CHAPTER 7: COASTAL AND MARINE RESOURCES

CARICOM countries depend heavily on fishing for income, food, employment. As a result, most coastal resources are fully or overexploited (especially those of higher commercial value).

The coastal and marine resources in the CARICOM region are of critical importance. As most of the Member States are either small-island or low-lying coastal states, the issues affecting them are similar in nature, though different in magnitude. Traditionally, the coastal zone has been considered as a band about fourteen miles wide inland from the land-water interface and extending no more than three miles sea-ward to the extent of the territorial sea. In the case of most of the insular CARICOM Member States, this so -called coastal zone encompasses the entire island, or a significant portion of the inhabited land area. Therefore, not only are the resources of this area of major importance to the Member States, but they also continue to be under threat from natural and anthropogenic activities.

There are three (3) Indicators covered in this section.

1. Total **and** Protected Marine Area: an indicator of Government's will to protect biodiversity.
2. Fish landings by type: used to measure the impact that fishing has on the environment.
3. Number of families and Population of coastal area: measure of population growth in coastal areas to provide an estimation of the pressures on the environment that will arise as a result of habitation of the coast

CHAPTER 7: COASTAL AND MARINE RESOURCES

Table 7.1 - Total and protected marine area: 2009-2013

Unit = km^2

Country	Year	Marine Area	
		Total	Protected
AG	2009	77,147.0	… [A]
BS	2009-2013	230,000.0	…
DM	2013	…	2,659.3
GY	2009-2013	41.2	…
JM	2009-2013	15,973.0	1,975.0
HT	2009-2014	5.6	0
VC	2010	27,533.0	98.2
SR	2009	…	2,971.0
TT	2009-2014	77,502.0	7.0
ASSOCIATE MEMBERS			
BM	2010-2013	4,236.1	294.7
KY	2005-2009	208.9	91.7

Concept and definition

A *Marine Protected Area* (MPA) is "any area of intertidal or subtidal terrain, together with its overlying water and associated flora, fauna, historical and cultural features, which has been reserved by law or other effective means to protect part or all of the enclosed environment". ***(Please refer to the IUCN 1988. Resolution 17.38 of the 17th General Assembly of the IUCN. IUCN; Gland; Switzerland and Cambridge; UK.)***

CHAPTER 7: COASTAL AND MARINE RESOURCES

Table 7.2 (a) Fish landings: 2009-2013

Metric Tonnes

Country	2009	2010	2011	2012	2013
BS	4,167	4,943	4,472	4,752	3,668
DM	684.9	559.7	665.4	561.0	539.8
LC	1,857	1,801.0	1,693	1,709	1,639
GY	42,803	47,142	44,364	53,092	49,575
MS	17.7	18.2	18.1	19.1	18.5
VC	817	783	668	798	732
SR*	35,490	39,264	39,369	38,358	43,915
TT	9,412.99	9,173.77	8,241.93	7,475.68	8,667.49
ASSOCIATE MEMBER					
BM	345.1	324.0	401.3	421.5	383.8

Definitions

Fish landings are the weight of [the fish] that is landed at a landing site. May be different from the catch (which includes the discards).

Catch: The total number (or weight) of fish caught by fishing operations. Catch should include all fish killed by the act of fishing, not just those landed. *Restrepo V. (1999): Annotated Glossary of Terms in Executive Summary Reports of the International Commission for the Conservation of Atlantic Tunas´ Standing Committee on Research and Statistics (SCRS). ICCAT.*
Source: http://www.fao.org/fi/glossary/

CHAPTER 7: COASTAL AND MARINE RESOURCES

Table 7.2 (b) Fish landings by type: 2009-2013

Country	Year	Fish landings by type			
		Crawfish	Scale Fish	Conch	Total Quantity (Metric Tonnes)
BS					
	2009	2,380	1,062	724	4,167
	2010	3,232	1,008	703	4,943
	2011	2,837	886	750	4,472
	2012	3,286	680	786	4,752
	2013	2,034	876	758	3,668

Country	Year	Fish landings by type							
		Flying Fish	Tuna and pelagics	Dolphin	Conch	Lobster	Wahoo	Other/ Misc.	Total Quantity (Metric Tonnes)
LC									
	2009	220	486	465	34	10	195	64	1,857
	2010	109	613	352	28	19	199	472	1,801
	2011	22	541	473	...	...	197	457	1,693
	2012	4	442	504	...	...	151	598	1,709
	2013	107	492	387	31	82	148	346	1,639

Country	Year	Fish landings by type		
		Finfish	Red Snapper	Shrimp
GY				
	2009	24,511	789	17,503
	2010	24,283	1,037	21,822
	2011	22,779	758	20,827
	2012	26,142	952	25,998
	2013	23,728	1,109	24,738

CHAPTER 7: COASTAL AND MARINE RESOURCES

Table 7.2(b) cont'd Fish landings by type: 2009-2013

Country	Year	Fish landings by type			
		Needlefish/Gar	Red Hind	Triggerfish; Queen	Total Quantity (Metric Tonnes)
MS					
	2009	12.5	2.5	2.7	17.7
	2010	13.1	2.6	2.5	18.2
	2011	13.2	2.4	2.5	18.1
	2012	13.6	2.9	2.6	19.1
	2013	13.1	2.7	2.7	18.5

Country	Year	Fish landings by type						
		Swimcrabs	Marlins	Jacks and related species	Tuna and pelagics	Shark	Spiny Lobster	Shrimp
TT								
	2009	51.7	1,032	292	1,217.4	688.5	11.7	770
	2010	112.3	1,257	270	1,424.0	688.4	60.0	879
	2011	51.5	1,157	319	1,348.7	648.8	125.6	787
	2012	0.1	1,474	248	1,292.5	536.9	46.0	687
	2013	50.2	1,690	254	1,604.9	534.2	21.3	687

Country	Year	Fish landings by type						
		Squids	Perciformes	Clupeoids	Bonito	Mackerel	Wahoo	Total Quantity (Metric Tonnes)
TT								
	2009	547	2,190	41	68	2,499	5	9,412.99
	2010	4	2,365	5	69	2,035	5	9,173.77
	2011	1	2,121	16	14	1,647	7	8,241.93
	2012	0	1,992	1	9	1,181	9	7,475.68
	2013	0	2,565	1	16	1,235	9	8,667.49

CHAPTER 7: COASTAL AND MARINE RESOURCES

Table 7.2(b) cont'd Fish landings by type: 2009-2013

Country	Year	Fish landings by type						
		Snappers (Lutjanidae sp.)	Groupers (Serranidae sp.)	Jacks and related species	Tuna and pelagics	Shark	Other/ Misc.	Total Quantity (Metric Tonnes)
BM								
	2009	32.5	48.5	49.9	178.4	5.4	30.5	345.1
	2010	30.6	44.6	55.7	158.4	4.6	30.2	324.0
	2011	33.5	44.5	49.3	239.7	5.7	28.6	401.3
	2012	39.1	74.1	77.0	187.9	6.4	36.9	421.5
	2013	46.2	75.7	71.8	141.0	5.0	44.2	383.8

CHAPTER 7: COASTAL AND MARINE RESOURCES

Table 7.3 - Number of families and Population of coastal area: 2009-2013

Country	Year	Population in coastal areas	Number of families in coastal areas
BS			
	2010	**351,461**	**…**
	2011	**354,720**	**…**
	2012	**357,930**	**…**
	2013	**361,142**	**…**
BZ			
	2010	**89,214**	**26,522**
GY			
	2012	**666,261**	**…**
SR			
	2009	**395,022**	**…**
BM			
	2010	**64,237**	**26,923**
KY			
	2010	**55,036**	**…**

Concept and Definition

Population of coastal areas is the total population living within one hundred kilometres of the coastline. A country might also consider percentage of population in the low elevation coastal zone (<10 meters elevation) or percentage of population in river deltas. Please refer to http://www.un.org/esa/sustdev/natlinfo/indicators/methodology_sheets.pdf

A **coastal area** is the part of the land affected by its proximity to the sea, and that part of the sea affected by its proximity to the land as the extent to which man's land-based activities have a measurable influence on water chemistry and marine ecology. (Please refer to European Environment Agency's website at http://glossary.eea.europa.eu/ EEAGlossary /C/ coastal_ area.)

CHAPTER 7: COASTAL AND MARINE RESOURCES

DATA GAPS

Table 7.1 presents data for two indicators, the *Total Marine area* and *Protected Marine Area.* Data were reported by eleven (11) countries and data gaps exists for nine (9) countries for which no data was submitted. It should be noted that this data does not change frequently from year-to-year. Out of the nine reporting countries, four (4) countries reported data for one year only. There were also five (5) countries reporting data on one indicator only resulting in data gaps for reporting countries.

Fish Landings

Data for Table 7.2 were reported by nine (9) countries, however some countries reported on the total fish landings only. Eleven (11) countries submitted no data on *fish landings* whether in total or by type. *Fish landings by type* were submitted by six (6) countries and due to the wide variety of species data were placed in separate tables by country. For most countries reported data represents the major species landed rather than data for all species as this may be numerous.

Number of families and Population of coastal areas

Data submissions for the two indicators *Number of families in coastal areas and Population of coastal areas* contained much data gaps. It should be noted that this data was sourced from the 2000 and 2010 rounds of Population and Housing Census for most countries. Missing data exists for fourteen (14) countries that submitted no data for this table. All but one country that reported on the *Population of coastal areas* reported data for one year only while one country reported data for the period 2010-2013. Two (2) countries reported on the *Number of families in coastal areas* for the 2010 Census round only.

CHAPTER 7: COASTAL AND MARINE RESOURCES

1.7.1(a): Sources of Data for Table 7.1 - Total and Protected Marine Area: 2009-2013

Country	Notes
ANTIGUA AND BARBUDA	Earth Trends Environmental Information Senior Fisheries Officer, Fisheries Division Senior Environment Officer, Environment Division
THE BAHAMAS	Department of Environment
DOMINICA	Environment Statistics 2014
GUYANA	Fisheries Department, Ministry of Agriculture
HAITI	Centre National de l'Information Géo-Spatiale (CNIGS), Programme of Land-based Information for the Sustainable Development (PITDD) project
JAMAICA	Earth Trends, National Environment and Planning Agency
ST VINCENT AND THE GRENADINES	Statistical Office, 2010 Environmental Statistics Report
SURINAME	Forest service of Suriname, Division Nature Conservation
TRINIDAD AND TOBAGO	Institute of Marine Affairs
BERMUDA	Department of Planning
THE CAYMAN ISLANDS	Department of Environment, Cayman Islands Government

1.7.1(b): Notes for Table 7.1 - Total and Protected Marine Area: 2009-2013

Country	Notes
ANTIGUA AND BARBUDA	The Marine Reserves have both terrestrial and marine area as protected areas. Total Marine Area includes all areas up to the territorial sea limit (12 nautical miles).
THE CAYMAN ISLANDS	Department Areas of overlap between marine protected areas only counted once Area (ha.) of marine protected areas considered "no take" is 3134.66

CHAPTER 7: COASTAL AND MARINE RESOURCES

1.7.2(a) and (b): Sources of Data for Table 7.2 - Fish landings by type: 2009-2013

Country	Notes
THE BAHAMAS	Ministry of Fisheries
DOMINICA	Fisheries Division, Ministry of Agriculture
GUYANA	Fisheries Department, Ministry of Agriculture
SAINT LUCIA	Ministry of Agriculture
MONTSERRAT	Fisheries Unit
ST. VINCENT AND THE GRENADINES	Fisheries Department
SURINAME	Suriname Fisheries Services
TRINIDAD AND TOBAGO	Ministry of Agriculture, Land & Fisheries Division
BERMUDA	Department of Environmental Protection, Marine Resources Division

1.7.2(a) and (b): Notes for Table 7.2 - Fish landings by type: 2009-2013

Country	Notes
MONTSERRAT	No biological data is collected, only catch and effort The information represents the three main species of fish landed locally.
SURINAME	Data refers to fish catch
TRINIDAD AND TOBAGO	1. Landings data are collected from the Trinidad Artisanal Fleets, Semi-industrial/ Industrial Trawl & Longline Fleets, and Game Fishing Tournaments in Trinidad & Tobago. 2. Landings from foreign fleets that may have operated in Trinidad and Tobago waters are not included.
BERMUDA	Total catch include fish landings in addition to bait and lobster catches.

CHAPTER 7: COASTAL AND MARINE RESOURCES

1.7.3(a): Sources of Data for Table 7.3 - Number of families and Population of Coastal Areas: 2009-2013

Country	Notes
BAHAMAS	Department of Statistics, Population & Household Census
BELIZE	Statistical Institute of Belize, Population and Housing Censuses
GUYANA	Bureau of Statistics
SURINAME	Demographic data from the GBS
BERMUDA	Department of Statistics, Population and Housing Census
THE CAYMAN ISLANDS	Department of Environment, Cayman Islands Government

1.7.3(b): Notes for Table 7.3 - Number of families and Population of Coastal Areas: 2009-2013

Country	Notes
BERMUDA	2010 Does not include the non-sheltered and institutionalized population. Bermuda measures 1 mile at its widest point. Based on the standard definition of coastal area, the entire island will be considered coastal.