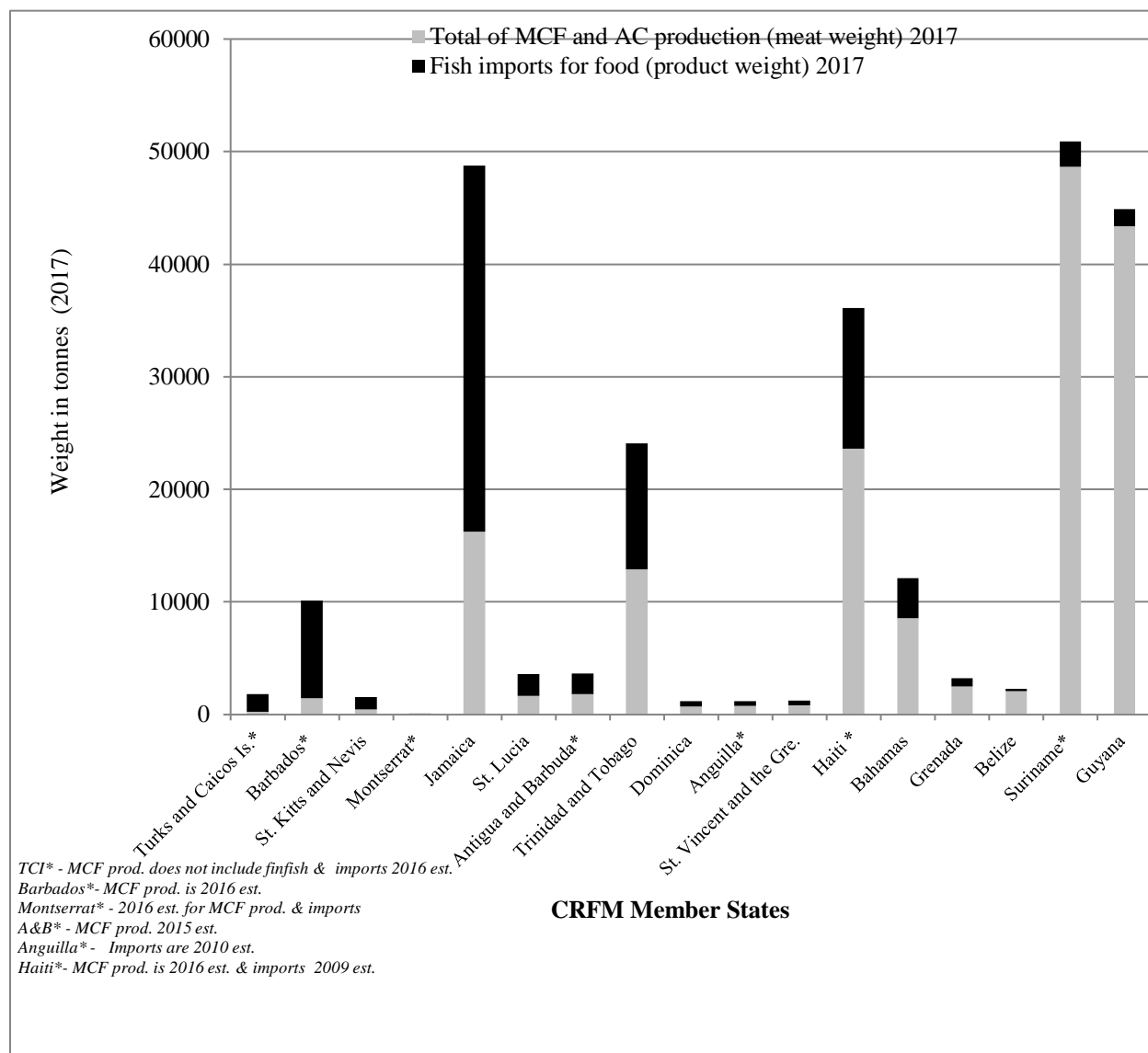
*Barbados\*- MCF production is 2016 estimate*

*Montserrat\* - 2016 estimates for both MCF prod. and imports*

*Antigua and Barbuda\* - MCF prod. 2015 estimate*

*Anguilla\* - Imports are 2010 estimate*

*Haiti\*- MCF production is 2016 estimate and imports are 2009 estimates*



**Figure 12: Weight of fish imported for food (product weight in tonnes) vs the meat weight production from the marine capture fisheries and the aquaculture production of CRFM Member States in 2017.**

## 6.2 Fish exports from the CRFM region

In 2017 and 2018 total domestic exports<sup>113</sup> of fish from the CRFM region (including exports of fish for food, bait and live ornamental fish for breeding or rearing) was approximately 73,949.5 t annually (74,913 t in 2017 and 72,987 t in 2018). Fish exported for food accounted for ~99.9% of the total. The total value of the domestic exports from all Member States combined was US\$295.5 million in 2017 and US\$293.81million in 2018 (an average of ~US\$294.7 million annually) (Tables 33, 34 and 35).

<sup>113</sup> Exports of goods which were grown, produced, mined, or manufactured in the country from which exported.

**Table 33: Product weight (tonnes) and value (in millions of United States dollars) of domestic exports of fish for food, bait and ornamental purposes by CRFM Member States 2017**

Member States	Domestic exports of fish for food (t) 2017	Value of domestic exports of fish for food (in millions of United States dollars) 2017	Domestic exports of fish for ornamental purposes (t) 2017	Value of domestic exports of fish for ornamental purposes (in millions of US dollars) 2017	Domestic export of fish for bait (t) 2017	Value of domestic exports of fish for bait (in millions of United States dollars) 2017	Total weight of domestic exports of fish for food, bait and ornamental (t) 2017	Total value of domestic exports of fish for food, bait and ornamental (in millions of US dollars) 2017
<b>Anguilla</b> (2010 est.)	0	0.0	0.0	0.0	0.0	0.0	0	0.0
<b>Antigua and Barbuda</b>	28.82	0.3214	0.9	0.013	0.0	0.0	30	0.3
<b>Bahamas</b>	2 673	83.6	0.0	0.0	0.0	0.0	2 673	83.6
<b>Barbados</b>	152	0.4	0.03	0.0001	0.0	0.0	152	0.4
<b>Belize</b>	1 439	20.3	3.2	0.135	0.0	0.0	1 442	20.4
<b>Dominica</b>	2	0.01	0.0	0.0	0.0	0.0	2	0.014
<b>Grenada</b>	641	6.5	0.0	0.0	0.0	0.0	641	6.5
<b>Guyana</b>	27 814	111.8	13.4	0.008	0.0	0.0	27 827	111.8
<b>Haiti</b> (2009 est.)	0	0.0	0.0	0.0	0.0	0.0	0	0.0
<b>Jamaica</b>	836	12.9	4.0	0.030	0.0	0.0	840	12.9
<b>Montserrat</b> (2016 estimates)	0	0.0	0.0	0.0	0.0	0.0	0	0.0
<b>St. Kitts and Nevis</b>	18	0.1	0.0	0.0	0.0	0.0	18	0.1
<b>St. Lucia</b>	0.012	0.0002	0.0	0.0	0.0	0.0	0	0.0002
<b>St. Vincent and the Grenadines</b>	240	1.2	0.0	0.0	0.0	0.0	240	1.2
<b>Suriname</b>	33 563	39.2	0.0	0.0	0.0	0.0	33 563	39.2
<b>Trinidad and Tobago</b>	7 369	17.5	24.7	0.079	0.0	0.0	7 393	17.6
<b>Turks and Caicos Islands</b> (2016 est.)	93	1.4	0.0	0.0	0.0	0.0	93	1.4
<b>Totals</b>	<b>74 866</b>	<b>295.2</b>	<b>46</b>	<b>0.264</b>	<b>0.0</b>	<b>0.0</b>	<b>74 913</b>	<b>295.5</b>

Source: data collected directly from the Government Statistical Department of the Member State unless otherwise stated.

**Table 34: Product weight (in tonnes) and value (in millions of United States dollars) of domestic exports of fish for food, bait and ornamental purposes by CRFM Member States 2018**

Member States	Domestic exports of fish for food (t) 2018	Value of domestic exports of fish for food (in millions of United States dollars ) 2018	Domestic exports of fish for ornamental purposes (t) 2018	Value of domestic exports of fish for ornamental purposes (in millions of United States dollars) 2018	Domestic export of fish for bait (t) 2018	Value of domestic exports of fish for bait (in millions of United States dollars) 2018	Total weight of domestic exports of fish for food, bait and ornamentals (t) 2018	Total value of domestic exports of fish for food, bait and ornamentals (in millions of United States dollars) 2018
<b>Anguilla</b> (2010 est.)	0	0.0	0.0	0.0	0.0	0.0	0	0.00
<b>Antigua and Barbuda</b>	47	0.78	0.0	0.0	0.0	0.0	47	0.78
<b>Bahamas</b>	2 532	81.2	0.0	0.0	0.0	0.0	2 532	81.24
<b>Barbados</b>	145	0.5	0.0	0.0	0.0	0.0	145	0.51
<b>Belize</b>	1 422	21.4	2.4	0.118	0.0	0.0	1 425	21.54
<b>Dominica</b>	15	0.07	0.0	0.0	0.0	0.0	15	0.07
<b>Grenada</b>	653	6.6	0.0	0.0	0.0	0.0	653	6.60
<b>Guyana</b>	23 929	110.9	6.5	0.007	0.0	0.0	23 936	110.93
<b>Haiti</b> (2009 est.)	0	0.0	0.0	0.0	0.0	0.0	0	0.00
<b>Jamaica</b>	499	9.2	2.3	0.038	0.0	0.0	502	9.28
<b>Montserrat</b> (2016 est.)	0	0.0	0.0	0.0	0.0	0.0	0	0.00
<b>St. Kitts and Nevis</b>	19	0.1	0.0	0.0	0.0	0.0	19	0.14
<b>St. Lucia</b>	0	0.00	0.0	0.0	0.0	0.0	0	0.00
<b>St. Vincent and the Grenadines</b>	464	2.5	0.0	0.0	0.0	0.0	464	2.47
<b>Suriname</b>	35 456	41.7	0.0	0.0	0.0	0.0	35 456	41.68
<b>Trinidad and Tobago</b>	7 648	17.1	51.3	0.090	0.0	0.0	7 699	17.15
<b>Turks and Caicos Islands</b> (2016 est.)	93	1.4	0.0	0.0	0.0	0.0	93	1.43
<b>Totals</b>	<b>72 923</b>	<b>293.6</b>	<b>62.5</b>	<b>0.254</b>	<b>0.0</b>	<b>0.0</b>	<b>72 986</b>	<b>293.81</b>

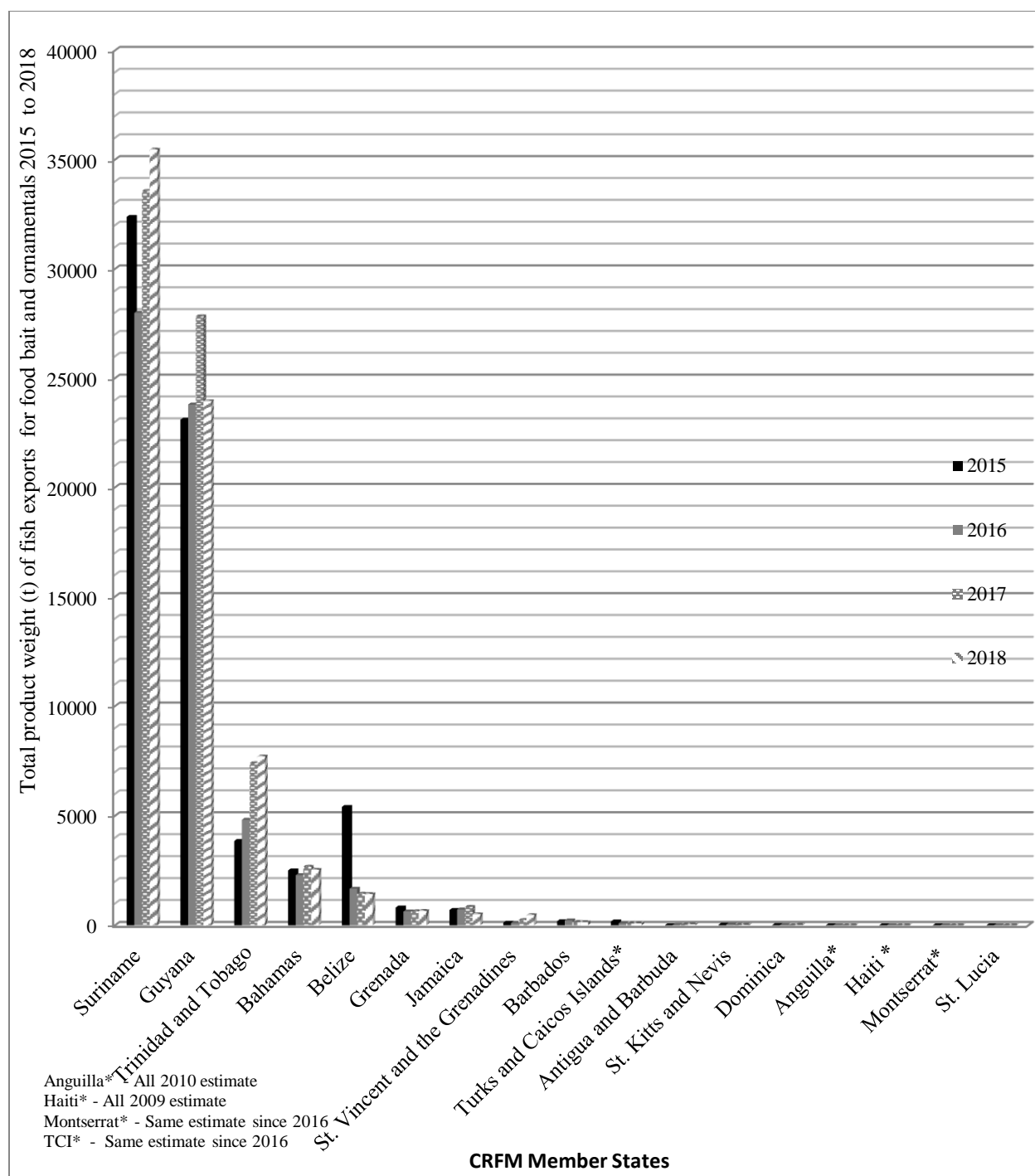
Source: data collected directly from the Government Statistical Department of the Member State unless otherwise stated.

Over the period 2015 to 2018 Suriname followed by Guyana exported the highest weights, Suriname exported ~ 32,346 t annually and Guyana exported ~24,661 t annually (Table 35 and Figure 13).



**Table 35: Total and average weight (product weight in tonnes) of domestic exports of fish for food, bait and ornamental purposes from CRFM Member States 2015 to 2018**

<b>Member States</b>	<b>Total weight (t) of domestic exports of fish for food, bait and ornamentals 2015</b>	<b>Total weight (t) of domestic exports of fish for food, bait and ornamentals 2016</b>	<b>Total weight (t) of domestic exports of fish for food, bait and ornamentals 2017</b>	<b>Total weight (t) of domestic exports of fish for food, bait and ornamentals 2018</b>	<b>Average weight(t) of domestic exports of fish for food, bait and ornamentals 2015 to 2018</b>
<b>Suriname</b>	32 376	27 986	33 563	35 456	32 346
<b>Guyana</b>	23 094	23 788	27 827	23 936	24 661
<b>Trinidad and Tobago</b>	3 847	4 816	7 393	7 699	5 939
<b>Bahamas</b>	2 502	2 287	2 673	2 532	2 498
<b>Belize</b>	5 397	1 666	1 442	1 425	2 482
<b>Grenada</b>	812	630	641	653	684
<b>Jamaica</b>	700	724	840	502	691
<b>St. Vincent and the Grenadines</b>	120	105	240	464	232
<b>Barbados</b>	189	223	152	145	177
<b>Turks and Caicos Islands</b> ( <i>same estimate since 2016</i> )	178	93	93	93	114
<b>Antigua and Barbuda</b>	0	10	30	47	22
<b>St. Kitts and Nevis</b>	27	37	18	19	25
<b>Dominica</b>	8.5	8.7	2	15	8
<b>Anguilla</b> ( <i>all 2010 estimate</i> )	0.0	0.0	0	0	0
<b>Haiti</b> ( <i>all 2009 estimates</i> )	0.0	0.0	0	0	0
<b>Montserrat</b> ( <i>same estimate since 2016</i> )	0.0	0.0	0	0	0
<b>St. Lucia</b>	1.7	2	0	0	1
<b>Totals</b>	<b>69 250</b>	<b>62 377</b>	<b>74 913</b>	<b>72 986</b>	<b>69 881</b>

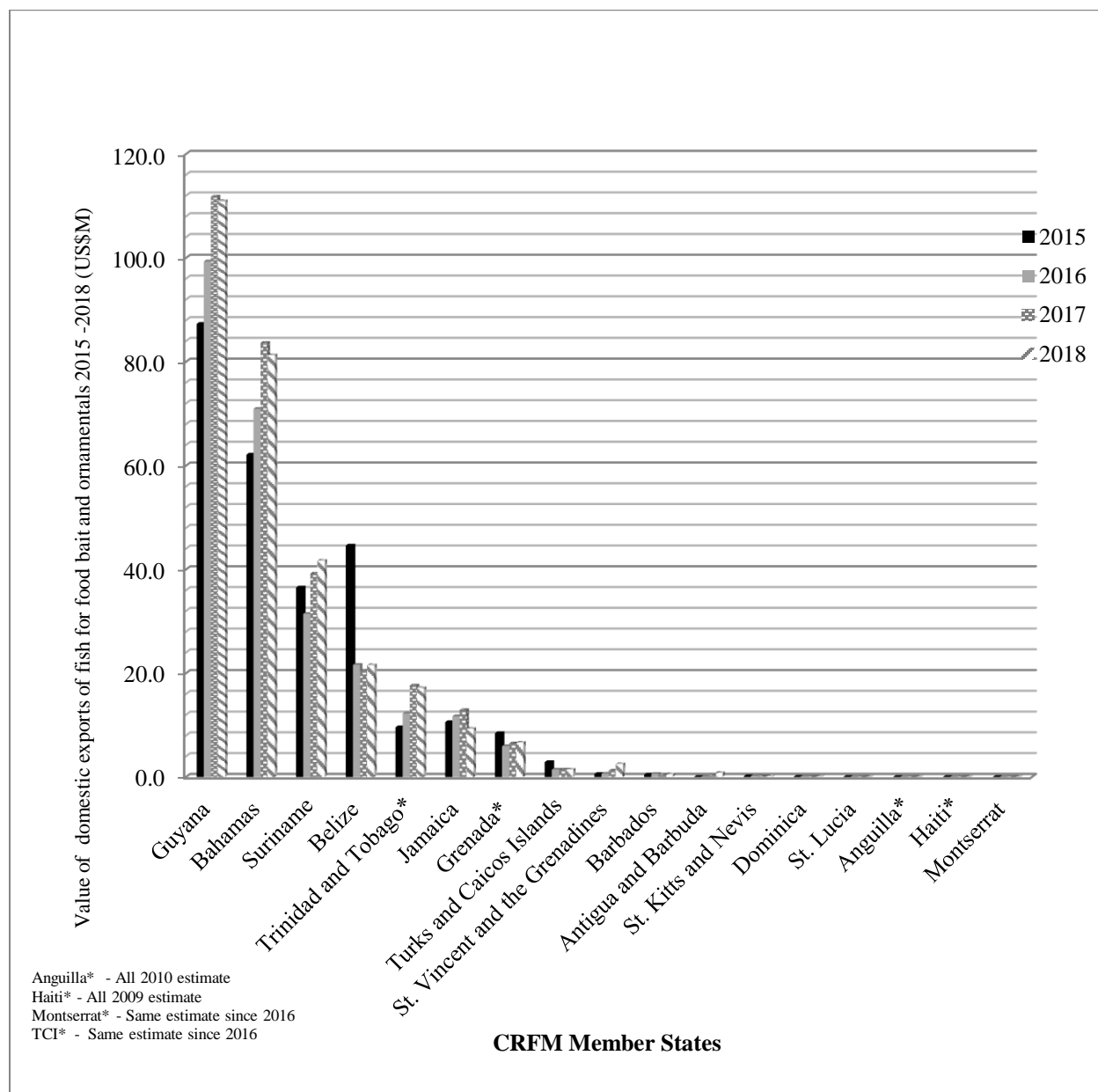


**Figure 13: Total weight (product weight in tonnes) of fish domestic exports for food, bait and ornamental purposes 2015 to 2018**

A comparison of the value of the total fish exports at the country level over the period of 2015 to 2018 showed that Guyana had the highest value for fish exported with an average of US\$102.3 million annually and was followed by The Bahamas with an average of US\$74.5 million annually (Table 35 and Figure 14).

**Table 36: Value and average value of domestic exports of fish for food, bait and ornamental purposes (in millions of United States dollars) from CRFM Member States for 2015 to 2018**

<b>Member States</b>	<b>Value of domestic exports of fish for food, bait and ornamentals (in millions of United States dollars) 2015</b>	<b>Value of domestic exports of fish for food, bait and ornamentals (in millions of United States dollars ) 2016</b>	<b>Value of domestic exports of fish for food, bait and ornamentals (in millions of United States dollars ) 2017</b>	<b>Value of domestic exports of fish for food, bait and ornamentals (in millions of United States dollars ) 2018</b>	<b>Average value of domestic exports of fish for food, bait and ornamentals (in millions of United States dollars ) 2015 to 2018</b>
<b>Guyana</b>	87.3	99.3	111.8	110.9	102.3
<b>Bahamas</b>	62.1	70.9	83.6	81.2	74.5
<b>Suriname</b>	36.5	31.4	39.2	41.7	37.2
<b>Belize</b>	44.6	21.6	20.4	21.5	27.0
<b>Trinidad and Tobago</b>	9.6	12.2	17.6	17.1	14.1
<b>Jamaica</b>	10.6	11.7	12.9	9.3	11.1
<b>Grenada</b>	8.5	6.0	6.5	6.6	6.9
<b>Turks and Caicos Islands</b> <i>(same estimate since 2016)</i>	2.9	1.4	1.4	1.4	1.8
<b>St. Vincent and the Grenadines</b>	0.6	0.6	1.2	2.5	1.2
<b>Barbados</b>	0.5	0.6	0.4	0.5	0.5
<b>Antigua and Barbuda</b>	0.0	0.0	0.3	0.8	0.3
<b>St. Kitts and Nevis</b>	0.1	0.2	0.1	0.1	0.1
<b>Dominica</b>	0.02	0.1	0.0	0.1	0.0
<b>St. Lucia</b>	0.008	0.008	0.0	0.0	0.0
<b>Anguilla</b> <i>(all 2010 estimate)</i>	0.0	0.0	0.0	0.0	0.0
<b>Haiti</b> <i>(all 2009 estimate)</i>	0.0	0.0	0.0	0.0	0.0
<b>Montserrat</b> <i>(same estimate since 2016)</i>	0.0	0.0	0.0	0.0	0.0
<b>Totals</b>	<b>263.3</b>	<b>256.2</b>	<b>295.5</b>	<b>293.8</b>	<b>277.2</b>



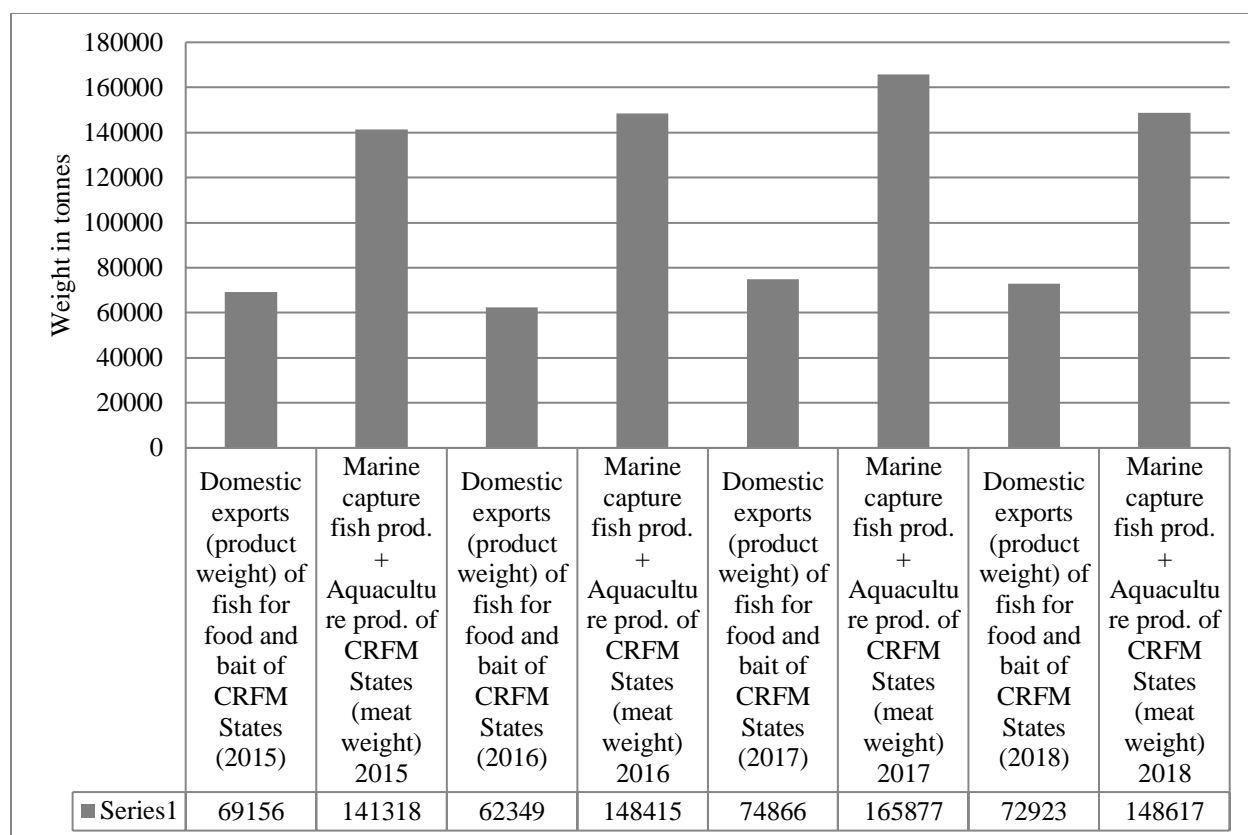
**Figure 14: Value of domestic exports of fish for food, bait and ornamental purposes (in millions US dollars) from CRFM Member States for 2015 to 2018**

In 2017 domestic exports of fish for food from the CRFM region was approximately 74,866 t (45% of the meat weight production from marine capture fisheries plus aquaculture production of the region). In 2018 domestic exports for food fell to 72,923 t and this corresponded to 49% of the meat weight production from marine capture fisheries plus aquaculture production of the region (Table 29 and Figure 11). A small portion of the fish imported was re-exported (of 80,979 t imported in 2017, 1,208 t (~1.5%) was re-exported). The three largest domestic exporters of fish (tonnes of fish exported) among the CRFM Member States in

2017/2018 were Suriname, Guyana and Trinidad and Tobago respectively, together they accounted for 92% of total domestic exports of fish from the region (Table 37 and Figure 15).

**Table 37: Domestic exports of fish for food, total domestic fish exports and re-exports (product weight in tonnes) 2018 and percentage contribution by Member State to total export of the CRFM region 2018 and 2015-2018**

<b>Member States</b>	<b>Domestic exports of fish for food (product weight in t) 2018</b>	<b>Total domestic exports of fish (product weight in t) 2018</b>	<b>% contribution to the total domestic exports of fish for the CRFM region 2018</b>	<b>Average weight (t) of domestic exports of fish for food, bait and ornamentals 2015 to 2018</b>	<b>% contribution to the total average weight of exports of fish for the CRFM region 2015 to 2018</b>	<b>Re-exports (product weight in t) 2017</b>
<b>Anguilla (2010 est.)</b>	0	0	0.00	0	0.00	0.00
<b>Antigua and Barbuda</b>	47	47	0.06	22	0.03	0.08
<b>Bahamas</b>	2 532	2 532	3.47	2498	3.58	0.52
<b>Barbados</b>	145	145	0.20	177	0.25	8.39
<b>Belize</b>	1 422	1 425	1.95	2 482	3.55	0.00
<b>Dominica</b>	15	15	0.02	8	0.01	0.00
<b>Grenada</b>	653	653	0.90	684	0.98	0.00
<b>Guyana</b>	23 929	23 936	32.80	24 661	35.29	0.00
<b>Haiti (2009 est.)</b>	0	0	0.00	0	0.00	0.00
<b>Jamaica</b>	499	502	0.69	691	0.99	351.17
<b>Montserrat (2016 est.)</b>	0	0	0.00	0	0.00	0.00
<b>St. Kitts and Nevis</b>	19	19	0.03	25	0.04	295.79
<b>St. Lucia</b>	0	0	0.00	1	0.00	0.07
<b>St. Vincent and the Grenadines</b>	464	464	0.64	232	0.33	0.00
<b>Suriname</b>	35 456	35 456	48.58	32 346	46.29	0.00
<b>Trinidad and Tobago</b>	7 648	7 699	10.55	5 939	8.50	551.65
<b>Turks and Caicos Islands (2016 est.)</b>	93	93	0.13	114	0.16	0.00
<b>Totals</b>	<b>72 923</b>	<b>72 986</b>	<b>100</b>	<b>69 881</b>	<b>100</b>	<b>1 207.67</b>



**Figure 15: Domestic exports of fish for food and bait (product weight in tonnes) compared to the total production from marine capture fisheries and aquaculture production (meat weight in tonnes) of the CRFM Member States 2015 to 2018.**

The species exported for food included: lobsters, shrimp, conch, tunas, snappers, groupers, and various other finfish species and aquatic invertebrates (Table 30). The breakdown of domestic exports from 11 Member States (breakdown was not available for Grenada and Suriname and Anguilla, Haiti, St. Lucia and Montserrat had no exports of fish) for 2018, showed that export of shrimp accounted for approximately 26% of the exports from those Member States, valued at US\$61 million. Exports of conch accounted for approximately 3% of exports (value US\$13 million), of lobsters 8% (value US\$96 million) and various finfish including tunas, snappers, flyingfish, mackerel, bangamary and groupers accounted for approximately 63% (value US\$74.5 million) of the export from the 11 Member States analysed (Table 38 & 38.1 and Table 39).

**Table 38: The species (common name) and weight (meat weight in tonnes) of fish exported for food by Member States of the CRFM in 2018**

Member States	Lobster (t)	Conch (t)	Yellowfin tuna (t)	Other tunas (skipjack, bluefin tuna etc.) (t)	Mackerels, Wahoo and Kingfish Marlin, Swordfish (t)	Dolphin fish (t)	Groupers (t)	Snappers (t)	Flying fish (t)	Fin fish aggregated (snapper, croaker, grouper, dolphin, bangamary & sea trout) (t)	Other fin fish (t)	Crabs (t)	Shrimp/prawns (t)	Aquatic invertebrates & other crustaceans (t)	Sharks and Rays (t)	Totals (t)
Anguilla (2010 est.)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Antigua and Barbuda	47	0	0	0	0	0	0	0	0	0	0	0	0	0	0	47
Bahamas	2 155	288	0	0	0	0	5	0	0	0	26	58	0	0	0	2 532
Barbados	0	0	128	8	0.04	0.1	0	0	2	0	5	0.02	1	0.05	0	145
Belize	433	261	0	0	4	0	0	0	0	10	25	1	540	148	0.1	1 422
Dominica	0	0	0	0	0.3	0	0	0	0	0	14	0	0	0	0.02	15
Grenada 114	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	653
Guyana	19	0	0	264	48	0	0	0	47	12 651	1 590	88	9 198	26	0	23 929
Haiti (2009 est.)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Jamaica	251	185	0	0	8	0	0	0	0	0.3	15	0	5	35	0	499
Montserrat (2016 est.)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
St. Kitts and Nevis	3	14	0	0	0	0	0	0	0	0	0.01	0.5	0	1	0	19
St. Lucia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
St. Vincent and the Grenadines	58	308	34	0.04	0.2	0	0	0	0	0.2	61	0.2	0	3	0	464
Suriname 115	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	35 456
Trinidad and Tobago	34	0	4 365	80	1	0	0	0	4	465	2 684	7	6	0.1	2	7 648
Turks and Caicos Islands(2016 est.)	33	60	0	0	0	0	0	0	0	0	0.03	0	0	0	0	93
Total of 15116 Member States	3 032	1 116	4 527	353	62	0.1	5	0	52	13 125	4 420	156	9 750	213	2	72 923
Total domestic exports for food 2018																72 923

Sources: Data were collected directly from the Government Statistics Department in the Member State

NA=Not Available (breakdown of species was not available)

<sup>114</sup> Breakdown not available

<sup>115</sup> Breakdown not available

<sup>116</sup> Breakdown was not available for Suriname and Grenada

**Table 38.1: The value (in millions of US\$) by species (common name weight of product) of fish exported for food by Member States of the CRFM in 2018**

Member States	Lobster (M US\$)	Conch (M US\$)	Yellowfin tuna (M US\$)	Other tunas (skipjack, bluefin tuna etc.) (M US\$)	Mackerels, Wahoo and Kingfish Marlins, Swordfish (M US\$)	Dolphin fish (M US\$)	Groupers (M US\$)	Snappers (M US\$)	Flying fish (M US\$)	Fin fish aggregated (snapper, croaker, grouper, dolphin, bangamary & sea trout (M US\$)	Other fin fish (M US\$)	Crabs (M US\$)	Shrimp/prawns (M US\$)	Aquatic invertebrates & other crustaceans (M US\$)	Sharks and Rays (M US\$)	Totals (M US\$)
Anguilla	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Antigua and Barbuda	0.776	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.776
Bahamas	74.700	4.452	0.000	0.000	0.000	0.000	0.018	0.000	0.000	0.000	0.094	1.980	0.000	0.000	0.000	81.243
Barbados	0.000	0.000	0.309	0.036	0.000	0.002	0.000	0.000	0.057	0.000	0.091	0.002	0.007	0.002	0.000	0.506
Belize	11.934	4.089	0.000	0.000	0.013	0.000	0.000	0.000	0.000	0.021	0.103	0.041	2.686	2.531	0.001	21.418
Dominica	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.067	0.000	0.000	0.000	0.000	0.068
Grenada	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	6.603
Guyana	0.160	0.000	0.000	1.940	0.183	0.000	0.000	0.000	0.132	35.085	14.433	0.314	58.565	0.111	0.000	110.923
Haiti	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Jamaica	6.570	1.802	0.000	0.001	0.027	0.000	0.000	0.000	0.000	0.002	0.139	0.000	0.061	0.640	0.000	9.242
Montserrat	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
St. Kitts and Nevis	0.023	0.102	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.000	0.009	0.000	0.136
St. Lucia	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
St. Vincent and the Grenadines	0.477	1.564	0.263	0.000	0.001	0.000	0.000	0.000	0.000	0.002	0.133	0.008	0.000	0.023	0.000	2.472
Suriname	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	41.677
Trinidad and Tobago	0.211	0.000	10.572	0.188	0.006	0.000	0.000	0.000	0.004	1.381	4.575	0.038	0.031	0.001	0.048	17.055
Turks and Caicos Islands	0.826	0.606	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.432
Value of 15 Member States <sup>117</sup> (M US\$)	95.677	12.615	11.144	2.166	0.232	0.002	0.018	0.000	0.193	36.492	19.638	2.384	61.349	3.315	0.048	293.552
Value of total domestic exports for food 2018 (M US\$)																<b>293.552</b>

<sup>117</sup> Breakdown was not available for Suriname and Grenada



**Table 39: Product weight of species exported by eleven Member States and the percentage contribution that the species made to the total exported (fish for food) and corresponding value (2018)**

Species of fish exported	Total product weight (t) exported by 11* of the 17 CRFM Member States (2018)	% contribution that the species made to the total product weight exported (2018)	Value in millions of US\$ (2018)
Lobsters	3 032	8	96
Shrimp	9 750	26	61
Fin fish aggregated (snapper, croaker, grouper, dolphin, bangamary & sea trout)	13 125	36	36
Other finfish	4 420	12	20
Conch	1 116	3	13
Yellowfin tuna	4 527	12	11
Other aquatic invertebrates and crustaceans	213	1	3
Stone crabs	156	0.4	2
Other tunas	353	1	2
Mackerels	62	0.2	0.2
Flyingfish	52	0.1	0.2
Sharks and rays	2	0.01	0.05
Groupers	5	0.01	0.02
Dolphinfish	0.14	0.0004	0.002
Snappers	0	0.0	0
<b>Total</b>	<b>36 814</b>	<b>100</b>	<b>245</b>

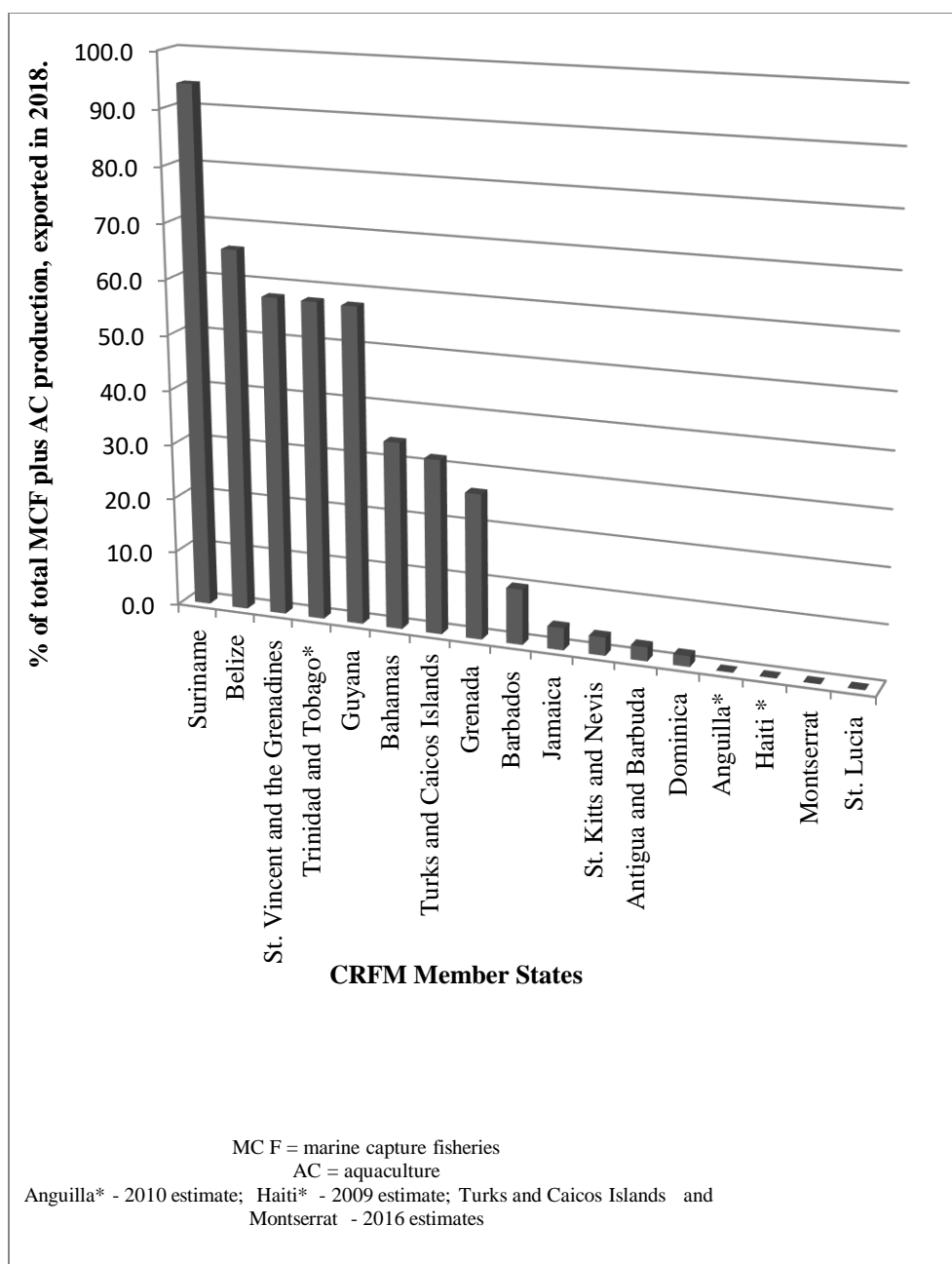
*\*Anguilla, Haiti, St. Lucia and Montserrat were estimated to have no exports and the breakdown for Grenada and Suriname were not available*

Suriname exported ~94 % of the fish production from the marine capture fisheries and the aquaculture production in 2018 as food and bait. Belize (~66%), Guyana, St. Vincent and the Grenadines and Trinidad and Tobago (~58%) also exported substantial amounts of the production from the marine capture fisheries and the aquaculture production in 2018 (Table 40 and Figure 16).

**Table 40: Percentage of the production (meat weight) from the marine capture fisheries production (MCF prod.) plus the aquaculture production (AC prod.) that was exported in 2018 by CRFM Member States**

<b>Member States</b>	<b>Domestic exports of fish for food and bait (product weight in tonnes) 2018</b>	<b>MCF prod.<sup>118</sup> + AC prod. (meat weight in tonnes) 2018</b>	<b>% of MCF prod. + AC prod. that was exported in 2018</b>
<b>Suriname</b>	35 456	37 617	94.3
<b>Belize</b>	1 422	2 163	65.8
<b>St. Vincent and the Grenadines</b>	464	802	57.9
<b>Trinidad and Tobago</b>	7 648	13 239	57.8
<b>Guyana</b>	23 929	41 558	57.6
<b>Bahamas</b>	2 532	7 434	34.1
<b>Turks and Caicos Islands (exp.2016 est.)</b>	93	293	31.8
<b>Grenada</b>	653	2 472	26.4
<b>Barbados</b>	145	1 436	10.1
<b>Jamaica</b>	499	12 394	4.0
<b>St. Kitts and Nevis</b>	19	585	3.3
<b>Antigua and Barbuda</b>	47	1 830	2.5
<b>Dominica</b>	15	763	1.9
<b>Anguilla (exp.2010 est.)</b>	0	758	0.0
<b>Haiti (exp.2009 est.)</b>	0	23 600	0.0
<b>Montserrat (exp.2016 est.)</b>	0	27	0.0
<b>St. Lucia</b>	0	1 647	0.0
<b>Totals</b>	<b>72 923</b>	<b>148 617</b>	

<sup>118</sup> Provisional estimates used for 2018: Mon., Haiti and Barbados - 2016 est.; Anguilla and Grenada - 2017 est.; Antigua and Barbuda 2015 est.



**Figure 16: Domestic fish exports (food and bait) of CRFM Member States expressed as a percentage of the total marine capture fisheries plus aquaculture fish production (meat weight 2018)**

# CHAPTER 7: FISH CONSUMPTION IN THE CRFM REGION

Table 4 assumes that all the fish imported and captured locally are consumed by the local population, and tourist and visitors are not accounted for.

*Table 41. Calculation table for consumption of fish (assuming that the local population consumed all the available fish) within CRFM Member States (in kg per person) for 2017*

Column 1 (C1)	Column 2 (C2)	Column 3 (C 3)	Column 4 (C 4)	Column 5 (C 5)	Column 6 (C 6)	Column 7 (C 7)	Column 8 (C 8)	Column 9 (C 9)	Column 10 (C 10)	Column 11 (C 11)
Member States	Marine Capture Fish Prod. + Aquaculture Prod. (t) 2017	Domestic Exports (t) 2017	Re-exports (t) 2017	Imports of chilled fresh or frozen fish (t) 2017	Imports of dried, salted smoked pickled (cured) fish (t) 2017	Imports of canned fish (t) 2017	Total fish imports for food (t) 2017 =C5+C6+C7	Total fish supply (t) 2017 =C2-C3-C4+C8	Population 2017	Total Fish Supply Per Capita (kg/2017) =(C9*1000)/C10
Anguilla*	758	0	0.00	262	65	123	450	1 208	14 584	83
Antigua and Barbuda*	1 815	28.82	0.08	653	671	501	1 825	3 612	95 426	38
Bahamas	8 567	2 673	0.52	1 551	104	1 884	3 539	9 433	381 761	25
Barbados*	1 436	152	8.39	4 499	803	3 386	8 688	9 963	286 233	35
Belize	2 068	1 439	0.00	38	1	189	227	857	375 769	2
Dominica	703	2	0.00	37	180	250	467	1 169	71 458	16
Grenada	2 472	641	0.00	55	301	378	733	2 565	110 874	23
Guyana	43 391	27 814	0.00	53	42	1 433	1 529	17 106	775 221	22
Haiti*	23 600	0	0.00	NA	NA	NA	12 500	36 100	10 982 366	3
Jamaica	16 272	836	351.17	14 124	4 803	13 578	32 505	47 590	2 920 848	16
Montserrat*	27	0	0.00	29	19	18	66	94	4 984	19
St. Kitts & Nevis	454	18	295.79	592	240	277	1 108	1 249	52 045	24
St. Lucia	1 682	0.012	0.07	491	458	958	1 907	3 589	180 955	20
St. Vincent & the Grenadines	815	240	0.00	26	284	134	443	1 018	109 827	9
Suriname	48 662	33 563	0.00	0	0	0	2 246	17 344	570 496	30
Trinidad & Tobago	12 904	7369	551.65	4 918	2 790	3 458	11 166	16 150	1 384 059	12
Turks and Caicos Islands*	250	93	0.00	1 132	201	247	1 580	1 737	37 115	47
Totals	165 877	74 866	1 207.67	28 459	10 961	26 813	80979	170 782	18 354 021	25

Source for population: Worldometers, 2020.

Anguilla\* - imports and exports were 2010 estimates.

Antigua and Barbuda \* - production figures 2015 estimates

Barbados \* - Marine capture fish prod. is 2016 estimate

Haiti\* - imports and exports were 2009 estimates and Marine capture fish prod. is 2016 estimate

Montserrat\* - 2016 estimates for MCF prod. and imports and exports.

Turks and Caicos Islands\* - import and exports are 2016 estimates. Marine capture fish prod. does not include marine finfish.

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The CRFM is an inter-governmental organization whose mission is to “Promote and facilitate the responsible utilization of the region’s fisheries and other aquatic resources for the economic and social benefits of the current and future population of the region”. The CRFM consists of three bodies – the Ministerial Council, the Caribbean Fisheries Forum and the CRFM Secretariat. CRFM members are Anguilla, Antigua and Barbuda, The Bahamas, Barbados, Belize, Dominica, Grenada, Guyana, Haiti, Jamaica, Montserrat, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Suriname, Trinidad and Tobago and the Turks and Caicos Islands.

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