

# THE CARICOM ENVIRONMENT IN FIGURES 2014



Bahamas

Haiti

Jamaica

Antigua  
& Barbuda

St. Kitts  
& Nevis

Montserrat

Belize

Dominica

St. Lucia

St. Vincent  
& the Grenadines

Grenada

Trinidad  
& Tobago

Guyana

Suriname

**Caribbean Community Secretariat**  
Regional Statistics Programme

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# THE CARICOM ENVIRONMENT IN FIGURES 2014



**Caribbean Community Secretariat**  
Greater Georgetown, 2017

# PREFACE

This is the fourth edition of The CARICOM Environment in Figures that has been prepared by the Caribbean Community (CARICOM) Secretariat, Regional Statistics Programme. This report contains data up to 2014 where these are available and is based on data submitted by Member States and Associate Members, from the United Nations Statistics Division (UNSD) and from other regional and National Organisations including The Caribbean Tourism Organisation (CTO) and The Caribbean Public Health Agency (CARPHA) website. It reflects the capacity building efforts that were undertaken over the years, since the UNSD/CARICOM project, to develop Environment Statistics and to provide additional detailed data as required by analysts and trade negotiators.

Prior to the publication of this latest report, a series of capacity-building activities were undertaken in the Region with support from the Tenth European Development Fund (10<sup>th</sup> EDF) CARICOM Single Market and Economy (CSME) and Economic Integration Programme to strengthen capacity and address the data gaps in selected areas of Environment Statistics. The CARICOM Secretariat provided technical assistance to strengthen capacity and address data gaps in selected areas of Environment Statistics in Grenada, Montserrat, St. Kitts and Nevis, Barbados and St. Vincent and the Grenadines. Meetings were held with stakeholders within these countries to strengthening the inter-agency collaboration and available data was collected to fill data gaps where they exist. Further a regional workshop was held in 2014 with Environment Statistics focal points of member countries, the objectives of which included, training personnel from member countries on the concepts, definitions and methods on the core set of indicators that are to be produced and disseminated in the publication. This Workshop led to the formation of a Technical Working Group (TWG) in Environment Statistics which will assist in the development of Environment Statistics in the CARICOM Region through the development and implementation of a regional Environment Statistics Work plan that will address data gaps.

The CARICOM Environment in Figures 2014 report, like the previous reports, took considerable time to produce, from the design and submission of table formats to member countries; the monitoring of the submission of the information; the compilation of the statistics and indicators in tables and the submission to countries for review and amendments and the preparation of various drafts of the report. To date there have been four rounds of data collection activities aimed at compiling data on environment statistics for dissemination through the publication. An analysis of data submitted since the first round of data collection has revealed that there continues to be significant data gaps in most themes which are compiled by the CARICOM Secretariat as well as for the two themes – Waste and Water - that are compiled by the UNSD and shared with the CARICOM Secretariat. With the exception of Tourism, Housing and Natural Disasters it can be said that all of the other themes have data gaps across most of the member countries and these need to be addressed more systematically in countries.

The publication includes concepts and definitions, the tables and graphs of the various statistics and

# PREFACE

indicators. The publication focuses on twelve (12) themes which include: Population and Households, Tourism, Environmental Health, Natural Disasters, Energy and Minerals, Land Use and Agriculture, Coastal and Marine Resources, Biodiversity, Forest, Air, Waste and Water.

In view of the fact that Environment Statistics is a relatively new and emerging field of statistics, with a large number of data sources and institutions involved, and with a lack of benchmarks and standards, it is anticipated that the publication would help bring to the fore some of the problems that exist with these data; differences in national and other sources of data; data that exist within various organisations at the national level but are not available at the CARICOM Secretariat. The CARICOM Secretariat continues to encourage strengthening of inter-agency coordination to compile data and fill the gaps in Environment Statistics; this becomes even more important as we monitor progress towards the SDGs. Apart from the inter-agency collaboration there is need to perhaps have dedicated personnel wherever feasible in NSOs to enable concerted attention to this area of statistics, if these gaps are to be filled in CARICOM countries.

The 2030 Agenda for Sustainable Development which was agreed to by Heads of Government including those of the Caribbean Community (CARICOM) at the United Nations Sustainable Development Summit provides new opportunities and challenges to the collection and dissemination of Environment Statistics. This new framework for international cooperation to promote sustainable development between 2015 and 2030 is composed of 17 new Sustainable Development Goals (SDGs) and 169 Targets and 200+ Indicators to measure the achievement of the SDGs most of which are environmentally related. The CARICOM Secretariat has provided its **support to Member States and Associate Members** in the refinement of the SDG indicators at the global level and in the identification of a core set of SDG Indicators for CARICOM Small Island Developing States (SIDS) through the Technical Working Groups. Given that the data needs for the SDGs contain a large number of statistical indicators and require more disaggregated data the implications are that NSOs will require capacity-building and investment and related support from their respective Governments as well as International Development Partners to enable monitoring and compilation of these global indicators. This investment and support would also help in reducing the data gaps of indicators that are currently compiled. It also requires NSOs to work closely with data environmental agencies that produce data for administrative purposes in the course of their work. Efforts are also being made to create a DevInfo database adaptation for the dissemination of the core SDG indicators, *SDGInfo*, which is expected to comprise the core indicators including those in the Environment.

The CARICOM Secretariat therefore welcomes feedback on the data presented in this report. It is hoped that this publication could contribute to providing a picture of some aspects of the status of the environment as well as in improving the data collection and compilation efforts in the Region.

## ACKNOWLEDGEMENTS

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The CARICOM Secretariat would also like to express their appreciation to The United Nations Statistics Division and The Caribbean Tourism Organisation. The Secretariat looks forward to the continued support of these Organizations in the preparation of future editions of this report.

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# ABBREVIATIONS & ACRONYMS

CARICOM Caribbean Community

## **CARICOM Member States**

AG Antigua and Barbuda  
BS The Bahamas  
BB Barbados  
BZ Belize  
DM Dominica  
GD Grenada  
GY Guyana  
HT Haiti  
JM Jamaica  
MS Montserrat  
KN St. Kitts and Nevis  
LC Saint Lucia  
VC St. Vincent and the Grenadines  
SR Suriname  
TT Trinidad and Tobago

## **Associate Members**

AI Anguilla  
BM Bermuda  
KY The Cayman Islands  
TC Turks and Caicos Islands  
VG The British Virgin Islands

BOD Biochemical Oxygen Demand

BOE Barrels of Energy

CO<sub>2</sub> Carbon dioxide

CTO Caribbean Tourism Organisation

FAO Food and Agriculture Organization of the United Nations

# ABBREVIATIONS & ACRONYMS

FOB	Freight on Board
GIS	Geographic Information System
IEA	International Energy Agency
IPCC	Intergovernmental Panel on Climate Change
LPG	Liquefied Petroleum Gas
MDG	Millennium Development Goals
MPA	Marine Protected Area
mT	Metric Tonnes
OECD	Organisation for Economic Cooperation and Development
OECS	Organisation of Eastern Caribbean States
UNECLAC	United Nations Economic Commission for Latin America and the Caribbean
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNSD	United Nations Statistics Division
WC	Water Closet
WHO	World Health Organisation

# NOTES AND SYMBOLS

## NOTE

Unless otherwise stated, the charts refer to data shown in the accompanying table.

Blank cells refer to no data submitted

## SYMBOLS

- ... Data not available
- n/a Not applicable
- 0 Less than half of the unit specified
- Nil, magnitude zero

# CHAPTER 1: POPULATION AND HOUSEHOLDS



The variables examined in this chapter can be used to diagnose housing conditions in the CARICOM region. These are type of dwelling, type of tenure, type of material used for roofing, type of materials of outer walls, number of bedrooms and size of household. The effects of poor housing conditions have been widely researched and evidence has indicated that squatter settlements are associated with environmental degradation which is regarded as the process of reducing the quality of the environment.



Besides being used to diagnose housing conditions these indicators are also used to measure the impact that changes in both the number and the size of households would have on the environment in terms of land use, energy and water consumption, and waste disposal. Issues such as overcrowding and the sturdiness of the dwelling which are highlighted in indicators such as the size of household and type of materials of outer walls can give an indication of the impact of the state of the environment on human condition.



While households impact the environment negatively by consuming large amounts of natural resources, housing itself is exposed to a variety of environmental impacts and natural hazard. Given these outcomes, countries in the region have embarked on programmes to upgrade squatter settlements and increase access to improved housing through enabling conditions.

It should be noted that data on housing conditions were primarily sourced from the 2000 and 2010 rounds of censuses. As a result countries have only two data points. Other data sources may include household surveys such as the Survey of Living Conditions, the Household Budget Survey and the Core Welfare Indicators Survey.

# CHAPTER 1: POPULATION AND HOUSEHOLDS

Table 1.1 (a) Number of Households by Type of Dwelling: 2000 and 2010 Round of Censuses

Country	Year	Undivided Private House	Part of a Private House	Flat/ Apartment / Condominium	Townhouse	Double house/ duplex	Combined business & dwelling	Barracks	Other	Not stated	Total
AG	2001	18,198	684	1,078	...	185	229	17	59		20,450
	2011	25,326	798	2,560	57	434	403	n/a	635		30,213
BS	2000	54,226	1,389	14,597	...	17,306	...	...	224		87,742
	2010	58,970	2,124	9,067	1,989	28,569	1,837	...	202		102,758
BB	2000	73,031	...	9,319	...	...	486	122	68		83,026
	2010	78,802	...	13,467	914	...	269	70	381	270	94,173
BZ	2000	43,490	2,735	1,412	...	2,041	1,375	650	242		51,945
	2010	65,426	4,555	4,233	239	1,031	2,260	1,285	358	104	79,491
DM	2001	18,036	2,255	1,066	20	484	377	57	64		22,359
GD	2001	30,219	1,802	507	58	109	674	27	81		33,477
GY	2002	129,648	25,950	13,582	1,474	5,317	4,259	446	1,393	540	182,609
JM	2001	607,903	...	125,878	...	...	5,115	...	9,430		748,326
	2011*	642,650	...	53,753	...	...	4,518	...	5,446	4,964	711,331
MS	2001	1,814	113	93	0	181	23	0	105		2,329
	2011	1,697	32	367	0	173	62	0	4		2,335
KN	2001	12,457	1,556	906	14	169	310	164	104		15,680
LC	2001	37,746	4,383	2,922	236	236	942	188	471		47,124
	2010	47,352	4,430	5,198	134	432	750	122	502		58,920
VC	2001	26,056	2,945	673	9	30	456	264	125	0	30,558
	2012	31,286	2,339	1,938	136	494	493	10	100	33	36,829
SR	2004	103,221	...	...	...	7,122	...	...	6,842	2,972	120,157
	2012	113,512	...	...	...	5,669	...	...	11,969	3,179	134,329
TT	2000	235,000	2,968	41,234	2,043	11,585	3,925	448	6,043	625	303,871
	2011	307,708	2,358	56,716	5,011	19,233	4,244	278	5,156	678	401,382
<b>ASSOCIATE MEMBERS</b>											
AI	2001	2,710	192	571	...	125	125	...	7		3,730
	2011	3,037	217	966	...	594	112	...	9		4,935
BM	2000	6,717	...	17,655	...	...	306	...	470		25,148
	2010	6,280	...	18,533	...	...	281	...	723	1,106	26,923
KY	2010	9,282	574	6,309	2,895	1,377	91	n/a	2,228	4	22,760
VG	2001	2,578	1,083	4,298	35	31	175	48	138		8,386
TC	2001	3,486	61	2,699	102	220	...	424	262		7,254

# CHAPTER 1: POPULATION AND HOUSEHOLDS

Table 1.1 (b) Percentage Distribution of Households by Type of Dwelling: 2000 and 2010 Round of Censuses

Country	Year	Undivided Private House	Part of a Private House	Flat/ Apartment / Condominium	Townhouse	Double house/ duplex	Combined business & dwelling	Barracks	Other	Not stated	Total
AG	2001	89.0	3.3	5.3	...	0.9	1.1	0.1	0.3		100.0
	2011	83.8	2.6	8.5	0.2	1.4	1.3	n/a	2.1		100.0
BS	2000	61.8	1.6	16.6	...	19.7	...	...	0.3		100.0
	2010	57.4	2.1	8.8	1.9	27.8	1.8	...	0.2		100.0
BB	2000	88.0	...	11.2	...	...	0.6	0.1	0.1		100.0
	2010	83.7	...	14.3	1.0	...	0.3	0.1	0.4	0.3	100.0
BZ	2000	83.7	5.3	2.7	...	3.9	2.6	1.3	0.5		100.0
	2010	82.3	5.7	5.3	0.3	1.3	2.8	1.6	0.5	0.1	100.0
DM	2001	80.7	10.1	4.8	0.1	2.2	1.7	0.3	0.3		100.0
GD	2001	90.3	5.4	1.5	0.2	0.3	2.0	0.1	0.2		100.0
GY	2002	71.0	14.2	7.4	0.8	2.9	2.3	0.2	0.8	0.3	100.0
JM	2001	81.2	...	16.8	...	...	0.7	...	1.3	...	100.0
	2011*	90.3	...	7.6	...	...	0.6	...	0.8	0.7	100.0
MS	2001	77.9	4.9	4.0	0.0	7.8	1.0	0.0	4.5		100.0
	2011	72.7	1.4	15.7	0.0	7.4	2.7	0.0	0.2		100.0
KN	2001	79.4	9.9	5.8	0.1	1.1	2.0	1.0	0.7		100.0
LC	2001	80.1	9.3	6.2	0.5	0.5	2.0	0.4	1.0		100.0
	2010	80.4	7.5	8.8	0.2	0.7	1.3	0.2	0.9		100.0
VC	2001	85.3	9.6	2.2	0.0	0.1	1.5	0.9	0.4	0.0	100.0
	2012	84.9	6.4	5.3	0.4	1.3	1.3	0.0	0.3	0.1	100.0
SR	2004	85.9	...	...	...	5.9	...	...	5.7	2.5	100.0
	2012	84.5	...	...	...	4.2	...	...	8.9	2.4	100.0
TT	2000	77.3	1.0	13.6	0.7	3.8	1.3	0.1	2.0	0.2	100.0
	2011	76.7	0.6	14.1	1.2	4.8	1.1	0.1	1.3	0.2	100.0
<b>ASSOCIATE MEMBERS</b>											
AI	2001	72.7	5.1	15.3	...	3.4	3.4	...	0.2		100.0
	2011	61.5	4.4	19.6	...	12.0	2.3	...	0.2		100.0
BM	2000	26.7	...	70.2	...	...	1.2	...	1.9		100.0
	2010	23.3	...	68.8	...	...	1.0	...	2.7	4.1	100.0
KY	2010	40.8	2.5	27.7	12.7	6.1	0.4	n/a	9.8	0.0	100.0
VG	2001	30.7	12.9	51.3	0.4	0.4	2.1	0.6	1.6		100.0
TC	2001	48.1	0.8	37.2	1.4	3.0	...	5.8	3.6		100.0

# CHAPTER 1: POPULATION AND HOUSEHOLDS

## Types of Dwelling - Definitions

**An Undivided Private House** is a single dwelling unit, which takes up the whole building. It may be occupied by one or more households.

**Part of a Private House** occurs when a household occupies only a part of a private house in what may be described as a physical subdivision or separation, even if entrance and exit is shared or not shared.

**Flat/Apartment/Condominium** are self-contained private dwellings in a single or multi-storied building. Each such dwelling must have separate access to the street, either through direct access or a communal staircase, passage, veranda or corridor, etc. The rooms in this type of dwelling are usually side-by-side on the same floor.

**Townhouse** This type of dwelling is similar to a flat, apartment or condominium except that the rooms are usually on two floors – living quarters on the ground floor and bedrooms above. This is a self-contained unit (usually in blocks of units) with separate legal title to ownership.

**Double house/duplex** This is a dwelling that is joined to only one other dwelling – separated by a wall extending from ground to roof. There must be no other dwellings either above or below and the double house or duplex must be separated from all other structures by open space.

**Combined business and dwelling** In this type of dwelling, the household occupies part of the building for living purposes. The other portion(s) of the building is used for business such as groceries, garages, etc.

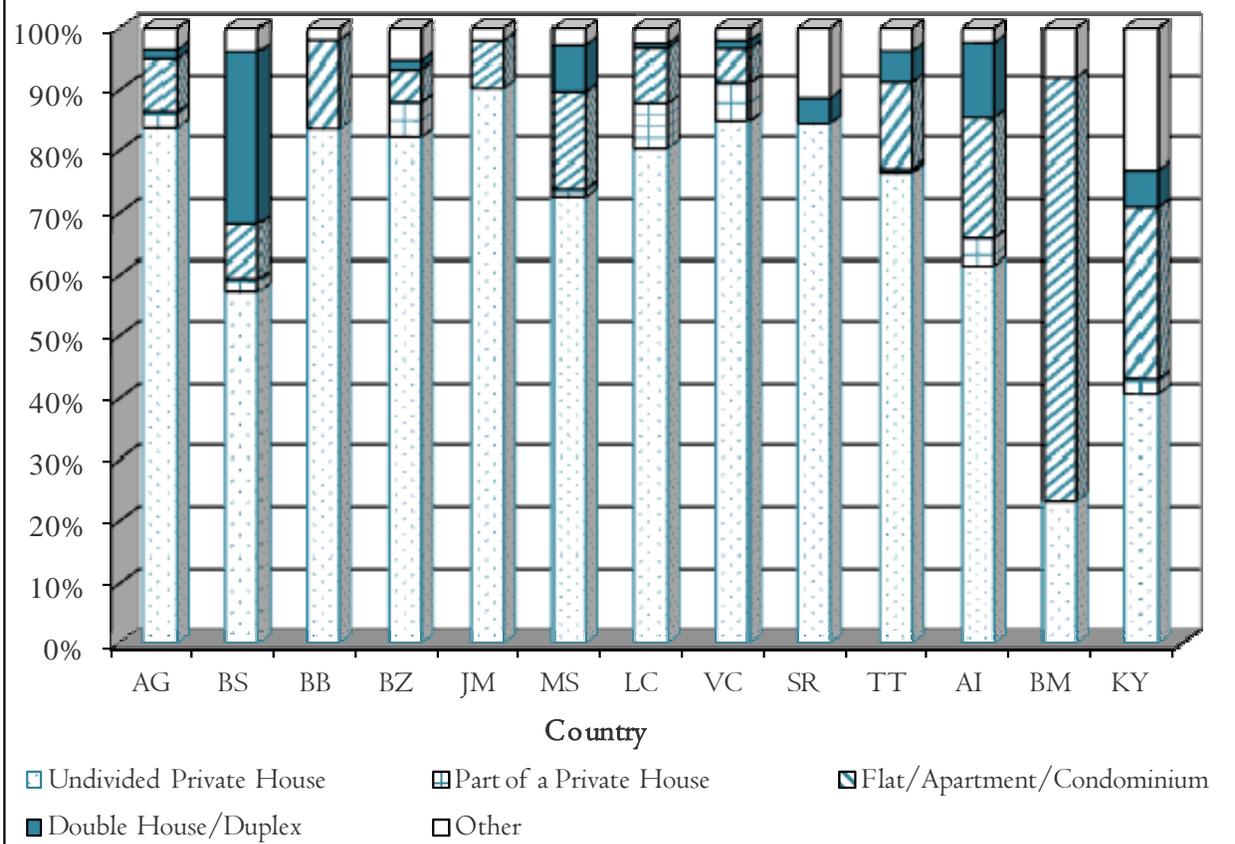
**Barracks** This is a room or division of a long building containing several independent private dwellings with or without shared facilities.

**Other** This category is used for dwellings which do not fit into any of the categories listed above.

*(Extracted from the Model Enumerator's Manual of the CARICOM Common Census Questionnaires of the 2010 Population and Housing Census, CARICOM Secretariat)*

# CHAPTER 1: POPULATION AND HOUSEHOLDS

CHART 1.1.1: PERCENTAGE DISTRIBUTION OF HOUSEHOLDS BY TYPE OF DWELLING AND SELECTED MEMBER COUNTRIES: 2010 ROUND OF CENSUS



Other includes Townhouse, Combined Business & Dwelling, Barracks, Other and Not Stated

# CHAPTER 1: POPULATION AND HOUSEHOLDS

Table 1.2 (a) Number of Households by Type of Tenure: 2000 and 2010 Round of Censuses

Country	Year	Owned	Squatted	Rented-Private/ Government	Leased	Rent-Free	Other	Don't Know/Not	Total
AG	2001	12,895		6,707		562	286		20,450
	2011	17,657	18	9,018	73	861	95	2,491	30,213
BS	2000	48,660		32,126		6,738	218		87,742
	2010	60,543		35,844	444	5,665	262		102,758
BB	2000	61,904		18,286		2,203	633		83,026
	2010*	58,952		16,316		3,156	382	130	78,936
BZ	2000	32,519		12,490		6,353	583		51,945
	2010	51,066		17,734	1,393	8,795	273	230	79,491
DM	2001	15,918	145	4,232		1,880	184		22,359
	2011	17,601	213	5,358	37	1,515	227	122	25,073
GD	2001	27,383	142	3,737	42	1,630	543		33,477
GY	2002	116,497	4,218	26,977	965	31,797	386	1,769	182,609
JM	2001	426,445		173,860		118,454	29,567		748,326
	2011	534,353	8,823	176,871	15,069	136,835	1,149	7,989	881,089
MS	2001	849	11	1,046	16	268	90	49	2,329
	2011	1,226	10	910		186	3		2,335
KN	2001	9,677	101	4,215	13	1,161	129	384	15,680
LC	2001	35,202		8,529		2,545	848		47,124
	2010	43,763		10,894		3,118	1,145		58,920
VC	2001	23,130	133	3,940	27	2,756	572		30,558
	2012	28,987	203	4,244	40	3,083	272		36,829
SR	2004	78,748		18,321	794	3,528	15,373	3,393	120,157
	2012	90,985	622	19,484	1,081	7,570	11,428	3,159	134,329
TT	2000	230,291	1,454	46,145	1,752	20,994	1,391	1,844	303,871
	2011	315,470	3,010	61,678	1,930	17,262	2,033		401,382
<b>ASSOCIATE MEMBERS</b>									
AI	2001	2,504		1,120		85	21		3,730
	2011	2,909		1,746		230	34	16	4,935
BM	2000	10,863		12,854		1,006	425		25,148
	2010	12,238		11,719		1,004	856	1,106	26,923
KY	1999	6,663		7,265		836	53	90	14,907
	2010	10,702		11,224		702	63	69	22,760
VG	2001	2,944	2	4,879	15	386	57	103	8,386
TC	2001	2,583	7	4,178	13	464	9		7,254

# CHAPTER 1: POPULATION AND HOUSEHOLDS

Table 1.2 (b) Percentage Distribution of Households by Type of Tenure: 2000 and 2010 Round of Censuses

Country	Year	Owned	Squatted	Rented-Private/ Government	Leased	Rent-Free	Other	Don't Know/Not	Total
AG	2001	63.1		32.8		2.7	1.4		100.0
	2011	58.4	0.1	29.8	0.2	2.8	0.3	8.2	100.0
BS	2000	55.5		36.6		7.7	0.2		100.0
	2010	58.9		34.9	0.4	5.5	0.3		100.0
BB	2000	74.6		22.0		2.7	0.8		100.0
	2010*	74.7		20.7		4.0	0.5	0.2	100.0
BZ	2000	62.6		24.0		12.2	1.1		100.0
	2010	64.2		22.3	1.8	11.1	0.3	0.3	100.0
DM	2001	71.2	0.6	18.9		8.4	0.8		100.0
	2011	70.2	0.8	21.4	0.1	6.0	0.9	0.5	100.0
GD	2001	81.8	0.4	11.2	0.1	4.9	1.6		100.0
	2005	82.7		10.9		5.8	0.6		100.0
GY	2002	63.8	2.3	14.8	0.5	17.4	0.2	1.0	100.0
JM	2001	57.0		23.2		15.8	4.0		100.0
	2011	60.6	1.0	20.1	1.7	15.5	0.1	0.9	100.0
MS	2001	36.5	0.5	44.9	0.7	11.5	3.9	2.1	100.0
	2011	52.5	0.4	39.0	0.0	8.0	0.1	0.0	100.0
KN	2001	61.7	0.6	26.9	0.1	7.4	0.8	2.4	100.0
LC	2001	74.7		18.1		5.4	1.8		100.0
	2010	74.3		18.5		5.3	1.9		100.0
VC	2001	75.7	0.4	12.9	0.1	9.0	1.9	0.0	100.0
	2012	78.7	0.6	11.5	0.1	8.4	0.7	0.0	100.0
SR	2004	65.5		15.2	0.7	2.9	12.8	2.8	100.0
	2012	67.7	0.5	14.5	0.8	5.6	8.5	2.4	100.0
TT	2000	75.8	0.5	15.2	0.6	6.9	0.5	0.6	100.0
	2011	78.6	0.7	15.4	0.5	4.3	0.5	0.0	100.0
<b>ASSOCIATE MEMBERS</b>									
AI	2001	67.1		30.0		2.3	0.6		100.0
	2011	58.9		35.4		4.7	0.7	0.3	100.0
BM	2000	43.2		51.1		4.0	1.7		100.0
	2010	45.5		43.5		3.7	3.2	4.1	100.0
KY	1999	44.7		48.7		5.6	0.4	0.6	100.0
	2010	47.0		49.3		3.1	0.3	0.3	100.0
VG	2001	35.1	0.0	58.2	0.2	4.6	0.7	1.2	100.0
TC	2001	35.6	0.1	57.6	0.2	6.4	0.1		100.0

# CHAPTER 1: POPULATION AND HOUSEHOLDS

## Types of Tenure - Definitions

**Owned:** The category applies when the head or **any other member** of the household owns the dwelling outright or is in the process of buying the dwelling.

**Squatted** This applies when the household is found occupying a dwelling unit without the permission of the owner or without any legal rights to the property.

**Rented – Private/Government** This applies when a member of the household rents the dwelling from an individual or a private company or from the Government or a Government Agency.

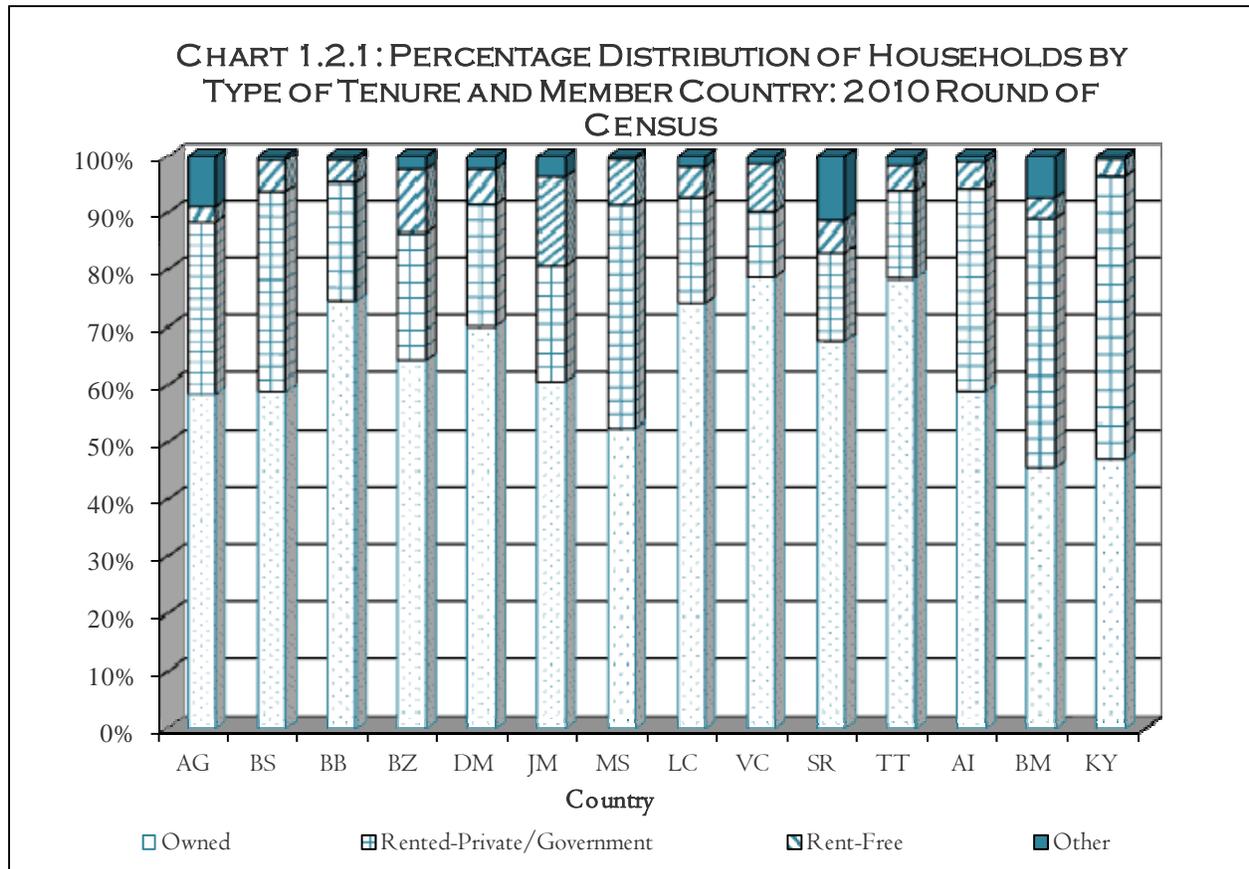
**Leased** A lease differs from a rental since it occurs by agreed contract that stipulates, in advance, the total rental sum for a fixed duration. This total sum may be paid in advance or by installments.

**Rent-free** occurs when no member of the household pays rent for the occupancy of the dwelling. This situation may apply to households occupying dwellings rent free, which are owned by relatives or even friends who are not members of the household. Other rent-free arrangements include government and private employees who occupy dwellings owned by their employers and pay no rent.

**Other** When conditions of occupancy are different from all the categories stated above.

*(Extracted from the Model Enumerator's Manual of the CARICOM Common Census Questionnaires of the 2010 Population and Housing Census, CARICOM Secretariat)*

# CHAPTER 1: POPULATION AND HOUSEHOLDS



Other includes Double House/Duplex, Combined Business & Dwelling, Barracks, Other and Not Stated

# CHAPTER 1: POPULATION AND HOUSEHOLDS

Table 1.3 (a) Number of Households by Type of Materials of Outer Walls: 2000 and 2010 Round of Censuses

Country	Year	Wood	Concrete	Wood & Concrete	Stone	Brick/Concrete block	Adobe	Wood/Concrete block/Galvanize/Stucco	Make-shift	Other	Not stated/Don't Know	Total
AG	2001	9,023	6,747	4,434	37	25	...	...	...	184		20,450
	2011	12,548	70	5,295	63	11,898	...	...	15	324		30,213
BS	2000	13,375	66,710	2,537	1,772	65	2,952	...	...	331		87,742
	2010	12,837	81,304	3,164	2,185	634	337	2,142	...	155		102,758
BB	2000	22,358	1,554	1,797	1,518	36,819	...	18,842	...	138		83,026
	2010	17,365	4,524	5,991	2,645	47,781	...	15,538	...	205	124	94,173
BZ	2000	22,923	20,924	2,231	...	29	...	...	33	5,805		51,945
	2010	30,532	40,170	2,225	...	204	...	2,605	228	3,375	153	79,492
DM	2001	8,026	10,754	3,300	29	19	1	...	185	45		22,359
GD	2001	13,762	13,696	5,851	22	36	0	...	110	...		33,477
GY	2002	112,557	27,067	34,666	510	761	3,325	...	51	3,477	195	182,609
JM	2001	140,309	515,013	56,764	5,431	11,815	2,823	4,102	...	12,069		748,326
	2011*	128,711	499,659	59,595	3,605	7,381	...	2,839	...	3,277	6,264	711,331
MS	2001	591	1,286	217	0	3	...	...	1	228	3	2,329
	2011	362	175	...	...	1,657	...	11	...	130		2,335
KN	2001	2,890	10,349	2,134	53	3	...	...	75	176		15,680
LC	2001	18,802	19,321	8,247	47	141	94	...	0	472		47,124
	2010	18,567	30,069	9,528	37	32	1	...	80	607		58,921
VC	2001	5,872	21,886	2,339	95	17	91	...	207	51		30,558
	2012	3,619	28,772	2,473	337	533	36	907	...	119	31	36,829
SR	2012	40,736	1,187	2,496	...	59,914	...	27,998	...	907	1,091	134,329
TT	2000	36,292	...	54,936	...	203,505	1,279	6,013	...	686	1,160	303,871
	2011	46,732	...	36,548	114	310,701	880	4,801	...	1,273	332	401,382
<b>ASSOCIATE MEMBERS</b>												
AI	2001	101	3,482	98	20	...	...	...	...	29		3,730
	2011	82	4,735	91	14	1	...	...	2	4	6	4,935
BM	2010	5				26,918						26,923
VG	2001	732	6,947	509	12	5	...	...	36	145		8,386
TC	2001	1,909	3,990	819	68	...	...	367	8	93		7,254

# CHAPTER 1: POPULATION AND HOUSEHOLDS

Table 1.3 (b) Percentage Distribution of Households by Type of Materials of Outer Walls: 2000 and 2010 Round of Censuses

Country	Year	Wood	Concrete	Wood & Concrete	Stone	Brick/Concrete block	Adobe	Wood/Concrete block/Galvanize	Make-shift	Other	Not stated/Don't Know	Total
AG	2001	44.1	33.0	21.7	0.2	0.1	...	...	...	0.9		100.0
	2011	41.5	0.2	17.5	0.2	39.4	...	...	0.0	1.1		100.0
BS	2000	15.2	76.0	2.9	2.0	0.1	3.4	...	...	0.4		100.0
	2010	12.5	79.1	3.1	2.1	0.6	0.3	2.1	...	0.2		100.0
BB	2000	26.9	1.9	2.2	1.8	44.3		22.7	...	0.2		100.0
	2010	18.4	4.8	6.4	2.8	50.7		16.5	...	0.2	0.1	100.0
BZ	2000	44.1	40.3	4.3	...	0.1	...		0.1	11.2		100.0
	2010	38.4	50.5	2.8	...	0.3	...	3.3	0.3	4.2	0.2	100.0
DM	2001	35.9	48.1	14.8	0.1	0.1	0.0	...	0.8	0.2		100.0
GD	2001	41.1	40.9	17.5	0.1	0.1	0.0	...	0.3			100.0
GY	2002	61.6	14.8	19.0	0.3	0.4	1.8	...	0.0	1.9	0.1	100.0
JM	2001	18.7	68.8	7.6	0.7	1.6	0.4	0.5	...	1.6		100.0
	2011*	18.1	70.2	8.4	0.5	1.0	0.0	0.4	...	0.5	0.9	100.0
MS	2001	25.4	55.2	9.3	0.0	0.1	0.0	...	0.0	9.8	0.1	100.0
	2011	15.5	0.0	7.5	0.0	71.0	0.0	0.5	0.0	5.6	0.0	100.0
KN	2001	18.4	66.0	13.6	0.3	0.0	...	...	0.5	1.1		100.0
LC	2001	39.9	41.0	17.5	0.1	0.3	0.2	...	0.0	1.0		100.0
	2010	31.5	51.0	16.2	0.1	0.1	0.0	...	0.1	1.0		100.0
VC	2001	19.2	71.6	7.7	0.3	0.1	0.3	...	0.7	0.2		100.0
	2012	9.8	78.1	6.7	0.9	1.4	0.1	2.5	0.0	0.3	0.1	100.0
SR	2012	30.3	0.9	1.9	0.0	44.6	0.0	20.8	0.0	0.7	0.8	100.0
TT	2000	11.9	...	18.1	...	67.0	0.4	2.0	...	0.2	0.4	100.0
	2011	11.6	...	9.1	0.0	77.4	0.2	1.2	...	0.3	0.1	100.0
<b>ASSOCIATE MEMBERS</b>												
AI	2001	2.7	93.4	2.6	0.5	...	...	...	...	0.8		100.0
	2011	1.7	95.9	1.8	0.3	0.0	...	...	0.0	0.1	0.1	100.0
BM	2010	0.0				100.0						100.0
VG	2001	8.7	82.8	6.1	0.1	0.1	...	...	0.4	1.7		100.0
TC	2001	26.3	55.0	11.3	0.9	...	...	5.1	0.1	1.3		100.0

# CHAPTER 1: POPULATION AND HOUSEHOLDS

## Households by Type of Materials of Outer Walls

### Concept and Definition

The number of households by type of materials of outer walls refers to the construction material of external (outer) walls of the building in which the sets of living quarters are located. If the walls are constructed of more than one type of material, the predominant type of material should be reported. The types distinguished (brick, concrete, wood, adobe and so on) will depend upon the materials most frequently used in the country concerned and on their significance from the point of view of permanency of construction or assessment of durability. *(Please refer to the United Nations Principles and Recommendations for Population and Housing Censuses, Revision 2 (2008) para. 5.525)*

### Types of Materials

**Wood:** This is applicable where major portion of the outside walls is of wood, wood boards, plywood, etc

**Concrete:** This is applicable if the major portion of the outside walls is of poured concrete.

**Wood & Concrete:** if the major portions of the outside walls are of wood, wood boards, plywood, etc. *and* approximately equally of poured concrete .

**Stone:** This applies to buildings where the major portion of the outside walls is of stones, either cut or in their natural state.

**Brick/Concrete Block:** This applies to buildings where the major portion of the outside walls is of concrete blocks. The walls may be covered with plaster cement.

**Adobe** is unburnt sun-dried bricks or the clay from which such bricks are made.

**Wood/Concrete Block/Galvanize/Stucco:** This applies where the walls are made of wood, concrete block, galvanize and Stucco.

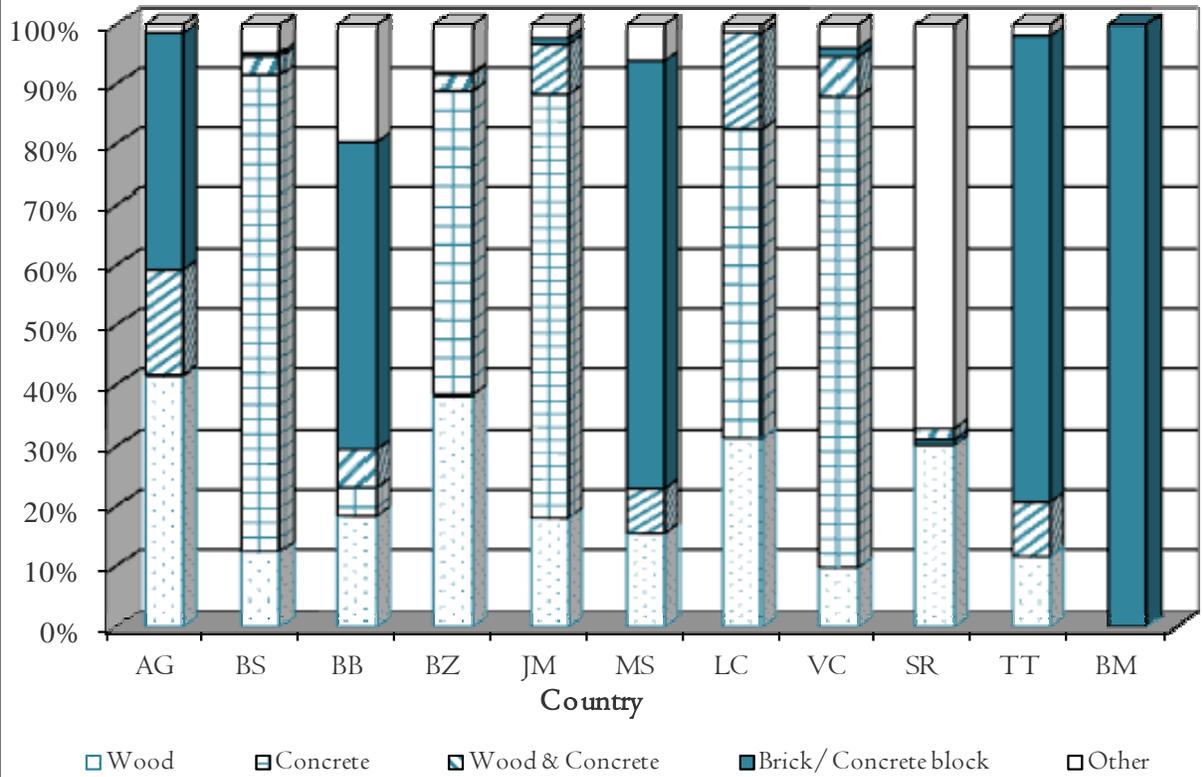
**Makeshift** includes any material that is not normally used for housing e.g. galvanize, cardboard, etc. Some persons may use an old car/truck, for example, to provide shelter or live under a bridge or other unconventional dwelling structure.

**Other:** This includes types of material of construction of outer walls not previously described.

*(Extracted from the Model Enumerator's Manual of the CARICOM Common Census Questionnaires of the 2010 Population and Housing Census, CARICOM Secretariat)*

# CHAPTER 1: POPULATION AND HOUSEHOLDS

CHART 1.3.1: PERCENTAGE DISTRIBUTION OF HOUSEHOLDS BY TYPE OF MATERIAL OF OUTER WALLS AND MEMBER COUNTRY: 2010 ROUND OF CENSUS



Other includes Stone, Adobe, Wood/ Concrete block/ Galvanize/ Stucco, Make-shift, Other and Not stated/Don't Know

# CHAPTER 1: POPULATION AND HOUSEHOLDS

Table 1.4 (a) Number of Households by Type of Material used for Roofing: 2000 and 2010 Round of Censuses

Country	Year	Sheet metal (Zinc)	Shingle - Asphalt	Shingle - Wood	Shingle - other	Tile	Concrete	Make-shift	Thatched/ Troole Palm	Other	Dont Know / Not Stated	Total
AG	2001	18,849	826	124	75	108	232	...	...	236		20,450
	2011	26,939	1,040	276	844	108	794	24	...	188		30,213
BS	2010	5,905	87,290	4,302	...	3,090	1,109	...	...	1,062		102,758
BB	2000	73,539	4,997	464	...	1,124	1,121	...	...	1,781		83,026
	2010	85,513	2,992	938	...	1,246	1,763	...	...	942	779	94,173
BZ	2000	41,657	...	...	204	...	4,250	...	3,991	1,737	106	51,945
	2010	64,381	651	264	0	192	9,960	46	3,110	708	180	79,492
DM	2001	20,097	554	84	40	25	1,468	10	...	81		22,359
GD	2001	32,278	578	116	85	135	235	12	...	38		33,477
GY	2002	164,873	1,104	1,755	1,839	1,953	325	2,522	7,014	1,199	25	182,609
JM	2001	583,434	...	10,054	7,902	2,626	128,535	...	...	15,775		748,326
MS	2001	1,297	594	64	6	0	299	0	...	63	6	2,329
	2011	821	546	153	7	0	804	1	...	3		2,335
KN	2001	10,818	3,400	201	40	40	928	14	...	80	159	15,680
LC	2001	44,155	1,272	188	47	47	895	47	...	473		47,124
	2010	55,541	688	219	46	74	1,661	11	...	681		58,921
VC	2001	27,440	983	152	68	70	1,567	31	...	194	53	30,558
	2012	33,452	325	79	36	42	2,688	5	...	201		36,829
SR	2012	127,782	...	624	...	961	181	...	...	2,457	2,324	134,329
TT	2011	374,032	2,409	4,456	...	679	17,630	24	...	1,452	701	401,382
ASSOCIATE MEMBERS												
AI	2001	2,710	192	571	...	125	125	...	...	7	0	3,730
BM	2010						26,923					26,923
VG	2001	3,928	182	319	23	53	3,600	1	...	258	22	8,386
TC	2001	1,875	3,830	740	282	198	284	45	...	0		7,254

## Types of Materials - Concept and Definitions

The type of material used for roofing refers to the construction material of the roof.

**Sheet metal (zinc, aluminum, galvanized):** the major portion of the roof is of metal such as zinc, steel, tin, etc

**Shingle (asphalt):** the major portion of the roof is of metal such as zinc, steel, tin, etc

**Shingle (wood):** the major portion of the roof is of wood, wood boards, plywood, etc

**Shingle – other:** This includes any other type of shingle.

**Tile:** the major portion of the roof is of tile.

**Concrete:** the major portion of the roof is of poured concrete.

# CHAPTER 1: POPULATION AND HOUSEHOLDS

Table 1.4 (b) Percentage Distribution of Households by Type of Material used for Roofing: 2000 and 2010 Round of Censuses

Country	Year	Sheet metal (Zinc)	Shingle - Asphalt	Shingle - Wood	Shingle - other	Tile	Concrete	Make-shift	Thatched/Troole Palm	Other	Dont Know / Not	Total
AG	2001	92.2	4.0	0.6	0.4	0.5	1.1	...	...	1.2		100.0
	2011	89.2	3.4	0.9	2.8	0.4	2.6	0.1	...	0.6		100.0
BS	2010	5.7	84.9	4.2	...	3.0	1.1	...	...	1.0		100.0
BB	2000	88.6	6.0	0.6	...	1.4	1.4	...	...	2.1		100.0
	2010	90.8	3.2	1.0	...	1.3	1.9	...	...	1.0	0.8	100.0
BZ	2000	80.2	...	...	0.4	...	8.2	...	7.7	3.3	0.2	100.0
	2010	81.0	0.8	0.3	0.0	0.2	12.5	0.1	3.9	0.9	0.2	100.0
DM	2001	89.9	2.5	0.4	0.2	0.1	6.6	0.0	...	0.4		100.0
GD	2001	96.4	1.7	0.3	0.3	0.4	0.7	0.0	...	0.1		100.0
GY	2002	90.3	0.6	1.0	1.0	1.1	0.2	1.4	3.8	0.7	0.0	100.0
JM	2001	78.0	...	1.3	1.1	0.4	17.2	...	...	2.1		100.0
MS	2001	55.7	25.5	2.7	0.3	0.0	12.8	0.0	...	2.7	0.3	100.0
	2011	35.2	23.4	6.6	0.3	0.0	34.4	0.0	...	0.1	0.0	100.0
KN	2001	69.0	21.7	1.3	0.3	0.3	5.9	0.1	...	0.5	1.0	100.0
LC	2001	93.7	2.7	0.4	0.1	0.1	1.9	0.1	...	1.0		100.0
	2010	94.3	1.2	0.4	0.1	0.1	2.8	0.0	...	1.2		100.0
VC	2001	89.8	3.2	0.5	0.2	0.2	5.1	0.1	...	0.6	0.2	100.0
	2012	90.8	0.9	0.2	0.1	0.1	7.3	0.0	...	0.5	0.0	100.0
SR	2012	95.1	0.0	0.5	...	0.7	0.1	0.0	...	1.8	1.7	100.0
TT	2011	93.2	0.6	1.1	...	0.2	4.4	0.0	...	0.4	0.2	100.0
ASSOCIATE MEMBERS												
AI	2001	72.7	5.1	15.3	0.0	3.4	3.4	0.0	...	0.2	0.0	100.0
BM	2010						100.0					100.0
VG	2001	46.8	2.2	3.8	0.3	0.6	42.9	0.0	...	3.1	0.3	100.0
TC	2001	25.8	52.8	10.2	3.9	2.7	3.9	0.6	...	0.0		100.0

## Types of Materials (cont'd)

**Thatch/Troole Palm:** the major portion of the roof is of palm or pandanus thatch, palm leaves, straw, etc.

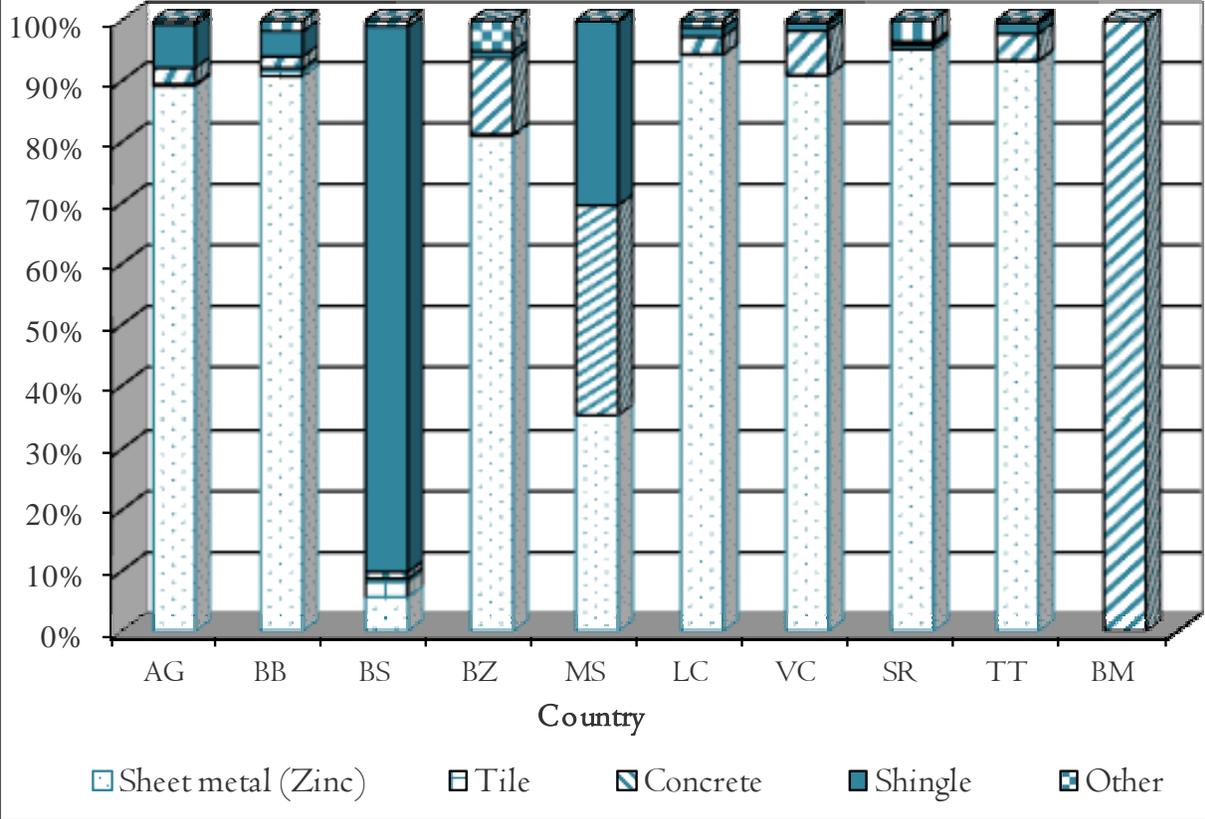
**Makeshift** refers to cases of any unconventional material such as cardboard, the roofs of cars, flattened metal drums, discarded sheets of metal etc.

**Other:** Any other material used not mentioned above.

*(Please refer to the Enumerator's Manual of the CARICOM Common Census Questionnaires of the 2010 Population and Housing Census)*

# CHAPTER 1: POPULATION AND HOUSEHOLDS

CHART 1.4.1: PERCENTAGE DISTRIBUTION OF HOUSEHOLDS BY MATERIALS USED FOR ROOFING AND SELECTED MEMBER COUNTRY: 2010 ROUND OF CENSUS



# CHAPTER 1: POPULATION AND HOUSEHOLDS

Table 1.5(a) - Households by Number of Bed Rooms: 2000 and 2010 Round of Censuses

Country	Year	No bedroom	One bedroom	Two bedrooms	Three bedrooms	More than three bedrooms	Not Stated/ Don't Know	Total	Average number of bedrooms per household	Average size of the household	Average number of persons per bedroom
AG	2001	163	3,029	7,750	7,121	2,357	30	20,450	...	...	...
	2011	...	4,878	11,866	9,930	3,539	0	30,213	2.4	2.8	1.1
BS	2000	...	5,525	12,188	23,109	46,920	...	87,742	...	...	...
	2010	5,161	13,591	34,666	34,849	14,491	...	102,758	3	3.4	1.3
BB	2000	...	9,300	24,998	39,929	8,799	...	83,026	...	3.2	...
	2010*	1,101	4,733	22,655	39,138	11,309	...	78,936	...	...	...
BZ	2000	2,451	12,223	18,969	12,920	5,382	0	51,945	...	4.5	...
	2010	280	21,633	27,941	21,049	8,379	207	79,491	...	...	...
DM	2001	...	1,233	5,396	6,150	9,580	...	22,359	...	3.1	...
GD	2001	1,069	5,448	14,526	9,687	2,747	...	33,477	2.0	3.3	1.7
GY	2002	...	54,033	68,600	46,291	13,685	...	182,609	...	...	...
JM	2001	...	266,843	262,486	132,374	86,623	...	748,326	2.1	3.2	1.5
MS	2001	...	446	929	579	173	202	2,329	...	...	...
	2011	74	460	1,023	609	163	6	2,335	...	...	...
KN	2001	...	991	2,831	3,930	7,928	...	15,680	...	...	...
LC	2001	1,367	13,195	16,493	10,085	5,984	...	47,124	2.0	3.2	1.6
	2010	...	11,488	20,908	18,276	8,239	...	58,920	...	...	1.1
VC	2001	...	1,855	5,548	8,718	14,141	...	30,262	2.7	3.5	1.3
	2012	3,134	6,369	10,364	12,603	4,359	...	36,829	...	3.0	...
SR	2004	1,453	19,404	27,848	45,489	21,971	3,992	120,157	...	...	...
	2012	...	20,274	33,064	52,055	25,710	3,226	134,329	...	...	...
TT	2000	3,699	43,447	96,685	111,525	45,009	3,506	303,871	...	3.7	...
	2011	18,677	44,262	115,577	136,431	60,824	25,610	401,382	...	...	...
ASSOCIATE MEMBERS											
AI	2001	...	594	1,156	1,151	623	206	3,730	...	3.1	...
	2011	4	1,050	1,613	1,489	771	8	4,935	...	2.8	...
BM	2000	1,188	6,385	8,964	6,866	1,319	41	24,763	2.0	2.5	1.2
	2010	...	6,891	8,944	7,473	1,645	141	25,094	2.1	2.4	1.1
KY	2010	2,171	6,220	6,441	5,325	2,551	52	22,760	...	...	...
VG	2001	...	997	2,033	2,645	2,711	...	8,386	...	...	...
TC	2001	791	2,724	1,722	1,137	880	...	7,254	1.9	2.7	1.5

## Concept and definition

A room is defined as a space in a dwelling unit enclosed by walls reaching from the floor to the ceiling or roof covering, or to a height of at least two meters, of an area large enough to hold a bed for an adult, that is, at least four square meters.

Bedrooms are rooms used **mainly** for sleeping. There must be some **permanency** about the walls enclosing the bedrooms. A room used for other activities by day and sleeping by night is not a bedroom except in the case of one-

room dwelling units. In such cases it must be recorded as having **ONE** room and **ONE** bedroom. A household can never have more bedrooms than rooms.

*(Please refer to the Enumerator's Manual of the CARICOM Common Census Questionnaires of the 2010 Population and Housing Census)*

**Average Household Size** is the estimated number of persons forming a household. It is the ratio of the total population to the total number of households.

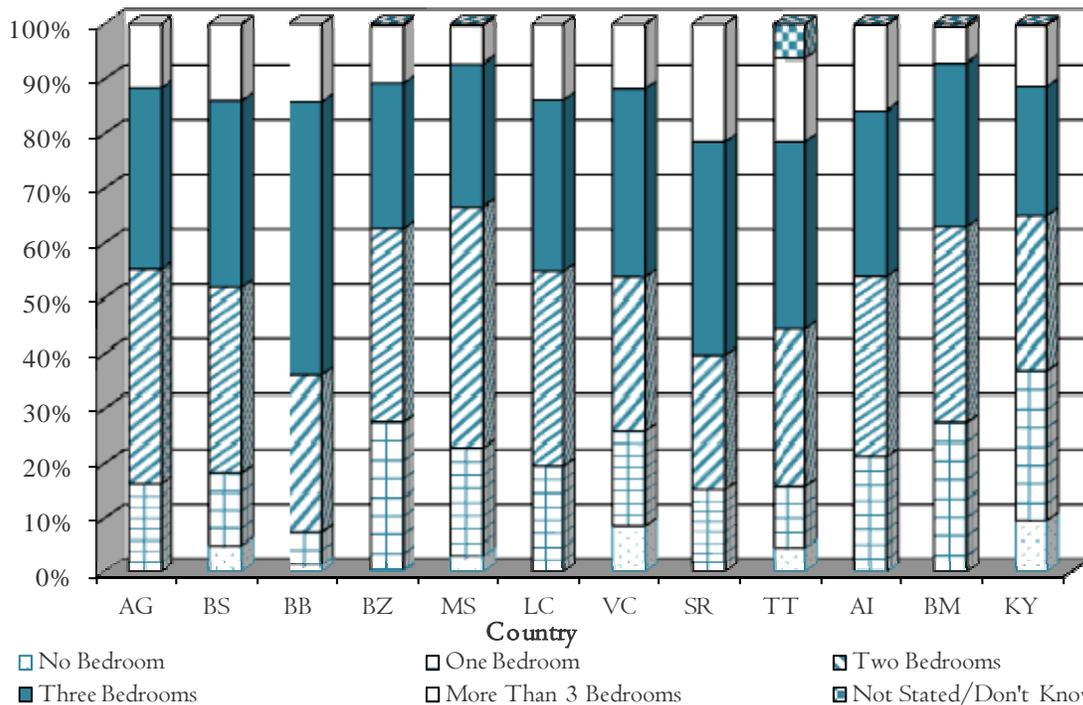
# CHAPTER 1: POPULATION AND HOUSEHOLDS

Table 1.5(b) - Percentage Distribution of Households by Number of Bed Rooms : 2000 and 2010 Round of Censuses

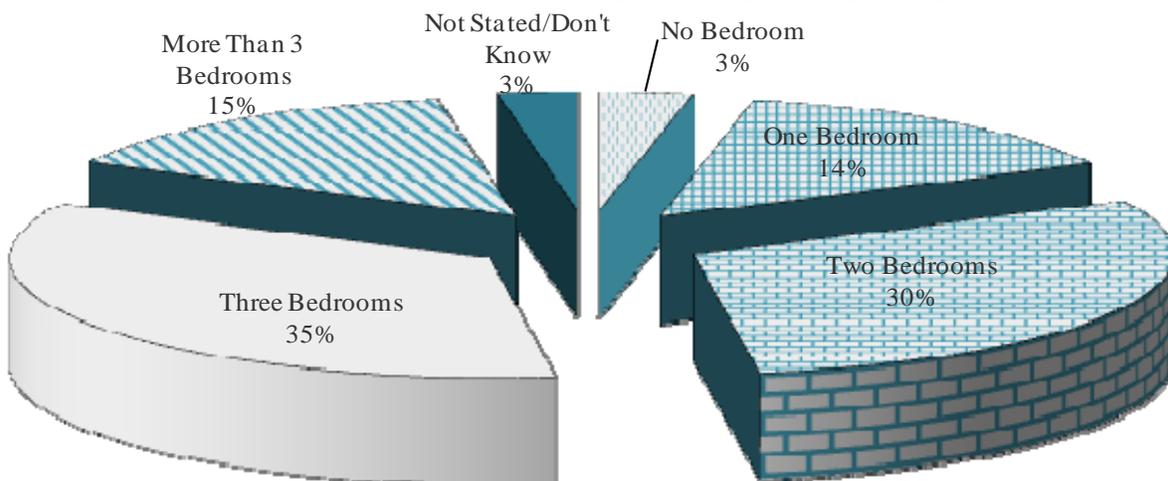
Country	Year	No bedroom	One bedroom	Two bedrooms	Three bedrooms	More than three bedrooms	Not Stated/ Don't Know	Total	Average number of bedrooms per household	Average size of the household	Average number of persons per bedroom
AG	2001	0.8	14.8	37.9	34.8	11.5	0.1	100.0	...	...	...
	2011	...	16.1	39.3	32.9	11.7	0.0	100.0	2.4	2.8	1.1
BS	2000	...	6.3	13.9	26.3	53.5	...	100.0	...	...	...
	2010	5.0	13.2	33.7	33.9	14.1	...	100.0	2.6	3.4	1.3
BB	2000	...	11.2	30.1	48.1	10.6	...	100.0	...	3.2	...
	2010*	1.4	6.0	28.7	49.6	14.3	...	100.0	...	...	...
BZ	2000	4.7	23.5	36.5	24.9	10.4	0.0	100.0	...	4.5	...
	2010	0.4	27.2	35.2	26.5	10.5	0.3	100.0	...	...	...
DM	2001	...	5.5	24.1	27.5	42.8	...	100.0	...	3.1	...
GD	2001	3.2	16.3	43.4	28.9	8.2	...	100.0	2.0	3.3	1.7
GY	2002	...	29.6	37.6	25.3	7.5	...	100.0	...	...	...
JM	2001	...	35.7	35.1	17.7	11.6	...	100.0	2.1	3.2	1.5
MS	2001	...	19.1	39.9	24.9	7.4	8.7	100.0	...	...	...
	2011	3.2	19.7	43.8	26.1	7.0	0.3	100.0	...	...	...
KN	2001	0.0	6.3	18.1	25.1	50.6	...	100.0	...	...	...
LC	2001	2.9	28.0	35.0	21.4	12.7	...	100.0	2.0	3.2	1.6
	2010	...	19.5	35.5	31.0	14.0	...	100.0	...	...	1.1
VC	2001	...	6.1	18.3	28.8	46.7	...	100.0	2.7	3.5	1.3
	2012	8.5	17.3	28.1	34.2	11.8	...	100.0	...	3.0	...
SR	2004	1.2	16.1	23.2	37.9	18.3	3.3	100.0	...	...	...
	2004	...	15.1	24.6	38.8	19.1	2.4	100.0	...	...	...
TT	2000	1.2	14.3	31.8	36.7	14.8	1.2	100.0	...	3.7	...
	2011	4.7	11.0	28.8	34.0	15.2	6.4	100.0	...	...	...
<b>ASSOCIATE MEMBERS</b>											
AI	2001	...	15.9	31.0	30.9	16.7	5.5	100.0	...	3.1	...
	2011	0.1	21.3	32.7	30.2	15.6	0.2	100.0	...	2.8	...
BM	2000	4.8	25.8	36.2	27.7	5.3	0.2	100.0	2.0	2.5	1.2
	2010	...	27.5	35.6	29.8	6.6	0.6	100.0	2.1	2.4	1.1
KY	2010	9.5	27.3	28.3	23.4	11.2	0.2	100.0	...	...	...
VG	2001	...	11.9	24.2	31.5	32.3	...	100.0	...	...	...
TC	2001	10.9	37.6	23.7	15.7	12.1	...	100.0	1.9	2.7	1.5

# CHAPTER 1: POPULATION AND HOUSEHOLDS

**CHART 1.5.1 (A): PERCENTAGE DISTRIBUTION OF HOUSEHOLDS BY NUMBER OF BEDROOMS AND SELECTED MEMBER COUNTRY: 2010 ROUND OF CENSUS**



**CHART 1.5.1 (B): PERCENTAGE DISTRIBUTION OF HOUSEHOLDS BY NUMBER OF BEDROOMS IN MEMBER COUNTRIES: 2010 ROUND OF CENSUS**



# CHAPTER 1: POPULATION AND HOUSEHOLDS

Table 1.6(a) Number of Households by Size of Household: 2000 and 2010 Round of Censuses

Country	Year	Size of household					Total	Average size of household
		One person	Two person	Three person	Four person	Five or more persons		
AG	2001	5,163	4,056	3,722	3,403	4,106	20,450	...
	2011	9,076	6,585	5,181	4,547	4,824	30,213	2.8
BS	2000	18,407	17,543	14,769	13,846	23,177	87,742	...
	2010	18,220	19,772	21,667	19,504	23,595	102,758	3.4
BB	2000	20,512	19,065	15,375	13,104	14,970	83,026	3.2
	2010*	21,409	19,020	14,948	11,614	11,945	78,936	...
BZ	2000	6,219	6,724	7,676	8,411	22,915	51,945	4.5
	2010	11,404	12,095	13,002	13,928	29,062	79,491	...
DM	2001	6,483	4,388	3,398	3,045	5,045	22,359	3.1
GY	2002	22,409	26,491	30,743	34,871	68,095	182,609	...
JM	2001	169,226	136,069	125,221	111,766	206,044	748,326	3.5
MS	2001	744	447	389	334	415	2,329	...
	2011	1,146	538	297	185	169	2,335	...
KN	2001	5,214	2,917	2,287	2,039	3,223	15,680	...
LC	2001	10,563	8,937	8,688	6,916	11,927	47,031	...
	2010	15,997	12,953	10,879	8,656	10,434	58,920	2.8
VC	2001	7,354	5,027	4,546	4,509	8,855	30,291	3.5
SR	2004	18,479	20,032	20,429	22,353	42,170	123,463	3.9
	2012	22,839	22,763	24,743	25,216	44,806	140,367	...
TT	2000	46,259	52,478	54,734	59,495	90,905	303,871	3.7
	2011	76,696	80,864	77,920	74,694	91,209	401,382	...
<b>ASSOCIATE MEMBERS</b>								
AI	2001	1,009	792	598	546	785	3,730	3.1
BM	2000	7,358	7,539	4,489	3,683	2,079	25,148	2.5
	2010	7,341	7,902	4,498	3,536	1,817	25,094	2.4
KY	2010	7,366	6,927	3,648	2,763	2,056	22,760	...
VG	2001	3,500	1,312	1,121	856	1,597	8,386	...
TC	2001	2,153	1,854	1,281	818	1,148	7,254	2.7

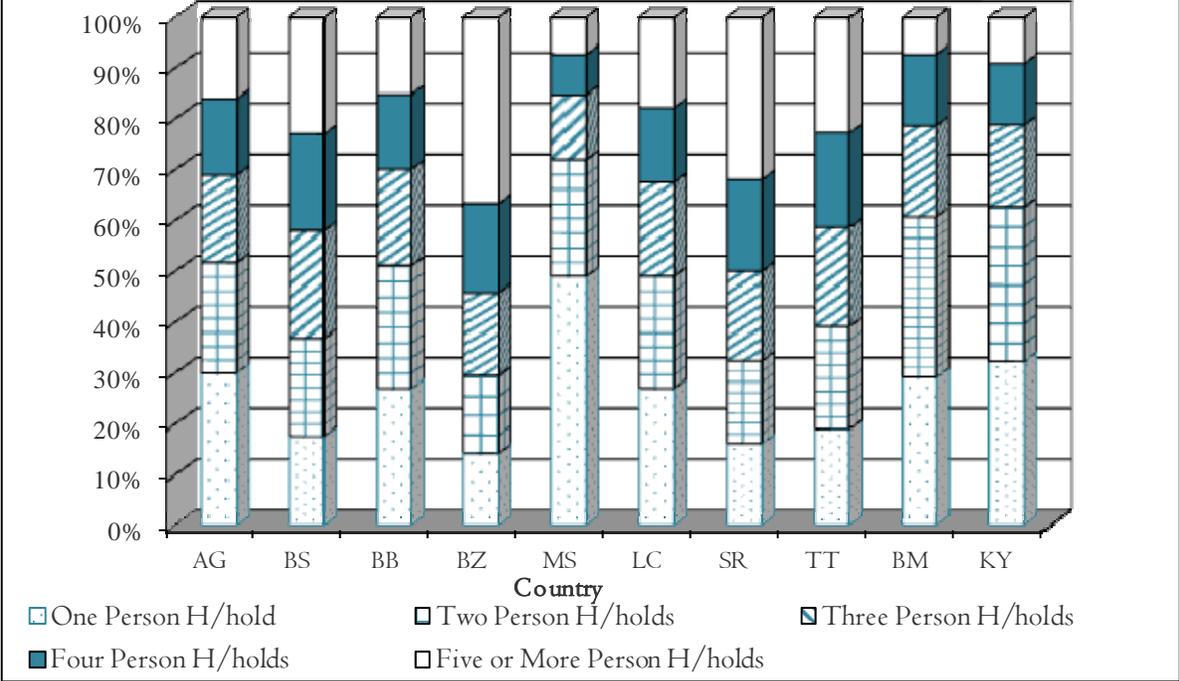
# CHAPTER 1: POPULATION AND HOUSEHOLDS

Table 1.6(b) - Percentage Distribution of Households by Size of Household: 2000 and 2010 Round of Censuses

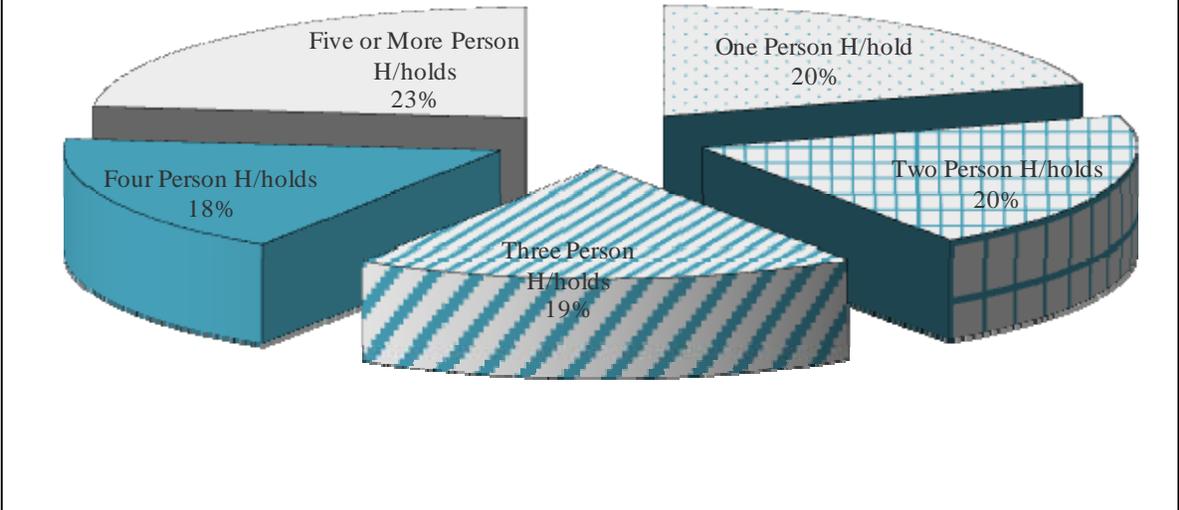
Country	Year	Size of household					Total	Average size of household
		One person	Two person	Three person	Four person	Five or more persons		
AG	2001	25.2	19.8	18.2	16.6	20.1	100.0	...
	2011	30.0	21.8	17.1	15.0	16.0	100.0	2.8
BS	2000	21.0	20.0	16.8	15.8	26.4	100.0	...
	2010	17.7	19.2	21.1	19.0	23.0	100.0	3.4
BB	2000	24.7	23.0	18.5	15.8	18.0	100.0	3.2
	2010	27.1	24.1	18.9	14.7	15.1	100.0	...
BZ	2000	12.0	12.9	14.8	16.2	44.1	100.0	4.5
	2010	14.3	15.2	16.4	17.5	36.6	100.0	...
DM	2001	29.0	19.6	15.2	13.6	22.6	100.0	3.1
GY	2002	12.3	14.5	16.8	19.1	37.3	100.0	...
JM	2001	22.6	18.2	16.7	14.9	27.5	100.0	3.5
MS	2001	31.9	19.2	16.7	14.3	17.8	100.0	...
	2011	49.1	23.0	12.7	7.9	7.2	100.0	...
KN	2001	33.3	18.6	14.6	13.0	20.6	100.0	...
LC	2001	22.5	19.0	18.5	14.7	25.4	100.0	...
	2010	27.2	22.0	18.5	14.7	17.7	100.0	2.8
VC	2001	24.3	16.6	15.0	14.9	29.2	100.0	3.5
SR	2004	15.0	16.2	16.5	18.1	34.2	100.0	3.9
	2012	16.3	16.2	17.6	18.0	31.9	100.0	...
TT	2000	15.2	17.3	18.0	19.6	29.9	100.0	3.7
	2011	19.1	20.1	19.4	18.6	22.7	100.0	...
<b>ASSOCIATE MEMBERS</b>								
AI	2001	27.1	21.2	16.0	14.6	21.0	100.0	3.1
BM	2000	29.3	30.0	17.9	14.6	8.3	100.0	2.5
	2010	29.3	31.5	17.9	14.1	7.2	100.0	2.4
KY	2010	32.4	30.4	16.0	12.1	9.0	100.0	...
VG	2001	41.7	15.6	13.4	10.2	19.0	100.0	...
TC	2001	29.7	25.6	17.7	11.3	15.8	100.0	2.7

# CHAPTER 1: POPULATION AND HOUSEHOLDS

**CHART 1.6.1 (A): PERCENTAGE DISTRIBUTION OF HOUSEHOLDS BY SIZE OF HOUSEHOLD AND MEMBER COUNTRY: 2010 ROUND OF CENSUS**



**CHART 1.6.1 (B): PERCENTAGE DISTRIBUTION OF HOUSEHOLDS BY SIZE OF HOUSEHOLD IN CARICOM: 2010 ROUND OF CENSUS**



# CHAPTER 1: POPULATION AND HOUSEHOLDS

## Households by Size of Household - Concept

In the context of household, size refers to the number of persons residing in households.

$$\text{Average Household Size} = \frac{\text{Total Population}}{\text{Total Number of Households}}$$

## DATA GAPS

### *Table 1.1 Number of Households by Type of Dwelling*

Missing data exists for six (6) countries for the 2010 Round of Population and Housing Census due to non-submission of data and for one country due to poor data quality.

### *Table 1.2 Number of Households by Type of Tenure*

Data gaps in this table were due to non-submission of data by five (5) countries for the 2010 Population and Housing Census. Additionally the 2010 census data received for one country was preliminary and of poor quality and therefore could not be used in the publication.

### *Table 1.3 Number of Households by Type of Materials of Outer Walls*

Missing data exists for five (5) countries that did not submit data for the 2010 Population and Housing Census for this table and two (2) countries that did not collect this data during the 2000 Round of Population and Housing Census.

### *Table 1.4 Number of Households by Type of Material used for Roofing*

No data exists for twelve (12) countries around the year 2010. Two (2) countries did not submit any data for this table.

### *Table 1.5 Households by Number of Bed Rooms*

Seven (7) countries submitted no data for this table. For two (2) countries, data gaps were filled with data published in their 2010 Population and Housing Census report. The table also presents data for three indicators *Average number of bedrooms per household*, *Average size of the Household* and *Average number of persons per bedroom*. Seven (7) countries provided no data for the three indicators.

### *Table 1.6 Number of Households by Size of Household*

Missing data exists for the *Number of Households by size of households* for two (2) countries. Eight countries had no data for the 2010 round of Population and Housing Census. The table also includes data for the indicator, *Average Household Size*.

In summary, twelve (12) countries submitted data during the collection period for this chapter of the publication. For the remaining eight countries, data gaps were filled with data from the 2000 Rounds of Population and Housing Census or published data from the country's 2010 Population and Housing Censuses reports.

# CHAPTER 1: POPULATION AND HOUSEHOLDS

## 1.1.1 (a) Sources of Data for Tables 1.1(a) Number of Households by Type of Dwelling and Table 1.1(b) -Percentage Distribution of Households by Type of Dwelling

Country	Year	Data Source
ALL COUNTRIES	2000	2000 Round of Population and Housing Census data
	2010	2010 Round of Population and Housing Census data (where available)

## 1.1.1 (b) Notes for Table 1.1(a) Number of Households by Type of Dwelling and Table 1.1(b) - Percentage Distribution of Households by Type of Dwelling

Country	Notes
GUYANA	Not Stated includes Don't Know
JAMAICA	(1) Part of a private house included in Undivided private house; (2) Townhouse and Double house/duplex included in Flat/apartment / condominium
MONTSERRAT	Other includes Not Stated. Other types of dwelling include shelters.
SURINAME	Undivided private house refers to Single dwelling Unit or Separate, detached House Double house/duplex refers to Two unit dwellings Other includes One room dwelling and Part of a multi dwelling
TRINIDAD AND TOBAGO	Undivided private house refers to a separate house. Out-room, Wafda and Group Dwelling are included in Other. Other private dwelling is included in Part of a private house Out-Room, Wafda and Group Dwelling are included in Other Other Private Dwelling is included in Part of a Private House
BERMUDA	2000 Other refers to Not Stated and includes Group Dwellings. 2000 Combined business & dwelling refers to residential/commercial premises. 2010 Flat/apartment / condominium Includes 8,870 two-apartments, 4,639 three-apartments and 5,024 four or more apartments. 2010 Total Includes 1,106 households for which there is no data. Also, 696 group dwellings and 27 boats.
THE CAYMAN ISLANDS	Other includes Studio, One room, Boat/Yacht
TURKS AND CAICOS	Other includes Not Stated. Out-Room, Wafda, Other Private Dwelling and Group Dwellings are included in Other Townhouse refer to townhouse/condominium Flat/apartment/condominium refers to apartment
ALL OTHER COUNTRIES	Other includes Not Stated

# CHAPTER 1: POPULATION AND HOUSEHOLDS

## 1.1.2 (a): Sources of Data for Table 1.2(a) - Number of Households by Type of Tenure and Table 1.2 (b) - Percentage Distribution of Households by Type of Tenure

Country	Year	Data Source
ALL COUNTRIES	2000-2004	2000 Round of Population and Housing Census
	2010-2012	2010 Round of Population and Housing Census

## 1.1.2 (b): Notes for Table 1.2(a) - Number of Households by Type of Tenure and Table 1.2 (b) Percentage Distribution of Households by Type of Tenure

Country	Notes
BARBADOS	2010* Data refers to Occupied dwelling units
DOMINICA	Other includes Not Stated
GRENADA	Other refers to Temporary Dwelling
GUYANA	Not Stated includes Don't Know
MONTserrat	Other types of tenure include shelters.
ST VINCENT AND THE GRENADINES	Not Stated includes Don't Know
TRINIDAD AND TOBAGO	Not Stated includes Don't Know
ANGUILLA	Other includes Not Stated
BERMUDA	2010 Total Includes 1,106 households for which there is no data. This was categorised as not stated. Other includes Group dwellings which are places such as hotel staff quarters, nurses' hostels, and police barracks.
BRITISH VIRGIN ISLANDS	Not Stated includes Don't Know
TURKS AND CAICOS	Lease includes Lease-Private and Lease-Government. Rent includes rented private and rented government

# CHAPTER 1: POPULATION AND HOUSEHOLDS

## 1.1.3 (a): Sources of Data for Table 1.3(a) - Number of Households by Type of Materials of Outer Walls and Table 1.3(b) - Percentage Distribution of Households by Type of Materials of Outer Walls

Country	Year	Data Source
ALL COUNTRIES	2000	2000 Round of Population and Housing Census data
	2010	2010 Round of Population and Housing Census (where available)

## 1.1.3 (b): Notes for Table 1.3(a) - Number of Households by Type of Materials of Outer Walls and Table 1.3(b) - Percentage Distribution of Households by Type of Materials of Outer Walls

Country	Data Source
ANTIGUA AND BARBUDA	Other includes Don't know.
THE BAHAMAS	Other includes Not Stated
BARBADOS	Other includes Not Stated
BELIZE	2000 - Other includes Not Stated 2010 - Other includes Plycem and Sticks/palmetto
DOMINICA	Other includes Not Stated
GRENADA	Other includes Not Stated
GUYANA	Wood/ concrete block refers to Clay Brick
JAMAICA	Other includes Not Stated
MONTSERRAT	Other includes Not Stated
SAINT LUCIA	2001 - Other includes Not Stated. 2010 - Other includes Not Stated, Plywood and Plywood/concrete

# CHAPTER 1: POPULATION AND HOUSEHOLDS

**1.1.3 (b): Notes for Table 1.3(a) - Number of Households by Type of Materials of Outer Walls and Table 1.3(b) - Percentage Distribution of Households by Type of Materials of Outer Walls (cont'd)**

Country	Data Source
ST VINCENT AND THE GRENADINES	Other includes Not Stated.
TRINIDAD AND TOBAGO	Wood/galvanize refers to Wood/ concrete block/ galvanize/Stucco Abode refers to Wattle/Adobe/Tapia
ANGUILLA	Other includes Not Stated.
BERMUDA	2000 - Other includes Not Stated. 2010 - 1. Bermuda has a building code whereas all houses have to sustain a category 1 hurricane. Therefore all houses are made from concrete block, stone block with concrete poured over the top of a combination of both. This is not part of the Census questionnaire. 2. Other includes 27 boats 3. Total includes 1,106 households for which there is no data by type of tenure.
BRITISH VIRGIN ISLANDS	Other includes Not Stated.
TURKS AND CAICOS	Wood/ concrete block/ galvanize/Stucco refers to Wood/stucco

**1.1.4 (a): Sources of Data for Table 1.4(a) - Number of Households by Type of Material used for Roofing and Table 1.4(b) - Percentage Distribution of Households by Type of Material used for Roofing**

Country	Year	Data Source
ALL COUNTRIES	2000	2000 Round of Population and Housing Census
	2010	2010 Round of Population and Housing Census

# CHAPTER 1: POPULATION AND HOUSEHOLDS

## 1.1.4 (b): Notes for Table 1.4(a) - Number of Households by Type of Material used for Roofing and Table 1.4(b) - Percentage Distribution of Households by Type of Material used for Roofing

Country	Notes
ANTIGUA AND BARBUDA	Other includes Don't Know
DOMINICA	Other includes Don't Know
GUYANA	Not Stated includes Don't Know
JAMAICA	Other includes Not Reported
MONTSERRAT	Not Stated includes Don't Know
ST VINCENT AND THE GRENADINES	Other includes Don't Know
SURINAME	Other includes Asbestos Plates and Palm Leaves
ANGUILLA	Make-shift includes Thatched
BERMUDA	Bermuda has a building code whereas all houses have to sustain a category 1 hurricane. Therefore each roof is made from stone slate with concrete poured over the top or a fiberglass tile with concrete poured over the top. This question is not part of our Census questionnaire Other Includes 27 boats Total Includes 1,106 households for which there is no data by type of tenure.
BRITISH VIRGIN ISLANDS	Other refers to Other/Don't Know/Not Stated

## 1.1.5 (a): Sources of Data for Table 1.5(a) - Households by Number of Bedrooms and Table 1.5(b) - Percentage Distribution of Households by Number of Bedrooms

Country	Year	Data Source
ALL COUNTRIES	2000	2000 Round of Population and Housing Census
	2010	2010 Round of Population and Housing Census

# CHAPTER 1: POPULATION AND HOUSEHOLDS

## 1.1.5 (b): Notes for Table 1.5(a) - Households by Number of Bedrooms and Table 1.5(b) - Percentage Distribution of Households by Number of Bedrooms

Country	Notes
JAMAICA	Other includes Not Reported
MONTserrat	Not Stated/ Don't Know includes Not Stated and Undefined
BERMUDA	No bedroom refers to Studio dwelling (0 bedrooms) Total number of households. Excludes 696 group dwellings and 27 boats since the number of bedrooms is not collected for these type of dwellings.

## 1.1.6 (a): Sources of Data for Table 1.6(a) - Number of Households by Size of Household and Table 1.6(b) - Percentage Distribution of Households by Size of Household

Country	Year	Data Source
ALL COUNTRIES	2000	2000 Round of Population and Housing Census data
	2010	2010 Round of Population and Housing Census

## 1.1.6 (b): Notes for Table 1.6(a) - Number of Households by Size of Household and Table 1.6(b) - Percentage Distribution of Households by Size of Household

Country	Notes
BERMUDA	Group dwellings represent 385 households are dispersed throughout the table.

## CHAPTER 2 - TOURISM



Tourism contributes significantly to economies of the Caribbean region through direct earnings from the sector as well as indirectly through infrastructure development and the development of the hotel industry and craft industry among others. Tourism activities, however, can have adverse environmental effects as it exerts significant pressure on scarce resources such as land, water and energy. It also generates a large amount of waste.

The situation with the use of water is improving as Tourism facilities have over the years implemented programmes to reduce their water use and initiatives such as Blue flag that encourage sustainable tourism. Regional groups such as the Caribbean Tourism Organisation have encouraged sustainable tourism projects to reduce the impact of tourism on the local environment.

The data provided under this theme seek to measure and quantify the environmental and social implications such as accommodation, transportation, employment and catering as well as the country's capacity to cater to and meet these demands. There are six (6) Indicators covered in this section: Tourist Arrivals by Type of Arrival and Number of Tourist Nights Spent; Tourist Intensity, Tourism Density and Tourist Penetration Ratio; Number of Hotels Classified by Number of Rooms, Beds and Rooms occupied by Year; Visitor Expenditure and Number Employed in Tourism; Tourist Arrivals by Type of Accommodation; and Tourist Arrivals by Country of Origin.

The data were compiled from National Statistical Offices of the Member States and National Tourism Agencies. It should be noted that the Caribbean Tourism Organisation (CTO) provided a significant amount of data which allowed most of the data gaps in this area to be filled.

## CHAPTER 2 - TOURISM

**Table 2.1 (a) Tourists, Cruise Ships Arrivals and Average Tourist Nights Spent by Year: 2009-2013**

Country	Year	Visitor arrivals			Cruise ships arrivals	Average tourist nights spent
		Stop over (Tourists)	Cruise passengers	Other		
AG	2009	234,410	712,792		370	10.1
	2010	229,943	557,635		299	9.3
	2011	241,331	606,495		328	9.4
	2012	246,926	572,153		314	9.7
	2013	243,932	533,993		328	10.1
BS	2009	1,327,007	3,256,780	45,487	3,256	6.8
	2010	1,370,174	3,809,807	47,347	3,810	6.7
	2011	1,346,372	4,161,269	46,157	4,161	6.8
	2012	1,421,753	4,434,161	40,308	4,434	6.8
	2013	1,364,208	4,709,236	44,632	4,709	6.8
BB	2009	518,564	635,212		460	10.7
	2010	532,180	664,747		391	11.0
	2011	567,724	609,844		391	10.4
	2012	536,303	517,436		358	10.9
	2013	508,520	570,263		374	...
BZ	2009	232,249	705,219		284	7.7
	2010	241,919	764,628		279	7.7
	2011	250,263	727,878		269	7.2
	2012	277,135	640,734		236	7.0
	2013	294,176	677,350		229	7.4
DM	2009	74,924	532,352		273	12.0
	2010	76,517	517,979		272	8.7
	2011	75,546	341,501		196	9.6
	2012	78,965	266,178		185	8.6
	2013	78,277	230,587		162	9.1
GD	2009	117,781	342,871	2,829	246	8.3
	2010	110,471	335,029	2,448	207	8.3
	2011	118,295	309,564	1,571	198	8.2
	2012	117,245	242,757	2,341	185	9.1
	2013	117,720	197,308	1,729	144	9.1

## CHAPTER 2 - TOURISM

**Table 2.1 (a) cont'd Tourists, Cruise Ships Arrivals and Average Tourist Nights Spent by Year: 2009-2013**

Country	Year	Visitor arrivals			Cruise ships arrivals	Average tourist nights spent
		Stop over (Tourists)	Cruise passengers	Other		
GY	2009	141,281	n.a		n.a	n.a
	2010	151,926	n.a		n.a	n.a
	2011	156,910	n.a		n.a	n.a
	2012	176,642	n.a		n.a	n.a
	2013	193,425	n.a		n.a	n.a
HT	2009	387,220	439		n.a	n.a
	2010	254,732	538		n.a	n.a
	2011	348,755	597		n.a	n.a
	2012	349,237	610		139	n.a
	2013	419,736	644		n.a	n.a
JM	2009	1,831,097	923,234		329	9.2
	2010	1,921,678	909,899		322	9.0
	2011	1,951,752	1,126,646		364	8.9
	2012	1,986,085	1,320,547		384	8.8
	2013	2,008,409	1,265,693		364	8.7
	2014	2,080,181	1,423,797		405	8.7
MS	2009	6,311	189	1,024	1	15.9
	2010	5,981	878	1,726	1	15.0
	2011	5,395	1,114	1,997	3	12.9
	2012	7,310	840	2,606	2	13.7
	2013	7,201	364	1,520	2	n.a
	2014	8,804	184	1,749	2	
KN	2009	96,077	450,553		235	
	2010	98,329	514,825		286	
	2011	94,843	605,407		337	
	2012	97,857	526,305		299	
	2013	100,997	575,716		301	
LC	2009	278,491	699,306	4,967	397	8.9
	2010	305,937	670,043	7,613	380	8.6
	2011	312,404	630,444	10,523	351	8.8
	2012	306,801	571,894	9,054	336	8.7
	2013	318,626	594,118	8,228	344	8.9

## CHAPTER 2 - TOURISM

**Table 2.1 (a) cont'd Tourists, Cruise Ships Arrivals and Average Tourist Nights Spent by Year: 2009-2013**

Country	Year	Visitor arrivals			Cruise ships arrivals	Average tourist nights spent
		Stop over (Tourists)	Cruise passengers	Other		
VC	2009	75,446	149,464		164	11.7
	2010	72,478	110,954		131	11.7
	2011	73,866	88,924		136	11.1
	2012	74,364	77,179		173	11.9
	2013	71,725	82,974		212	12.8
SR	2009	150,628		300		
	2010	204,519		482		
	2011	220,475		289		
	2012	240,041		289		
	2013	249,102		669		
TT	2009	414,349	122,602		101	15.7
	2010	388,310	102,220		87	15.7
	2011	430,922	60,277		59	...
	2012	454,683	49,109		69	...
	2013	441,266	32,915		34	...
	2014	412,447				
<b>ASSOCIATE MEMBERS</b>						
AI	2009	57,891	n/a		n/a	8.0
	2010	61,998	n/a		n/a	8.0
	2011	65,783	n/a		n/a	7.8
	2012	64,698	n/a		n/a	7.7
	2013	69,068	n/a		n/a	7.5
	2014	70,927				
BM	2009	235,866	318,528		135	6.1
	2010	232,262	347,931		149	6.2
	2011	236,038	415,711		177	6.1
	2012	232,063	378,262		157	5.4
	2013	236,343	340,030		125	5.3

## CHAPTER 2 - TOURISM

**Table 2.1 (a) cont'd Tourists, Cruise Ships Arrivals and Average Tourist Nights Spent by Year: 2009-2013**

Country	Year	Visitor arrivals			Cruise ships arrivals	Average tourist nights spent
		Stop over (Tourists)	Cruise passengers	Other		
KY	2009	271,958	1,520,372		542	6.9
	2010	288,272	1,597,838		577	6.1
	2011	309,092	1,401,495		529	4.8
	2012	321,650	1,507,370		525	n.a
	2013	345,385	1,375,872		481	n.a
TC	2009	250,215	513,928		215	
	2010	281,159	617,863		245	
	2011	354,223	657,497		270	
	2012	298,936	676,647		261	
	2013	290,587	778,920		258	
VG	2009	308,793	530,327		539	
	2010	330,343	501,451		372	
	2011	337,773	484,715		387	
	2012	351,404	390,579		397	
	2013	366,108	367,362		384	

A **Visitor** is a traveler taking a trip to a main destination outside his/her usual environment, for less than a year, for any main purpose (business, leisure or other personal purpose) other than to be employed by a resident entity in the country or place visited. These trips taken by visitors qualify as tourism trips. Tourism refers to the activity of visitors.

**Tourist (or overnight visitor):** A visitor (domestic, inbound or outbound) is classified as a tourist (or overnight visitor), if his/her trip includes an overnight stay, or as a **same-day visitor** (or excursionist) otherwise.

**Cruise passengers** are regarded as a special type of same-day visitor (even if

the ship overnights at the port) who stay less than twenty-four hours in the country visited.

**Cruise ship arrivals** refer to the number of times cruise ships enter the country. A cruise ship can be counted multiple times if it leaves the country, then returns with new passengers within the same month.

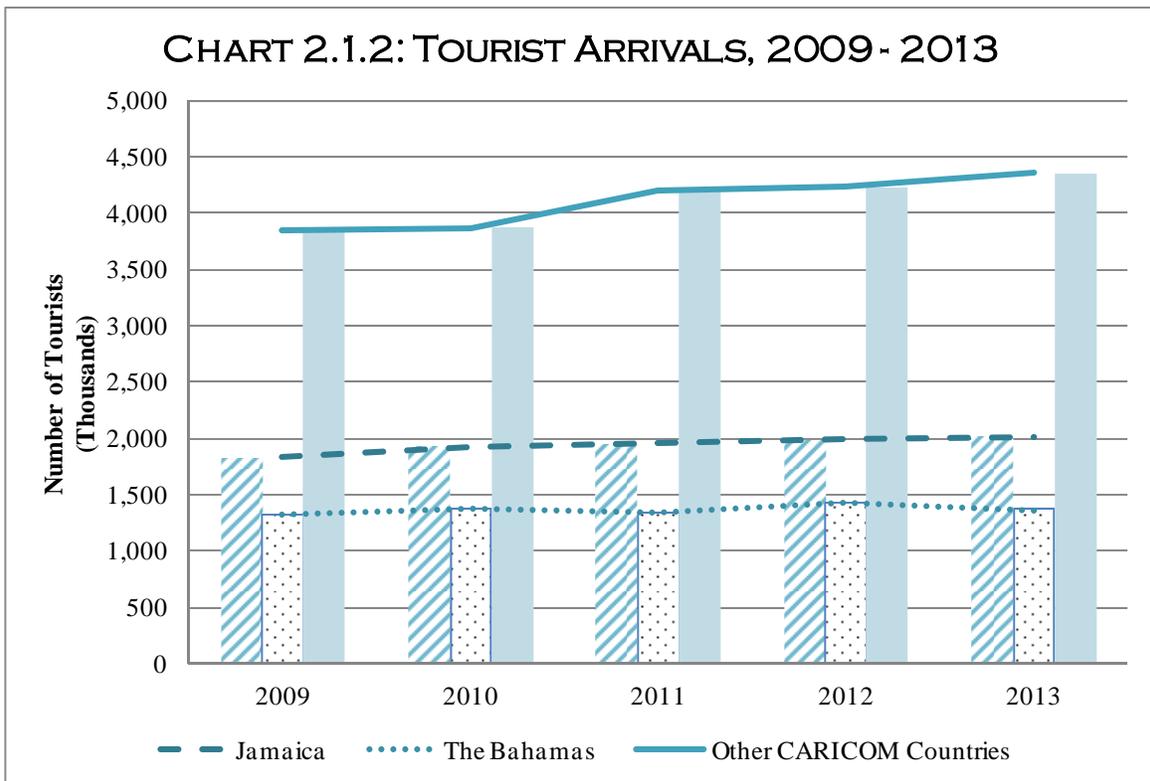
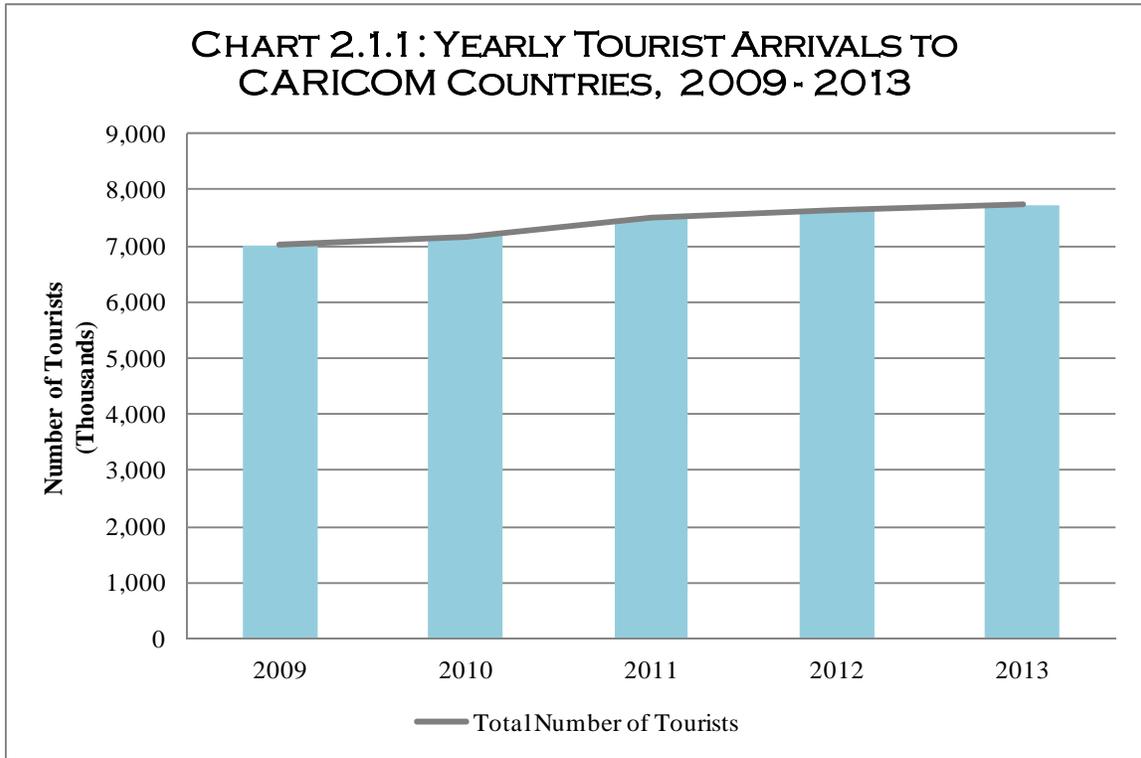
The **average length of stay** for a number of holiday trips is calculated by dividing the total number of nights spent by the total number of tourism trips. Tourism trips are trips taken by visitors (*see definition of visitors*). A domestic or an outbound tourism trip refers to the travel of a visitor from the time of leaving his/her usual residence until he/she returns.

An inbound tourism trip refers to the travel of a visitor from the time of arriving in a country to the time of leaving. The term tourism visit refers to a stay in a place visited during a tourism trip.

Observing tourism trips and visits is not the same as observing visitors, as an individual might make more than one trip or visit during the period of observing visitors, as an individual might make more than one trip or visit during the period of observation.

*(International Recommendations for Tourism Statistics 2008 [https://unstats.un.org/unsd/publication/SeriesM/SeriesM\\_83rev1e.pdf](https://unstats.un.org/unsd/publication/SeriesM/SeriesM_83rev1e.pdf))*

## CHAPTER 2 - TOURISM



## CHAPTER 2 - TOURISM

CHART 2.1.3(A): PERCENTAGE DISTRIBUTION OF TOURIST ARRIVALS: 2009

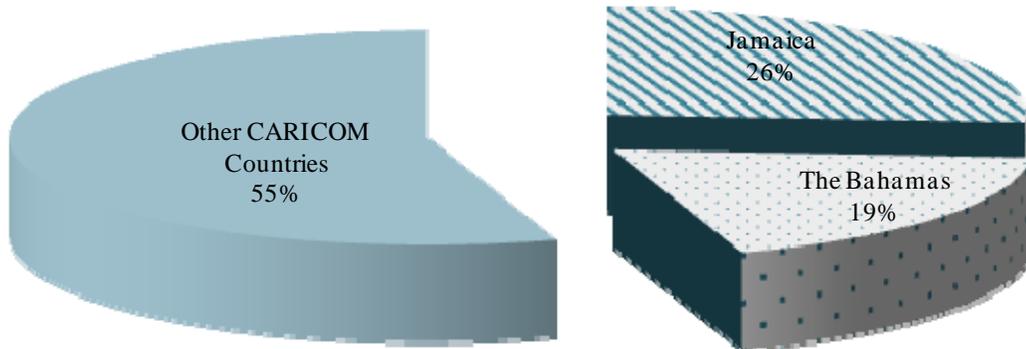


CHART 2.1.3(B): PERCENTAGE DISTRIBUTION OF TOURIST ARRIVALS: 2013



## CHAPTER 2 - TOURISM

**Table 2.1 (b) Tourism Intensity Rate, Tourism Density Ratio and Tourist Penetration Ratio: 2009-2013**

Country	Year	Tourism Intensity Rate	Tourism Density Ratio	Tourist Penetration Ratio
<b>AG</b>	2009	...	13.9	72.9
	2010	...	14.9	64.5
	2011	...	15.4	67.4
	2012	...	15.0	70.8
	2013	...	15.6	71.9
<b>BS</b>	2009	1.0	1.8	72.2
	2010	1.1	1.8	69.3
	2011	1.1	1.8	71.3
	2012	1.2	1.9	74.0
	2013	1.2	1.8	70.4
<b>BB</b>	2009	...	35.2	55.3
	2010	...	37.1	58.0
	2011	...	37.3	58.1
	2012	...	37.1	57.7
	2013	...	35.2	54.7
<b>BZ</b>	2009	...	0.2	15.5
	2010	...	0.2	15.8
	2011	...	0.2	14.9
	2012	...	0.2	15.6
	2013	...	0.3	17.0
<b>DM</b>	2009	2.1	3.3	34.6
	2010	2.3	2.4	25.7
	2011	2.7	2.6	28.3
	2012	3.5	2.5	26.7
	2013	2.8	2.6	28.0
<b>GD</b>	2009	...	8.4	27.6
	2010	...	7.5	24.5
	2011	...	7.7	24.9
	2012	...	8.4	27.0
	2013	...	8.6	27.3

## CHAPTER 2 - TOURISM

**Table 2.1 (b) cont'd Tourism Intensity Rate, Tourism Density Ratio and Tourist Penetration Ratio: 2009-2013**

Country	Year	Tourism Intensity Rate	Tourism Density Ratio	Tourist Penetration Ratio
<b>GY</b>	2009	...	4.9	9.0
	2010	...	5.4	9.8
	2011	...	5.5	10.1
	2012	...	6.4	11.6
	2013	...	7.2	13.2
<b>JM</b>	2009	...	4.0	17.1
	2010	...	4.1	17.5
	2011	...	4.2	17.6
	2012	...	4.2	17.7
	2013	...	4.2	17.6
<b>HT</b>	2009	...	0.1	0.3
	2010	...	0.1	0.2
	2011	...	0.1	0.3
	2012	...	0.1	0.3
	2013	...	0.1	0.3
<b>MS</b>	2009	...	2.7	54.5
	2010	...	2.4	48.9
	2011	...	1.9	38.7
	2012	...	2.7	55.5
	2013	...	2.6	54.5
<b>KN</b>	2009	...	9.4	48.9
	2010	...	9.6	49.1
	2011	...	9.3	53.7
	2012	...	9.6	55.4
	2013	...	9.9	57.2
<b>LC</b>	2009	12.6	11.0	41.4
	2010	13.4	11.7	43.8
	2011	14.1	12.2	46.0
	2012	13.6	11.9	43.7
	2013	14.4	12.6	45.9

## CHAPTER 2 - TOURISM

**Table 2.1 (b) cont'd Tourism Intensity Rate, Tourism Density Ratio and Tourist Penetration Ratio: 2009-2013**

Country	Year	Tourism Intensity Rate	Tourism Density Ratio	Tourist Penetration Ratio
<b>VC</b>	2009	...	6.2	22.0
	2010	...	6.0	21.1
	2011	...	5.8	20.4
	2012	...	6.2	22.0
	2013	...	6.5	22.8
<b>TT</b>	2009	...	3.6	14.1
	2010	...	3.2	12.6
	2011	...	3.6	13.9
	2012	...	3.8	14.6
	2013	...	3.6	13.9
<b>ASSOCIATE MEMBERS</b>				
<b>AI</b>	2009	...	13.9	79.4
	2010	...	14.9	82.9
	2011	...	15.4	84.1
	2012	...	15.0	101.9
	2013	...	15.6	104.8
<b>BM</b>	2009	72.4	74.2	59.8
	2010	72.7	74.5	61.5
	2011	72.1	73.9	62.0
	2012	63.2	72.5	55.0
	2013	63.1	86.7	55.4
<b>VG</b>	2009	...	56.4	301.7
	2010	...	62.7	335.5
	2011	...	64.1	342.2
	2012	...	66.1	350.4
	2013	...	70.8	372.6

## CHAPTER 2 - TOURISM

**Table 2.1 (b) cont'd Tourism Intensity Rate, Tourism Density Ratio and Tourist Penetration Ratio: 2009-2013**

Country	Year	Tourism Intensity Rate	Tourism Density Ratio	Tourist Penetration Ratio
<b>KY</b>	2005	...	<b>19.8</b>	<b>93.5</b>
	2006	...	<b>18.5</b>	<b>87.7</b>
	2007	...	<b>15.6</b>	<b>73.2</b>
	2008	...	<b>16.6</b>	<b>76.1</b>
	2009	...	<b>17.8</b>	<b>83.2</b>
<b>TC</b>	2005	...	<b>11.5</b>	<b>133.2</b>
	2006	...	<b>12.9</b>	<b>157.4</b>
	2007	...	<b>16.3</b>	<b>202.6</b>
	2008	...	<b>13.4</b>	<b>173.6</b>
	2009	...	<b>13.4</b>	<b>165.4</b>

**Tourism Intensity Rate (TIR):** The indicator “arrivals/population” provides an estimate of tourism intensity in the country of reference. This indicator is calculated by World Tourism Organization (UNWTO) based on the available basic data on inbound and domestic tourism, which can be either the number of visitors or the number of tourists. (*UNWTO Methodological Notes to the Tourism Statistics Database at [http://cf.cdn.unwto.org/sites/all/files/pdf/2015\\_metho\\_notes\\_eng\\_0.pdf](http://cf.cdn.unwto.org/sites/all/files/pdf/2015_metho_notes_eng_0.pdf)*) Tourism Intensity Rate is calculated as the Number of Visitors/tourists divided by per 1,000 population divided by the Country area in square kilometers

**Tourism Density Ratio (TDR):** This ratio attempts to show the density of tourist in the country at any one time on average. Its value is limited by the fact that tourist flows are season and tourism activity tends to be concentrated in specific geographical areas. (*Caribbean Tourism Organization*) Tourism Density Ratio is calculated as the Number of Visitors times average stay divided by land area times 365.

**Tourist Penetration Ratio (TPR):** The penetration ratio quantifies the average number of tourists, per thousand local inhabitants, in the country at any one time. The value of this ratio is constrained by the fact that tourist flows are seasonal and cruise passengers are not. (*Caribbean Tourism Organization*) Tourist Penetration Ratio is calculated as the Average stay times number of visitors divided by 365 times mid year population estimates.

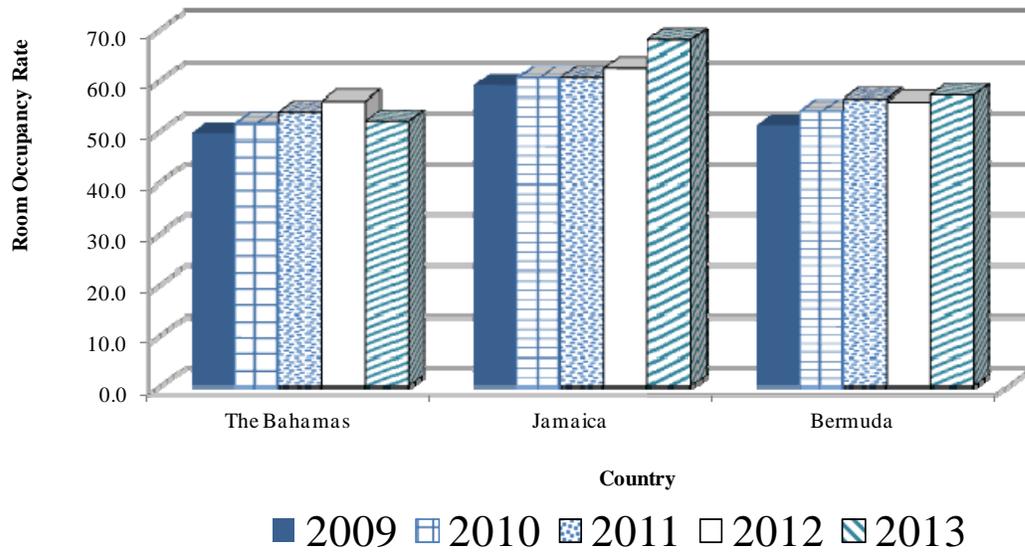
## CHAPTER 2 - TOURISM

**Table 2.2 - Number of Hotels classified by Size, Beds and Rooms by Year: 2009-2013**

Country	Year	Hotels by Number of Rooms					Number of beds	Total number of rooms occupied	Room occupancy rate
		Rooms 5 and more and less than 10	Rooms 10 and more and less than 25	Rooms 25 and more and less than 50	Rooms 50 and more	Total			
BS	2009						30,552	49.5	
	2010						30,472	51.5	
	2011						30,306	53.7	
	2012						29,386	55.9	
	2013						29,672	51.9	
DM	2009					989			
	2010					1,036			
	2011					1,062			
	2012					1,080			
	2013					1,127			
MS	2009		1			1			
	2010		1			1			
	2011		1			1			
	2012		1			1			
	2013		1			1			
JM	2009						42,812	59.0	
	2010			86	83	169	42,909	60.5	
	2011			92	82	174	43,196	60.5	
	2012			92	83	175	43,791	62.4	
	2013			96	81	177	42,227	67.9	
SR	2013							79	
TT	2009		114	40	23				
	2010		114	39	23				
	2011		97	39	23				
	2012		97	42	23				
<b>ASSOCIATE MEMBERS</b>									
BM	2009						5,820	365,623	51.1
	2010						5,693	333,565	54.0
	2011						5,401	355,145	56.3
	2012						5,243	350,356	55.7
	2013						5,265	342,767	57.0
KY	2009					2,031			
	2010					2,031			
	2011					2,130			
	2012					2,140			
	2013					2,140			

## CHAPTER 2 - TOURISM

CHART 2.2: ROOM OCCUPANCY RATE: 2009-2013



**Room Occupancy Rate:** For Hotels and similar establishments the net rate of room occupancy is a measure of capacity utilization. It is calculated by dividing the monthly or yearly sum of occupied rooms by the number of rooms available for use, then multiplying the quotient by 100 to express as a percentage. (*Caribbean Tourism Organisation Statistical Report*)

## CHAPTER 2 - TOURISM

Table 2.3 Visitor Expenditure and Number Employed in Tourism: 2009-2013

Country	Year	Visitor expenditure (US\$M)	Int'l and domestic tourism expenditure ('000US\$)	Expenditure on same-day visits ('000US\$)	Expenditure on accommodation, meals and drinks, shopping, entertainment etc. ('000US\$)	Total directly employed in tourism		
						Women	Men	Total
AG	2009	305.1						
	2010	297.7						
	2011	311.9						
	2012	319.0						
	2013	...						
BS	2009	2,014.2						
	2010	2,163.2						
	2011	2,141.5						
	2012	2,311.6						
	2013	2,284.7						
BB	2009	1,052.6						
	2010	1,021.9						
	2011	952.7						
	2012	909.9						
	2013	...						
BZ	2009	211.4						
	2010	250.7						
	2011	256.8						
	2012	319.6						
	2013	374.8						
DM	2009	83.6						
	2010	94.1						
	2011	95.0						
	2012	78.1						
	2013	102.0						
GD	2009	115.8		137.26				
	2010	111.7		118.77				
	2011	117.0		76.22				
	2012	122.6		90.39				
	2013	121.3		81.80				
JM	2009	1,925.0						36,354
	2010	2,001.0						37,018
	2011	2,008.0						34,921
	2012	2,070.0						34,921
	2013	2,113.0						35,197
	2014	2,248.0						35,166

## CHAPTER 2 - TOURISM

Table 2.3 cont'd Visitor Expenditure and Number Employed in Tourism: 2009-2013

Country	Year	Visitor expenditure (US\$M)	Int'l and domestic tourism expenditure ('000US\$)	Expenditure on same-day visits ('000US\$)	Expenditure on accommodation, meals and drinks, shopping, entertainment etc. ('000US\$)	Total directly employed in tourism		
						Women	Men	Total
MS	2009	16.4						
	2010	15.0						
	2011	14.0						
	2012	19.0						
	2013	18.3						
	2014	22.2						
KN	2009	83.5						
	2010	89.5						
	2011	94.1						
	2012	93.7						
	2013	...						
LC	2009	419.8						
	2010	562.0						
	2011	582.2						
	2012	590.1						
	2013	650.8						
VC	2009	87.5						
	2010	86.2						
	2011	91.7						
	2012	94.1						
	2013	92.3						
SR	2009	63.6						
	2010	61.0						
	2011	60.9						
	2012	71.0						
	2013	84.0						
TT	2009	4,400			3,605			
	2010	2,013			1,683			
	2011	4,116			3,571			
	2012	5,103			4,533			
	2013	3,579			3,011			
	2014	6,111			5,363			

# CHAPTER 2 - TOURISM

Table 2.3 cont'd Visitor Expenditure and Number Employed in Tourism: 2009-2013

Country	Year	Visitor expenditure (US\$M)	Int'l and domestic tourism expenditure ('000US\$)	Expenditure on same-day visits ('000US\$)	Expenditure on accommodation, meals and drinks, shopping, entertainment etc. ('000US\$)	Total directly employed in tourism		
						Women	Men	Total
<b>ASSOCIATE MEMBERS</b>								
AI	2009	93.8						
	2010	99.4						
	2011	112.0						
	2012	114.0						
	2013	123.0						
BM	2009	321.2		54,800	266,400	1,838	2,836	4,674
	2010	385.5		62,600	322,900	1,759	2,590	4,349
	2011	434.9		84,600	348,500	1,872	2,661	4,533
	2012	392.1		80,100	312,000	1,823	2,562	4,385
	2013	391.0		72,800	318,200	1,723	2,494	4,217
VG	2009	373.8						
	2010	389.4						
	2011	388.2						
	2012	397.8						
	2013	420.5						
KY	2009	547.8						
	2010	394.1						
	2011	453.8						
	2012	605.1						
	2013	470.0						

## Concept and Definitions

**Tourism Expenditure** refers to the amount paid for the acquisition of consumption goods and services, as well as valuables, for own use or to give away, for and during tourism trips. It includes expenditures by visitors themselves, as well as expenses that are paid for or reimbursed by others.

It excludes the acquisition of certain items such as social transfers in kind that benefit visitors, the imputation of accommodation services from owned vacation homes and financial intermediation services indirectly measured.

**Expenditures on same-day visits** are defined as the expenditures of visitors who spend less than twenty-four hours in the country being visited.

## Categories of Tourism Expenditures

Three categories of tourism expenditure based on the country of residence of the transactors involved, can be defined as follows:

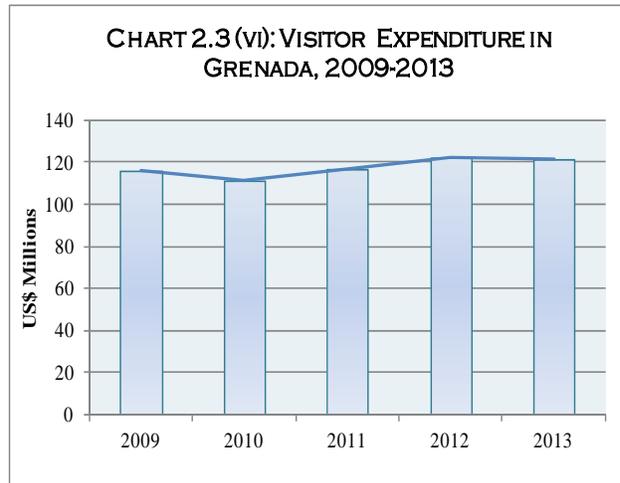
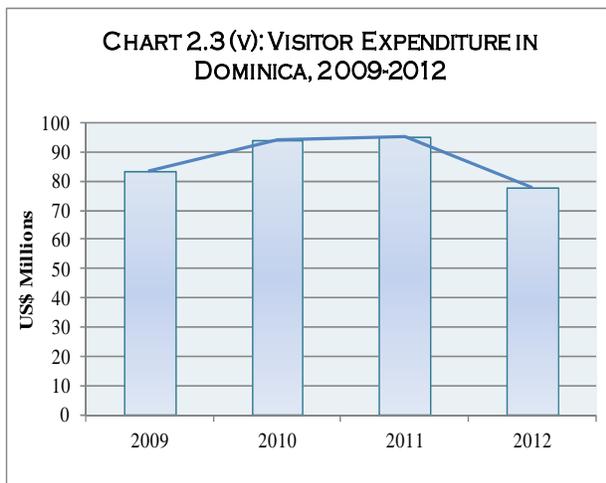
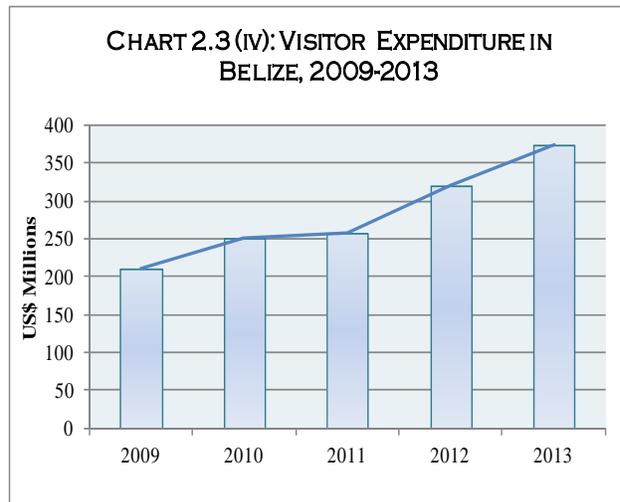
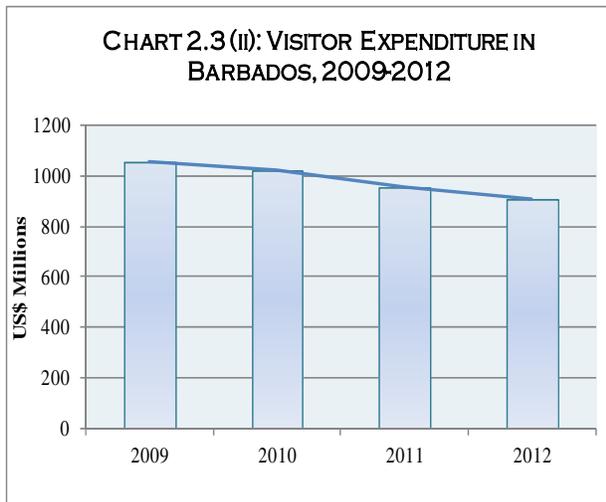
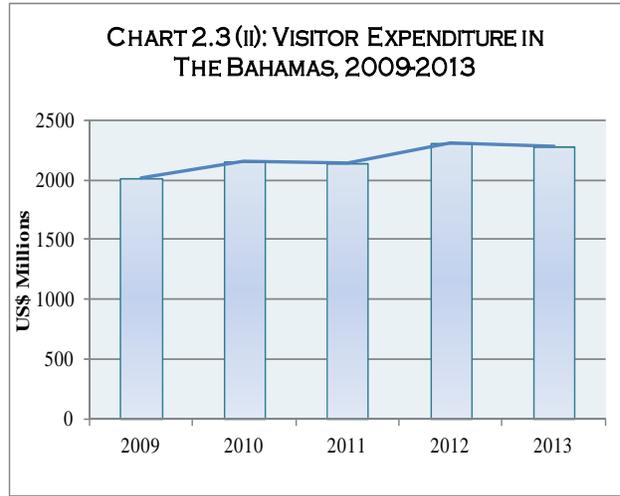
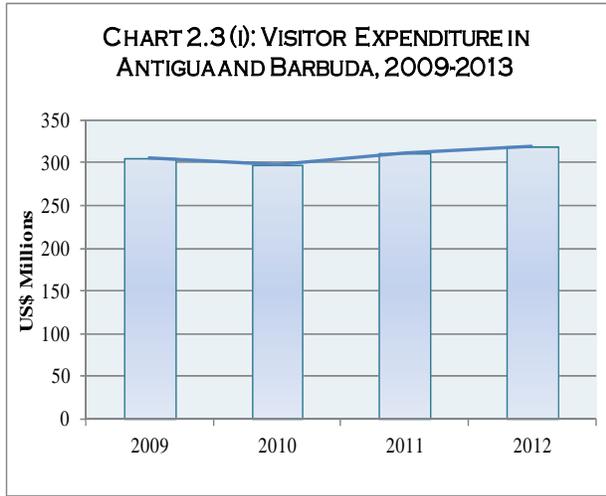
**Domestic tourism expenditure** is the tourism expenditure of a resident visitor within the economy of reference;

**Inbound tourism expenditure** is the tourism expenditure of a non-resident visitor within the economy of reference;

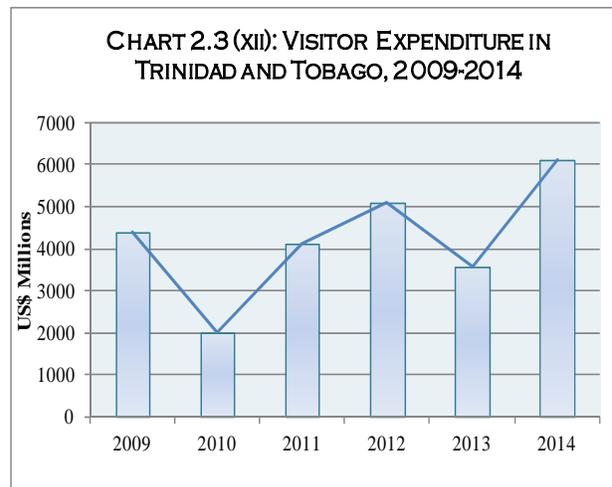
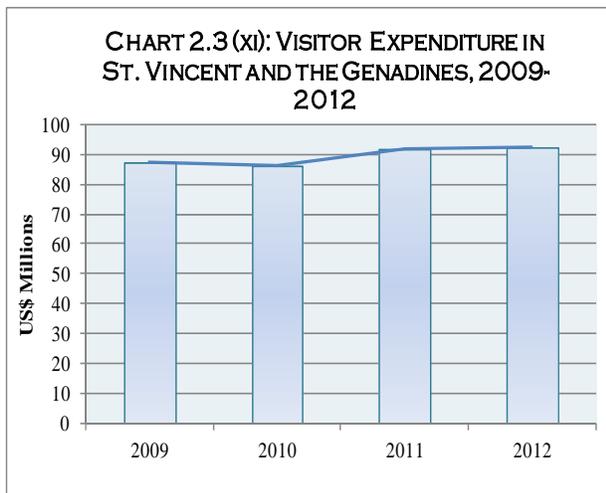
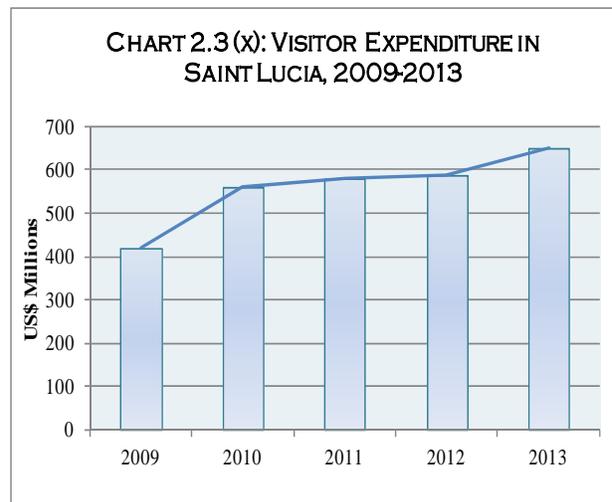
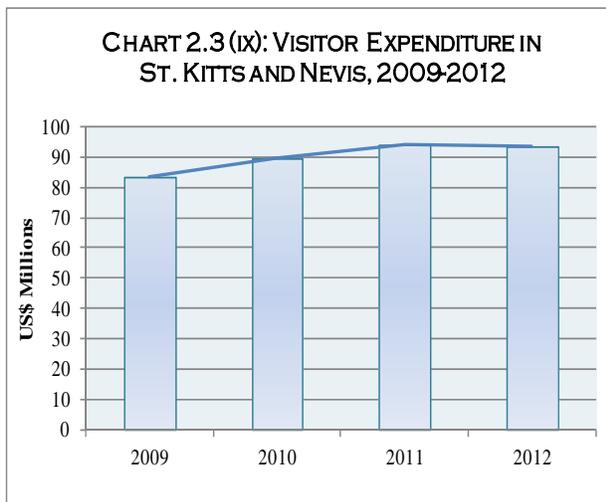
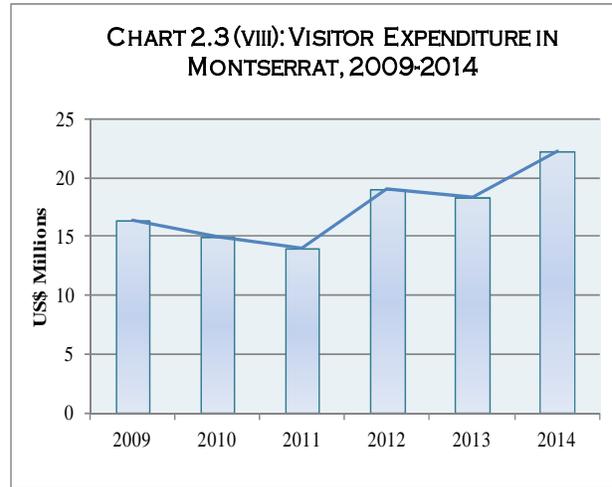
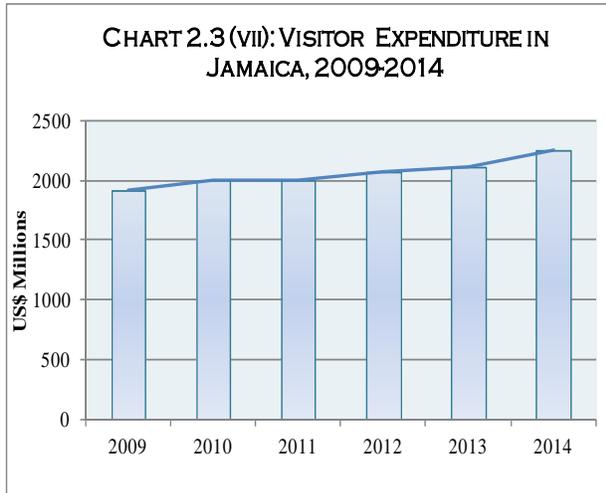
**Outbound tourism expenditure** is the tourism expenditure of a resident visitor outside the economy of reference.

(Please refer to the *International Recommendations for Tourism Statistics 2008 (IRTS 2008)* )

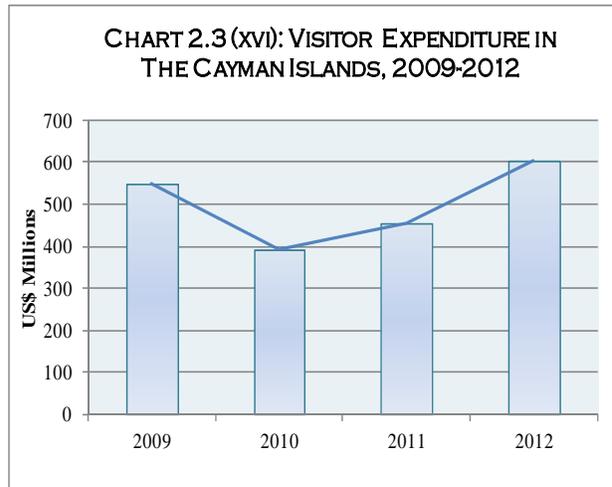
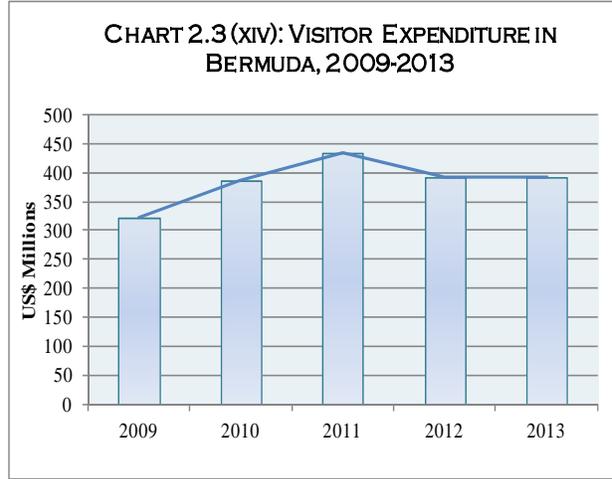
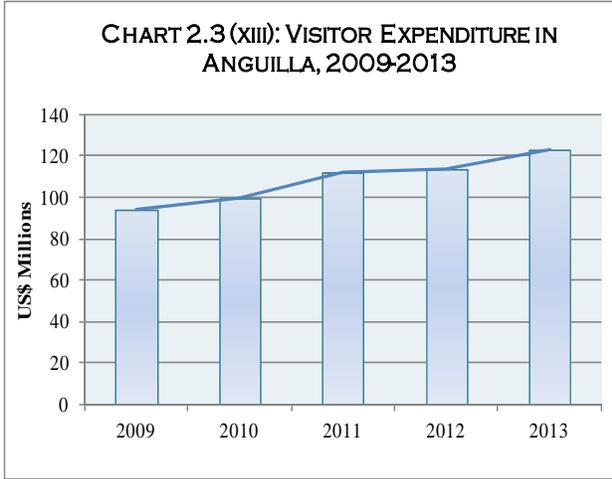
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**Table 2.4 (a) Number of Tourist Arrivals by Type of Accommodation: 2009-2013**

Country	Year	Hotels	Apartments / Villas	Guest Houses	Cottages/ Yacht/ Private Home	Other	Total
BS	2009	940,455	58,585			327,967	1,327,007
	2010	997,625	64,478			308,071	1,370,174
	2011	980,069	67,054			299,249	1,346,372
	2012	1,042,637	74,516			304,600	1,421,753
	2013	981,378	80,576			302,254	1,364,208
DM	2009	17,020	4,147	4,178	44,108	5,471	74,924
	2010	15,473	5,644	4,496	43,776	7,129	76,518
	2011	16,574	3,928	4,387	43,307	7,350	75,546
	2012	18,723	4,464	4,576	44,757	6,895	79,415
	2013	17,416	5,275	3,874	43,578	8,134	78,277
JM	2009	1,205,224	85,956		539,917		1,831,097
	2010	1,286,366	85,605		549,707		1,921,678
	2011	1,322,996	85,794		542,962		1,951,752
	2012	1,352,510	87,941		545,634		1,986,085
	2013	1,398,909	85,676		523,824		2,008,409
	2014	1,435,372	98,202		546,607		2,080,181
MS	2009	723	633	852	4,021	82	6,311
	2010	614	603	1,140	3,619	5	5,981
	2011	561	577	1,023	3,229	5	5,395
	2012	602	492	1,132	4,947	137	7,310
	2013	639	541	1,503	4,506	12	7,201
	2014	680	1,390	1,453	5,082	199	8,804
LC	2009	179,796	12,022	35,173	38,528	12,972	278,491
	2010	205,181	13,735	36,303	38,934	11,754	305,907
	2011	205,674	10,104	26,744	36,252	33,630	312,404
	2012	238,935	8,038	4,417	46,561	8,850	306,801
	2013	246,529	8,333	4,443	49,142	10,179	318,626
VC	2009	25,258	2,461	1,034	39,878	6,815	75,446
	2010	23,372	2,326	1,008	39,258	6,514	72,478
	2011	26,630	1,799	822	38,160	6,455	73,866
	2012	26,466	1,888	787	39,052	6,171	74,364

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Table 2.4 (a) cont'd Number of Tourist Arrivals by Type of Accommodation: 2009-2013

Country	Year	Hotels	Apartments /Villas	Guest Houses	Cottages/ Yacht/ Private Home	Other	Total
SR	2009	49,520	16,205		75,195	9,708	150,628
	2010	72,674	20,589		95,053	16,203	204,519
	2011	87,847	16,740		91,717	24,171	220,475
	2012	96,902	18,960		93,880	30,299	240,041
	2013	103,545	45,578		80,795	19,184	249,102
<b>ASSOCIATE MEMBERS</b>							
BM	2009	159,739		1,894		74,233	235,866
	2010	162,011		2,067		68,184	232,262
	2011	168,502		1,996		65,540	236,038
	2012	166,425		1,548		64,090	232,063
	2013	167,538		1,683		67,122	236,343
KY	2009	135,456	65,824		44,880	25,840	272,000
	2010	143,848	68,609		45,547	30,269	288,272
	2011	156,405	76,657		48,838	27,201	309,100
	2012	159,242	88,789		48,255	25,414	321,700
	2013	160,266	98,094		46,284	40,757	345,400

### Concept and Definition

**Tourist accommodation** refers to any facility that regularly or occasionally provides overnight accommodation for tourists. There are two basic categories of tourist accommodations:

- **Collective accommodation establishments:** e.g. Hotels and similar establishments; and,
- **Private tourist accommodations:** e.g. owned dwellings, rented rooms in family homes, accommodation provided by friends and relatives.

*(Please refer to the Caribbean Tourism Organisation Statistical Report)*

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**Table 2.4 (b): Percentage Distribution of Tourist Arrivals by Type of Accommodation: 2009-2013**

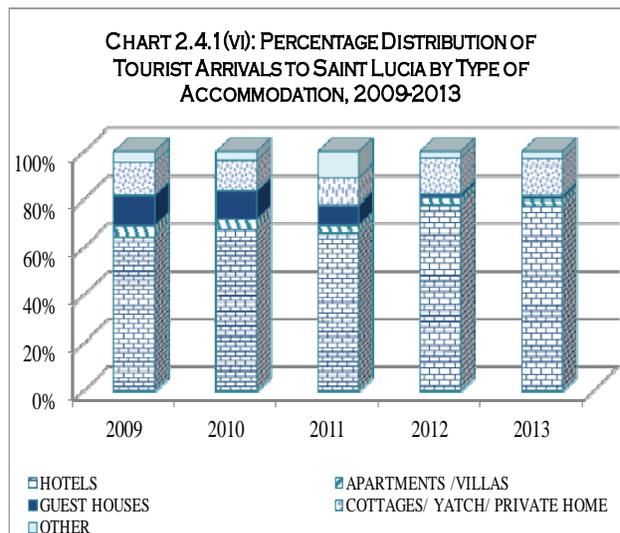
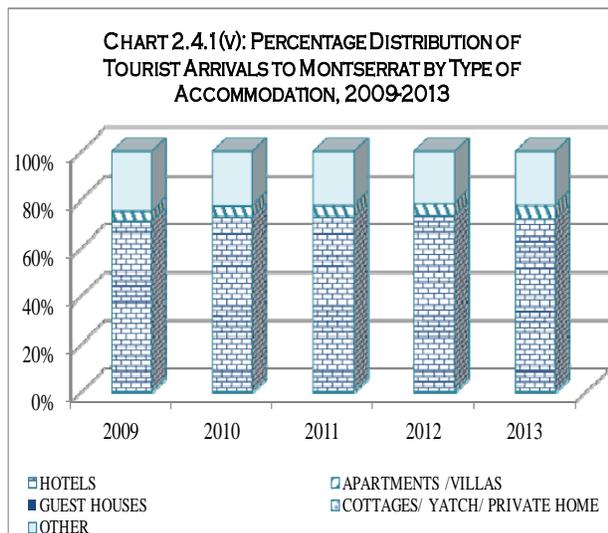
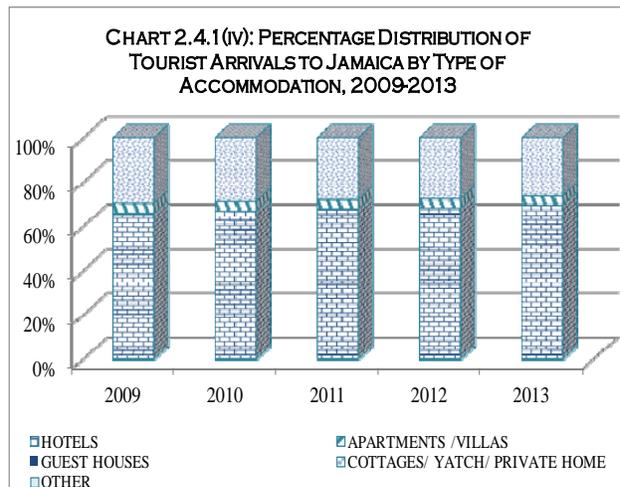
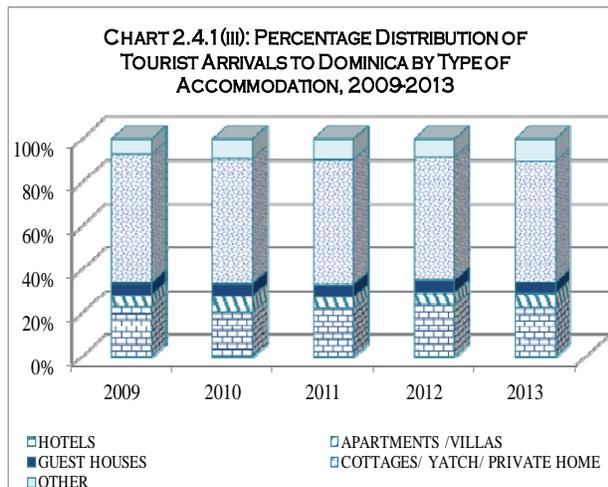
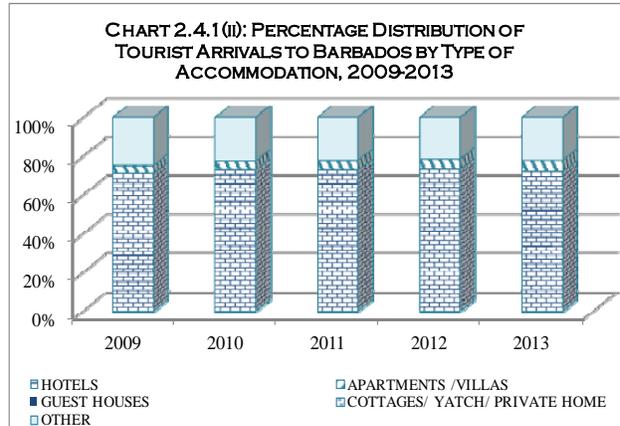
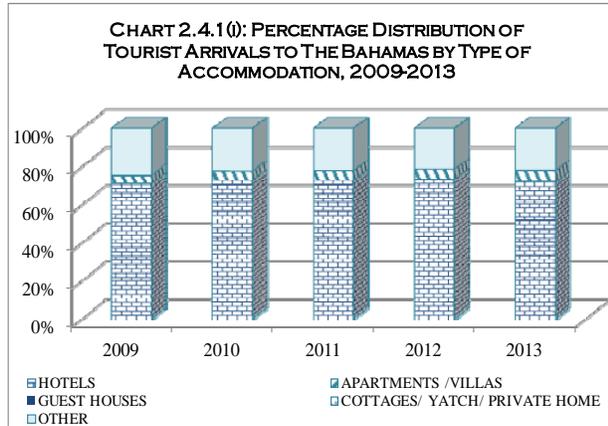
Country	Year	Hotels	Apartments /Villas	Guest Houses	Cottages/ Yacht/ Private Home	Other	Total
BS	2009	70.9	4.4			24.7	100.0
	2010	72.8	4.7			22.5	100.0
	2011	72.8	5.0			22.2	100.0
	2012	73.3	5.2			21.4	100.0
	2013	71.9	5.9			22.2	100.0
BB	2009	22.7	5.5	5.6	58.9	7.3	100.0
	2010	20.2	7.4	5.9	57.2	9.3	100.0
	2011	21.9	5.2	5.8	57.3	9.7	100.0
	2012	23.6	5.6	5.8	56.4	8.7	100.0
	2013	22.2	6.7	4.9	55.7	10.4	100.0
JM	2009	65.8	4.7	0.0	29.5	0.0	100.0
	2010	66.9	4.5	0.0	28.6	0.0	100.0
	2011	67.8	4.4	0.0	27.8	0.0	100.0
	2012	68.1	4.4	0.0	27.5	0.0	100.0
	2013	69.7	4.3	0.0	26.1	0.0	100.0
	2014	69.0	4.7	0.0	26.3	0.0	100.0
MS	2009	11.5	10.0	13.5	63.7	1.3	100.0
	2010	10.3	10.1	19.1	60.5	0.1	100.0
	2011	10.4	10.7	19.0	59.9	0.1	100.0
	2012	8.2	6.7	15.5	67.7	1.9	100.0
	2013	8.9	7.5	20.9	62.6	0.2	100.0
	2014	7.7	15.8	16.5	57.7	2.3	100.0
LC	2009	64.6	4.3	12.6	13.8	4.7	100.0
	2010	67.1	4.5	11.9	12.7	3.8	100.0
	2011	65.8	3.2	8.6	11.6	10.8	100.0
	2012	77.9	2.6	1.4	15.2	2.9	100.0
	2013	77.4	2.6	1.4	15.4	3.2	100.0
VC	2009	33.5	3.3	1.4	52.9	9.0	100.0
	2010	32.2	3.2	1.4	54.2	9.0	100.0
	2011	36.1	2.4	1.1	51.7	8.7	100.0
	2012	35.6	2.5	1.1	52.5	8.3	100.0

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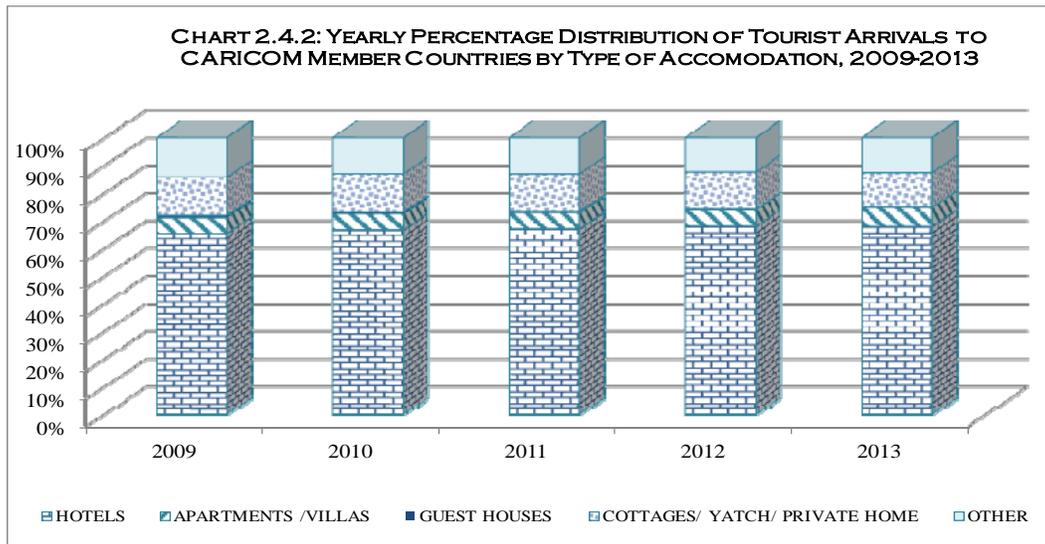
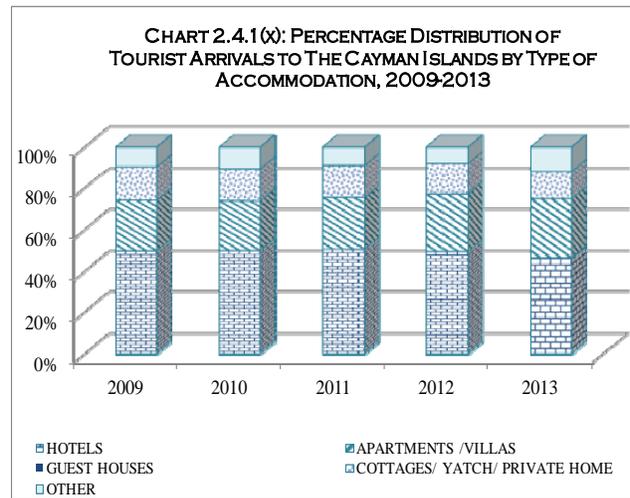
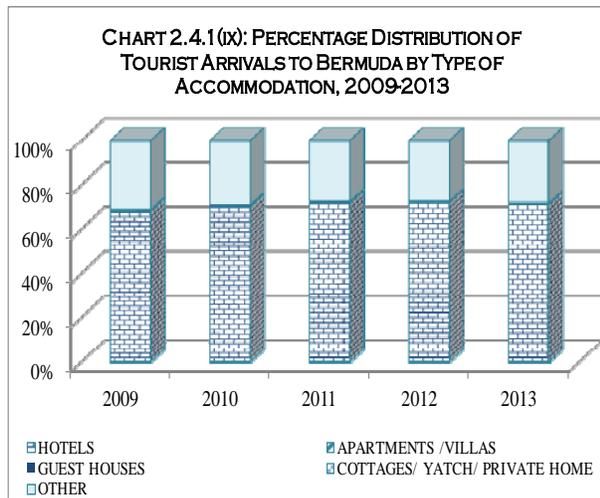
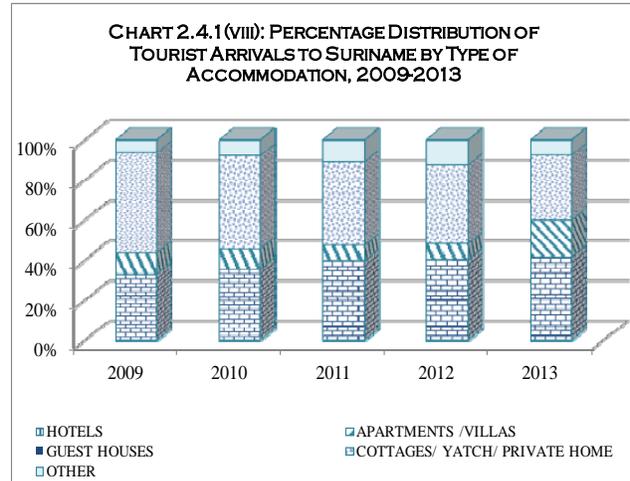
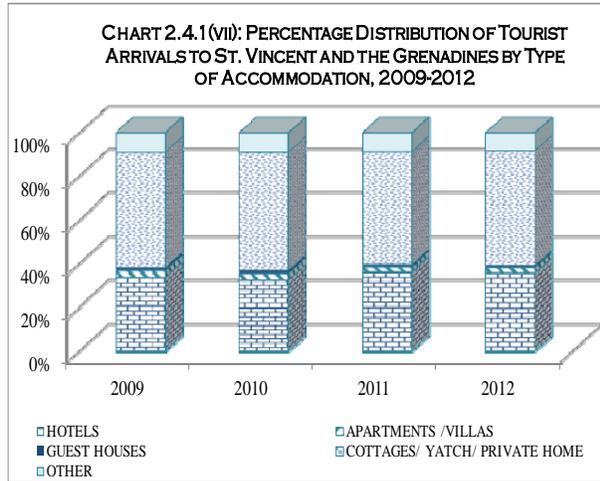
**Table 2.4 (b) cont'd: Percentage Distribution of Tourist Arrivals by Type of Accommodation: 2009-2013**

Country	Year	Hotels	Apartments /Villas	Guest Houses	Cottages/ Yacht/ Private Home	Other	Total
SR	2009	32.9	10.8	0.0	49.9	6.4	100.0
	2010	35.5	10.1	0.0	46.5	7.9	100.0
	2011	39.8	7.6	0.0	41.6	11.0	100.0
	2012	40.4	7.9	0.0	39.1	12.6	100.0
	2013	41.6	18.3	0.0	32.4	7.7	100.0
<b>ASSOCIATE MEMBERS</b>							
BM	2009	67.7		0.8		31.5	100.0
	2010	69.8		0.9		29.4	100.0
	2011	71.4		0.8		27.8	100.0
	2012	71.7		0.7		27.6	100.0
	2013	70.9		0.7		28.4	100.0
KY	2009	49.8	24.2		16.5	9.5	100.0
	2010	49.9	23.8		15.8	10.5	100.0
	2011	50.6	24.8		15.8	8.8	100.0
	2012	49.5	27.6		15.0	7.9	100.0
	2013	46.4	28.4		13.4	11.8	100.0

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**Table 2.5 (a) Tourist Arrivals by Country of Origin: 2009-2013**

Country	Year	United States	Canada	Europe	Caribbean	Rest of the World	Total
AG	2009	82,068	12,947	93,442	41,546	4,407	234,410
	2010	81,598	17,818	88,945	37,505	4,077	229,943
	2011	84,832	22,403	92,097	37,887	4,112	241,331
	2012	93,214	24,185	89,909	35,249	4,369	246,926
	2013	88,818	30,442	88,468	31,801	4,403	243,932
BS	2009	1,068,726	107,041	78,817	18,856	53,567	1,327,007
	2010	1,097,184	119,321	78,083	18,518	57,068	1,370,174
	2011	1,058,682	124,166	78,201	17,979	67,344	1,346,372
	2012	1,121,597	131,064	78,641	17,228	73,223	1,421,753
	2013	1,066,072	123,720	80,568	18,603	75,245	1,364,208
BB	2009	122,306	63,751	220,704	101,676	10,127	518,564
	2010	134,969	72,351	212,276	98,586	13,998	532,180
	2011	142,414	71,953	225,009	112,538	15,810	567,724
	2012	130,762	72,020	210,638	106,041	16,842	536,303
	2013	120,583	67,293	209,796	87,294	23,548	508,514
BZ	2009	139,561	17,211	29,603	2,388	43,486	232,249
	2010	145,872	18,246	30,025	2,505	45,271	241,919
	2011	156,293	20,093	30,142	2,050	41,685	250,263
	2012	176,642	24,223	29,362	2,288	44,620	277,135
	2013	183,513	26,713	32,191	2,179	49,580	294,176
DM	2009	18,193	2,618	11,590	40,525	1,998	74,924
	2010	19,266	2,858	10,725	41,899	1,769	76,517
	2011	17,820	2,986	11,538	41,210	1,992	75,546
	2012	19,002	3,063	12,816	41,958	2,126	78,965
	2013	18,044	3,018	13,552	41,540	2,123	78,277
GD	2009	25,984	7,194	36,090	26,483	18,163	113,914
	2010	26,067	7,322	35,386	24,201	17,495	110,471
	2011	28,714	7,490	36,235	27,284	18,572	118,295
	2012	32,068	8,123	33,103	25,707	18,244	117,245
	2013	36,321	9,920	27,729	25,253	18,497	117,720

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Table 2.5 (a) cont'd Tourist Arrivals by Country of Origin: 2009-2013

Country	Year	United States	Canada	Europe	Caribbean	Rest of the World	Total
GY	2009	76,955	23,812	8,277	28,026	4,211	141,281
	2010	82,966	25,381	8,357	29,487	5,735	151,926
	2011	83,298	23,968	8,287	36,649	4,708	156,910
	2012	98,625	25,977	8,877	36,621	6,542	176,642
	2013	83,973	26,033	10,054	51,942	28,058	200,060
JM	2009	1,172,844	290,307	276,799	65,333	25,814	1,831,097
	2010	1,242,943	325,191	271,315	58,299	23,930	1,921,678
	2011	1,225,565	378,938	253,045	66,216	27,988	1,951,752
	2012	1,257,669	403,200	222,428	64,984	37,804	1,986,085
	2013	1,271,262	399,331	235,811	58,249	43,756	2,008,409
MS	2009	1,606	367	2,031	2,267	40	6,311
	2010	1,665	404	1,573	2,259	80	5,981
	2011	1,526	320	1,535	1,881	133	5,395
	2012	1,950	505	2,342	2,390	123	7,310
	2013	1,775	516	2,220	2,591	99	7,201
	2014	2,041	678	2,433	3,528	124	8,804
KN	2009	56,373	6,931	8,303	22,769	1,701	96,077
	2010	58,710	5,720	9,201	19,923	4,775	98,329
	2011	59,997	5,624	8,853	17,401	2,968	94,843
	2012	63,074	6,756	9,081	16,195	2,751	97,857
	2013	65,557	6,722	9,767	16,027	2,924	100,997
LC	2009	98,685	28,563	86,819	60,132	4,241	278,440
	2010	129,085	32,154	85,695	53,998	5,005	305,937
	2011	122,356	35,393	91,759	58,876	4,020	312,404
	2012	115,065	37,709	93,400	56,067	4,560	306,801
	2013	128,331	35,985	88,492	60,521	5,297	318,626
VC	2009	20,159	6,820	19,097	26,835	2,535	75,446
	2010	21,551	7,208	17,665	23,968	2,086	72,478
	2011	21,164	6,719	20,549	23,272	2,162	73,866
	2012	21,454	7,424	20,410	22,768	2,308	74,364
	2013	20,106	7,146	20,401	21,745	2,327	71,725

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Table 2.5 (a) cont'd Tourist Arrivals by Country of Origin: 2009-2013

Country	Year	United States	Canada	Europe	Caribbean	Rest of the World	Total
SR	2009	4,964	...	87,783	10,497	47,384	150,628
	2010	6,600	...	110,209	13,417	74,293	204,519
	2011	7,754	...	107,966	14,448	90,307	220,475
	2012	7,985	...	108,975	14,329	108,752	240,041
	2013	7,287	...	104,566	15,840	121,409	249,102
TT	2009	193,801	49,067	57,333	58,203	57,077	415,481
	2010	183,704	46,768	52,329	56,010	49,499	388,310
	2011	156,109	48,710	62,740	101,745	19,006	388,310
	2012	148,312	42,472	58,308	103,129	78,701	430,922
	2013	140,994	61,681	68,068	104,359	79,581	454,683
<b>ASSOCIATE MEMBERS</b>							
AI	2009	34,073	2,032	7,457	12,924	1,405	57,891
	2010	38,882	2,403	7,544	11,851	1,318	61,998
	2011	42,829	2,823	7,523	10,954	1,654	65,783
	2012	41,795	3,291	7,223	10,181	2,208	64,698
	2013	45,510	3,575	7,434	10,454	2,095	69,068
	2014	55,645	8,126	21,287	13,662	7,133	105,853
BM	2009	172,651	24,866	23,906		14,443	235,866
	2010	166,016	30,402	23,240		12,604	232,262
	2011	172,890	29,217	21,524		12,407	236,038
	2012	168,178	30,565	21,029		12,291	232,063
	2013	171,215	27,613	23,610		13,905	236,343
KY	2009	215,042	17,254	19,117		20,545	271,958
	2010	228,461	19,499	19,840		20,462	288,262
	2011	242,900	24,629	21,132		20,402	309,063
	2012	253,209	24,092	21,388		22,961	321,650
	2013	265,436	23,640	27,813		28,496	345,385
TC	2009	174,903	56,841	20,887	16,911	...	250,215
	2010	173,014	36,785	7,523	15,245	48,592	281,159
	2011	262,142	42,282	6,902	39,913	2,984	354,223
	2012	228,271	37,877	6,955	...	3,295	276,398
	2013	231,651	31,797	6,671	16,114	4,354	290,587
VG	2010	223,813	11,599	25,840	60,521	8,570	330,343
	2011	222,263	15,844	31,797	58,884	8,985	337,773
	2012	217,476	16,030	31,730	77,800	8,368	351,404
	2013	218,345	17,522	39,445	81,247	9,549	366,108

## CHAPTER 2 - TOURISM

**Table 2.5 (b) Percentage Distribution of Tourist Arrivals by Country of Origin: 2009-2013**

Country	Year	United States	Canada	Europe	Caribbean	Rest of the World	Total
<b>AG</b>	2009	35.0	5.5	39.9	17.7	1.9	100.0
	2010	35.5	7.7	38.7	16.3	1.8	100.0
	2011	35.2	9.3	38.2	15.7	1.7	100.0
	2012	37.7	9.8	36.4	14.3	1.8	100.0
	2013	36.4	12.5	36.3	13.0	1.8	100.0
<b>BS</b>	2009	80.5	8.1	5.9	1.4	4.0	100.0
	2010	80.1	8.7	5.7	1.4	4.2	100.0
	2011	78.6	9.2	5.8	1.3	5.0	100.0
	2012	78.9	9.2	5.5	1.2	5.2	100.0
	2013	78.1	9.1	5.9	1.4	5.5	100.0
<b>BB</b>	2009	23.6	12.3	42.6	19.6	2.0	100.0
	2010	25.4	13.6	39.9	18.5	2.6	100.0
	2011	25.1	12.7	39.6	19.8	2.8	100.0
	2012	24.4	13.4	39.3	19.8	3.1	100.0
	2013	23.7	13.2	41.3	17.2	4.6	100.0
<b>BZ</b>	2009	60.1	7.4	12.7	1.0	18.7	100.0
	2010	60.3	7.5	12.4	1.0	18.7	100.0
	2011	62.5	8.0	12.0	0.8	16.7	100.0
	2012	63.7	8.7	10.6	0.8	16.1	100.0
	2013	62.4	9.1	10.9	0.7	16.9	100.0
<b>DM</b>	2009	24.3	3.5	15.5	54.1	2.7	100.0
	2010	25.2	3.7	14.0	54.8	2.3	100.0
	2011	23.6	4.0	15.3	54.5	2.6	100.0
	2012	24.1	3.9	16.2	53.1	2.7	100.0
	2013	23.1	3.9	17.3	53.1	2.7	100.0
<b>GD</b>	2009	22.8	6.3	31.7	23.2	15.9	100.0
	2010	23.6	6.6	32.0	21.9	15.8	100.0
	2011	24.3	6.3	30.6	23.1	15.7	100.0
	2012	27.4	6.9	28.2	21.9	15.6	100.0
	2013	30.9	8.4	23.6	21.5	15.7	100.0

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**Table 2.5 (b) cont'd Percentage Distribution of Tourist Arrivals by Country of Origin: 2009-2013**

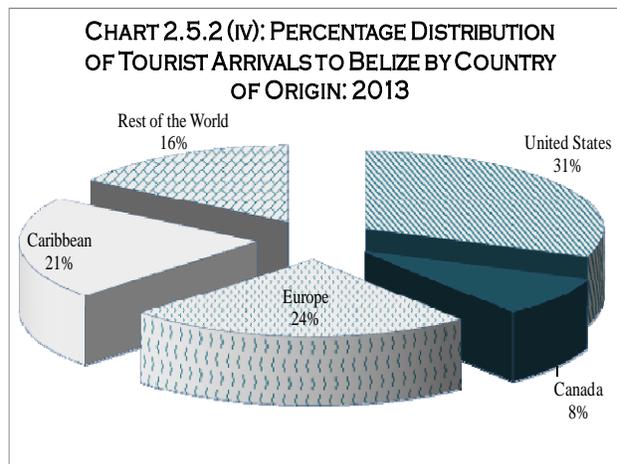
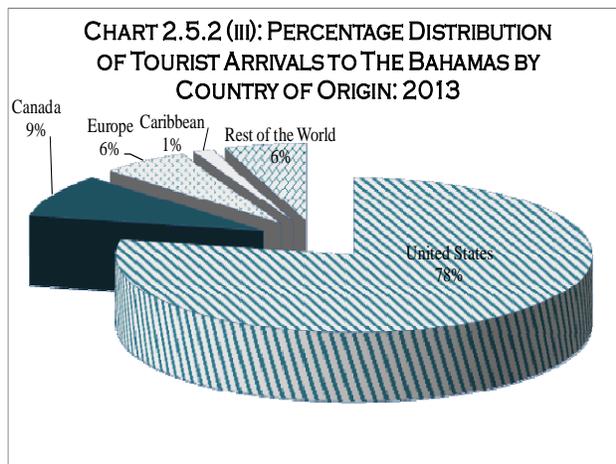
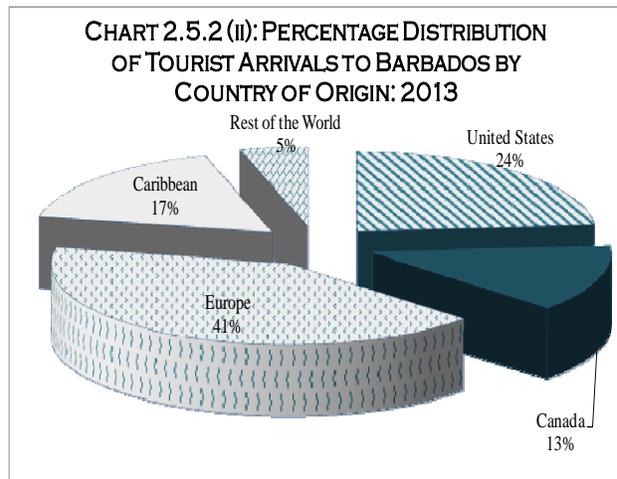
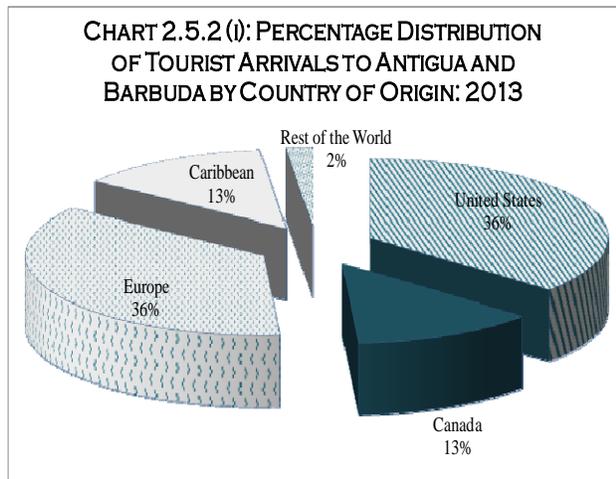
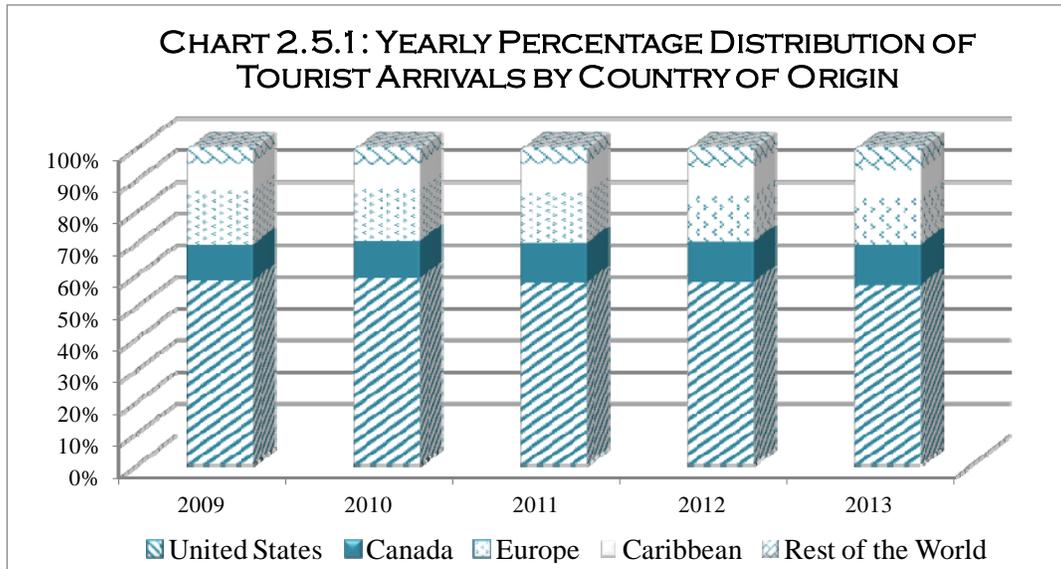
Country	Year	United States	Canada	Europe	Caribbean	Rest of the World	Total
<b>GY</b>	2009	54.5	16.9	5.9	19.8	3.0	100.0
	2010	54.6	16.7	5.5	19.4	3.8	100.0
	2011	53.1	15.3	5.3	23.4	3.0	100.0
	2012	55.8	14.7	5.0	20.7	3.7	100.0
	2013	42.0	13.0	5.0	26.0	14.0	100.0
<b>JM</b>	2009	64.1	15.9	15.1	3.6	1.4	100.0
	2010	64.7	16.9	14.1	3.0	1.2	100.0
	2011	62.8	19.4	13.0	3.4	1.4	100.0
	2012	63.3	20.3	11.2	3.3	1.9	100.0
	2013	63.3	19.9	11.7	2.9	2.2	100.0
<b>MS</b>	2009	25.4	5.8	32.2	35.9	0.6	100.0
	2010	27.8	6.8	26.3	37.8	1.3	100.0
	2011	28.3	5.9	28.5	34.9	2.5	100.0
	2012	26.7	6.9	32.0	32.7	1.7	100.0
	2013	24.6	7.2	30.8	36.0	1.4	100.0
	2014	23.2	7.7	27.6	40.1	1.4	100.0
<b>KN</b>	2009	58.7	7.2	8.6	23.7	1.8	100.0
	2010	59.7	5.8	9.4	20.3	4.9	100.0
	2011	63.3	5.9	9.3	18.3	3.1	100.0
	2012	64.5	6.9	9.3	16.5	2.8	100.0
	2013	64.9	6.7	9.7	15.9	2.9	100.0
<b>LC</b>	2009	35.4	10.3	31.2	21.6	1.5	100.0
	2010	42.2	10.5	28.0	17.7	1.6	100.0
	2011	39.2	11.3	29.4	18.8	1.3	100.0
	2012	37.5	12.3	30.4	18.3	1.5	100.0
	2013	40.3	11.3	27.8	19.0	1.7	100.0
<b>VC</b>	2009	26.7	9.0	25.3	35.6	3.4	100.0
	2010	29.7	9.9	24.4	33.1	2.9	100.0
	2011	28.7	9.1	27.8	31.5	2.9	100.0
	2012	28.8	10.0	27.4	30.6	3.1	100.0
	2013	28.0	10.0	28.4	30.3	3.2	100.0

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**Table 2.5 (b) cont'd Percentage Distribution of Tourist Arrivals by Country of Origin: 2009-2013**

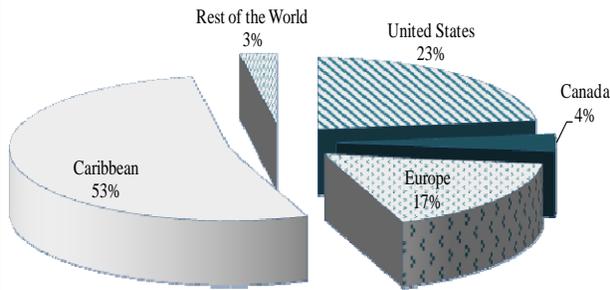
Country	Year	United States	Canada	Europe	Caribbean	Rest of the World	Total
SR	2009	3.3	...	58.3	7.0	31.5	100.0
	2010	3.2	...	53.9	6.6	36.3	100.0
	2011	3.5	...	49.0	6.6	41.0	100.0
	2012	3.3	...	45.4	6.0	45.3	100.0
	2013	2.9	...	42.0	6.4	48.7	100.0
TT	2009	46.6	11.8	13.8	14.0	13.7	100.0
	2010	47.3	12.0	13.5	14.4	12.7	100.0
	2011	40.2	12.5	16.2	26.2	4.9	100.0
	2012	34.4	9.9	13.5	23.9	18.3	100.0
	2013	31.0	13.6	15.0	23.0	17.5	100.0
<b>ASSOCIATE MEMBERS</b>							
AI	2009	58.9	3.5	12.9	22.3	2.4	100.0
	2010	62.7	3.9	12.2	19.1	2.1	100.0
	2011	65.1	4.3	11.4	16.7	2.5	100.0
	2012	64.6	5.1	11.2	15.7	3.4	100.0
	2013	65.9	5.2	10.8	15.1	3.0	100.0
	2014	52.6	7.7	20.1	12.9	6.7	100.0
BM	2009	73.2	10.5	10.1		6.1	100.0
	2010	71.5	13.1	10.0		5.4	100.0
	2011	73.2	12.4	9.1		5.3	100.0
	2012	72.5	13.2	9.1		5.3	100.0
	2013	72.4	11.7	10.0		5.9	100.0
KY	2009	79.1	6.3	7.0		7.6	100.0
	2010	79.3	6.8	6.9		7.1	100.0
	2011	78.6	8.0	6.8		6.6	100.0
	2012	78.7	7.5	6.6		7.1	100.0
	2013	76.9	6.8	8.1		8.3	100.0
TC	2009	69.9	22.7	8.3	6.8	...	100.0
	2010	61.5	13.1	2.7	5.4	17.3	100.0
	2011	74.0	11.9	1.9	11.3	0.8	100.0
	2012	82.6	13.7	2.5	...	1.2	100.0
	2013	79.7	10.9	2.3	5.5	1.5	100.0
VG	2010	67.8	3.5	7.8	18.3	2.6	100.0
	2011	65.8	4.7	9.4	17.4	2.7	100.0
	2012	61.9	4.6	9.0	22.1	2.4	100.0
	2013	59.6	4.8	10.8	22.2	2.6	100.0

# CHAPTER 2 - TOURISM

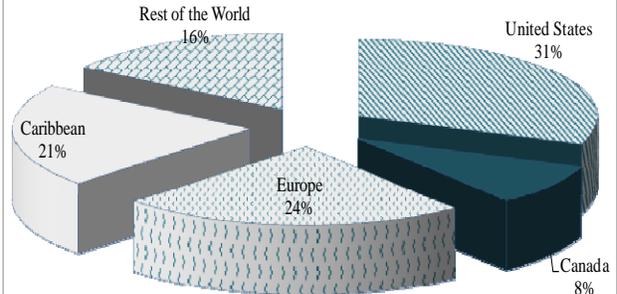


# CHAPTER 2 - TOURISM

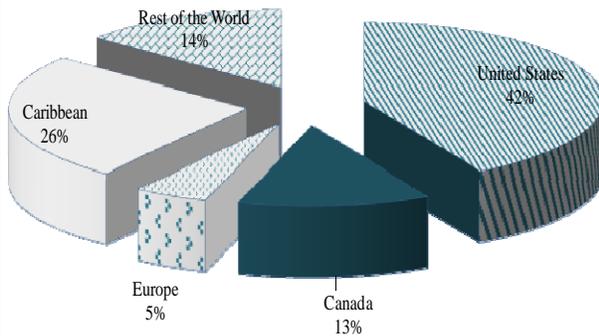
**CHART 2.5.2 (v): PERCENTAGE DISTRIBUTION OF TOURIST ARRIVALS TO THE DOMINICA BY COUNTRY OF ORIGIN: 2013**



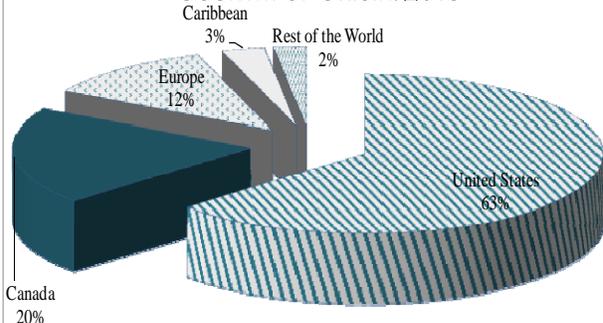
**CHART 2.5.2 (vi): PERCENTAGE DISTRIBUTION OF TOURIST ARRIVALS TO GRENADA BY COUNTRY OF ORIGIN: 2013**



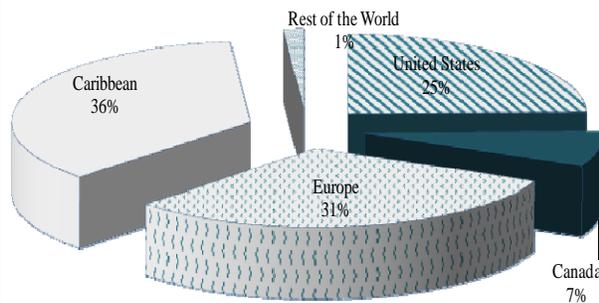
**CHART 2.5.2 (vii): PERCENTAGE DISTRIBUTION OF TOURIST ARRIVALS TO THE GUYANA BY COUNTRY OF ORIGIN: 2013**



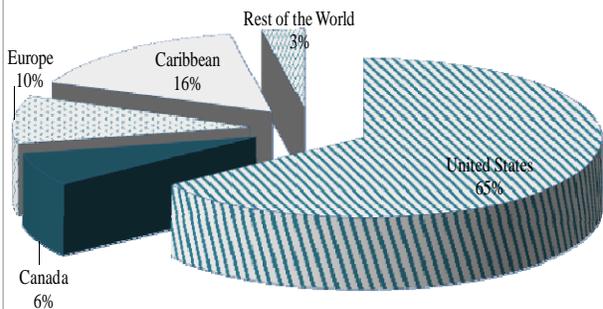
**CHART 2.5.2 (viii): PERCENTAGE DISTRIBUTION OF TOURIST ARRIVALS TO JAMAICA BY COUNTRY OF ORIGIN: 2013**



**CHART 2.5.2 (ix): PERCENTAGE DISTRIBUTION OF TOURIST ARRIVALS TO THE MONTSERRAT BY COUNTRY OF ORIGIN: 2013**

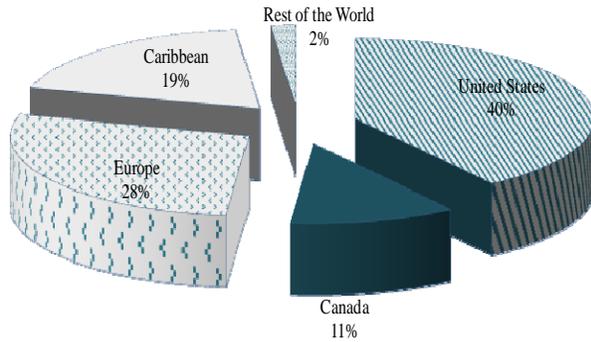


**CHART 2.5.2 (x): PERCENTAGE DISTRIBUTION OF TOURIST ARRIVALS TO ST. KITTS AND NEVIS BY COUNTRY OF ORIGIN: 2013**

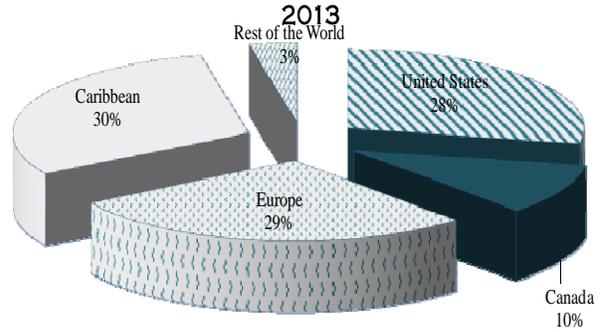


# CHAPTER 2 - TOURISM

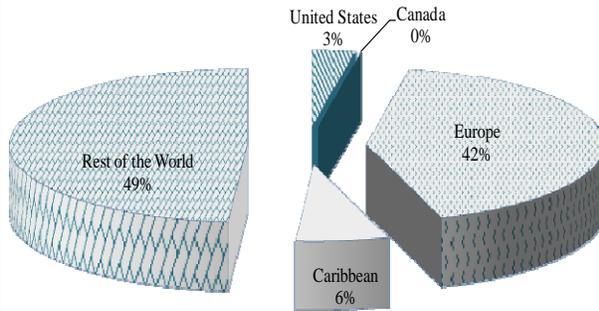
**CHART 2.5.2 (xi): PERCENTAGE DISTRIBUTION OF TOURIST ARRIVALS TO THE SAINT LUCIA BY COUNTRY OF ORIGIN: 2013**



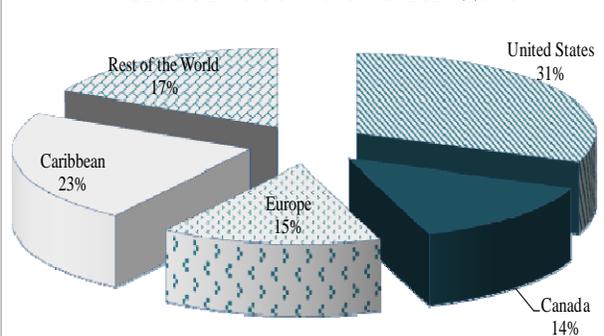
**CHART 2.5.2 (xii): PERCENTAGE DISTRIBUTION OF TOURIST ARRIVALS TO ST. VINCENT AND THE GRENADINES BY COUNTRY OF ORIGIN: 2013**



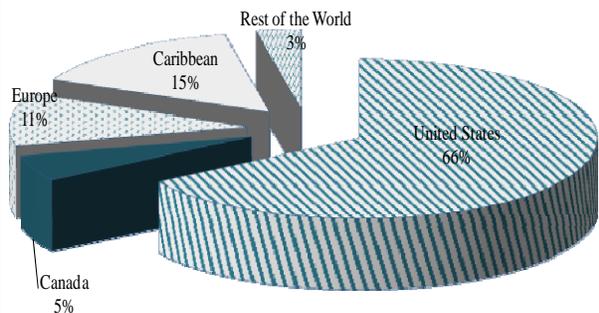
**CHART 2.5.2 (xiii): PERCENTAGE DISTRIBUTION OF TOURIST ARRIVALS TO SURINAME BY COUNTRY OF ORIGIN: 2013**



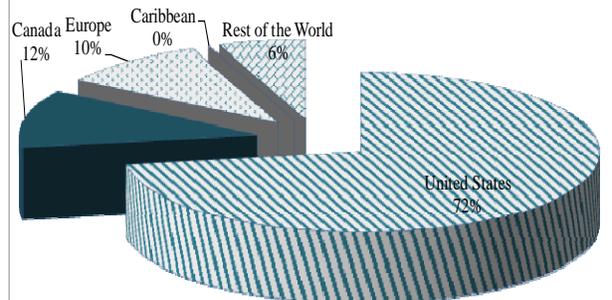
**CHART 2.5.2 (xiv): PERCENTAGE DISTRIBUTION OF TOURIST ARRIVALS TO TRINIDAD AND TOBAGO BY COUNTRY OF ORIGIN: 2013**



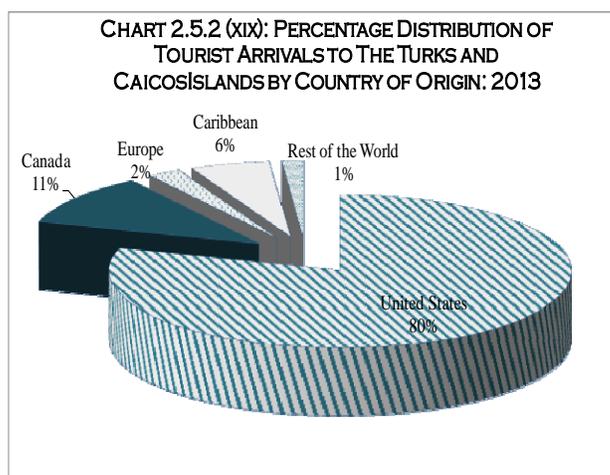
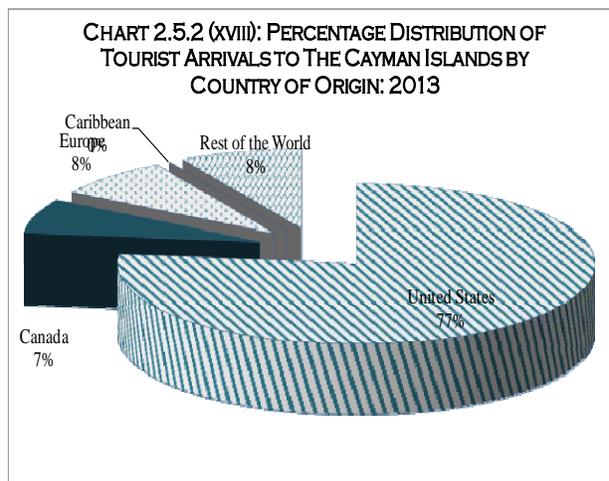
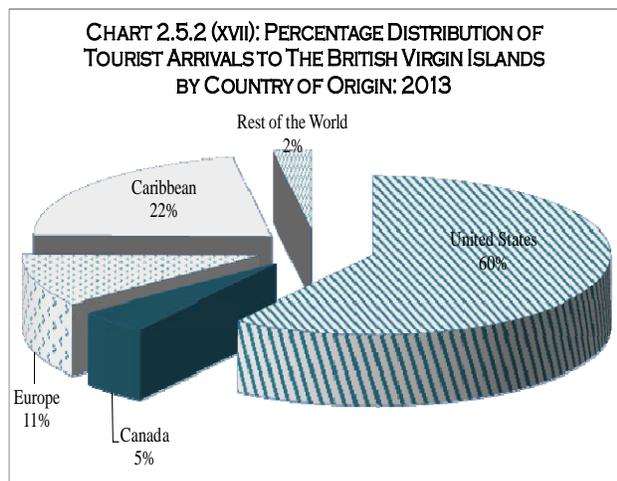
**CHART 2.5.2 (xv): PERCENTAGE DISTRIBUTION OF TOURIST ARRIVALS TO ANGUILLA BY COUNTRY OF ORIGIN: 2013**



**CHART 2.5.2 (xvi): PERCENTAGE DISTRIBUTION OF TOURIST ARRIVALS TO BERMUDA BY COUNTRY OF ORIGIN: 2013**



## CHAPTER 2 - TOURISM



### **Concepts and Definitions**

**Tourist Arrivals** include all stay-over (or overnight) visitors. It does not, however, include same-day visitors such as cruise passengers and yacht arrivals.

**Country of Origin:** This is the place/country from which the trip originates. It is usually the same as the place and country of residence.

The trip may also start from the place of work or education. This is not relevant for tourism since the place of residence may still be considered as the origin. When people live in another place than their usual residence during the survey period (e.g. short-term migrants and seasonal workers), this place should be taken as the origin. For day trips the place of origin may be the second regular residence of the person although it is useful to distinguish them from trips originating from the first residence.

**Country of Residence:** A person is considered to be a resident in a country (place) if the person (i) has lived for most of the past year or 12 months in that country (place), or (ii) has lived in that country (place) for a shorter period and intends to return within 12 months to live in that country (place).

Please refer to Eurostat (1996). *Applying the Eurostat Methodological Guidelines In Basic Tourism and Travel Statistics*. <http://epp.eurostat.ec.europa.eu/>

## CHAPTER 2 - TOURISM

### DATA GAPS

#### **Table 2.1 (a) Tourists, Cruise Ships Arrivals and Average tourist nights spent by year**

Twelve (12) countries submitted data from 2009 -2013 for this table with the remaining gaps filled with data from the Caribbean Tourism Organisation (CTO). Data on the indicator the *average tourist nights spent* were submitted by six (6) countries and CTO data were used to fill this particular data gap.

#### **Table 2.1 (b) Tourism Intensity Rate, Tourism Density Ratio and Tourist Penetration Ratio**

Five (5) countries supplied the requested data on the *Tourism Intensity Rate* and *Tourist Penetration Ratio* while remaining countries with missing data were filled with data from the CTO.

#### **Table 2.2 - Number of Hotels classified by Size, Beds and Rooms by Year**

Table 2.2 presents data on four indicators for the period 2009-2013. Eight (8) countries reported on this table of which six (6) countries reported for the entire period 2009-2013, one country up to 2012 and one country for 2013 only. Three (3) countries providing details for the *Hotels by Number of Rooms* and two (2) countries providing totals only. Two (2) countries provided data for the *Number of beds* as well as the *Room occupancy rate* and one country provided data for the *Number of beds*, *Room occupancy rate* and the *Total number of rooms occupied*. There are no data for twelve (12) countries for this table.

#### **Table 2.3 Visitor expenditure and Number Employed in Tourism**

Seven (7) countries submitted data on the *Total Visitor Expenditure* with three (3) countries also submitting data on expenditure by category. Data for ten (10) countries were sourced from the CTO. *Total number of persons directly employed in tourism* was submitted by two (2) countries with one country also submitting data disaggregated by sex. Large data gaps exists for *Visitor expenditure by category* and the *Total number of persons directly employed in tourism* by sex.

#### **Table 2.4 Number of Tourist Arrivals by Type of Accommodation**

Data were received from eight (8) countries for the entire period 2009-2014. Twelve countries (12) have therefore not submitted data for this table.

#### **Table 2.5 Tourist Arrivals by Country of Origin**

Data were submitted by twelve (12) countries, however, the table has been updated with data for a total of eighteen (18) countries; six (6) through the use of the CTO database. Missing data exists for two (2) countries.

In summary, the tables that require data on tourism accommodation contained the most data gaps. Most countries also did not submit data on the indicators which measure the impact of tourism.

## CHAPTER 2 - TOURISM

### 1.2.1 (i)(a): Sources of Data for Table 2.1(a) - Tourists, Cruise Ship Arrivals and Average/ Number of Tourist Nights Spent by Year: 2009-2013

Country	Data Source
ANTIGUA AND BARBUDA	Ministry of Tourism
THE BAHAMAS	The Ministry of Tourism, Research Department
BARBADOS	Caribbean Tourism Organisation
BELIZE	Caribbean Tourism Organisation
DOMINICA	Caribbean Tourism Organisation
GRENADA	Annual Compendium of Statistics, Grenada Board of Tourism
GUYANA	Caribbean Tourism Organisation
JAMAICA	Jamaica Tourist Board
HAITI	Caribbean Tourism Organisation
MONTSERRAT	The Statistics Department and Caribbean Tourism Organisation
ST KITTS AND NEVIS	Caribbean Tourism Organisation
SAINT LUCIA	Saint Lucia Tourist Board & Saint Lucia Air and Seaport Authority
ST VINCENT AND THE GRENADINES	Caribbean Tourism Organisation
SURINAME	Suriname Tourism Foundation
TRINIDAD AND TOBAGO	Central Statistical Office, Ministry of Tourism, Port Authority of Trinidad and Tobago, THA Department of Tourism and Caribbean Tourism Organisation
ANGUILLA	Statistics Department Tourism Statistics Summary 2012
BERMUDA	Department of Statistics, Department of Tourism and Bermuda Tourism Authority
THE CAYMAN ISLANDS	Department of Tourism
TURKS AND CAICOS	Caribbean Tourism Organisation and Tourist Board

## CHAPTER 2 - TOURISM

### 1.2.1(i)(b): Notes for Table 2.1 (a) Tourists, Cruise Ship Arrivals and Average/Number of Tourist Nights Spent by Year: 2009-2013

Country	Notes
JAMAICA	Cruise passengers include armed forces on naval vessels.

### 1.2.1(ii) (a): Sources of Data for Table 2.1 (b): Tourism Intensity Rate, Tourism Density Ratio and Tourist Penetration Ratio: 2009-2013

Country	Data Source
ANTIGUA AND BARBUDA	Caribbean Tourism Organisation
THE BAHAMAS	The Ministry of Tourism
BARBADOS	Caribbean Tourism Organisation
BELIZE	Caribbean Tourism Organisation
DOMINICA	Environment Statistics 2014 report and the Caribbean Tourism Organisation
GRENADA	Caribbean Tourism Organisation
GUYANA	Caribbean Tourism Organisation
JAMAICA	Caribbean Tourism Organisation
HAITI	Caribbean Tourism Organisation
MONTSERRAT	Caribbean Tourism Organisation
ST KITTS AND NEVIS	Caribbean Tourism Organisation

## CHAPTER 2 - TOURISM

### 1.2.1(ii) (a): Sources of Data for Table 2.1 (b): Tourism Intensity Rate, Tourism Density Ratio and Tourist Penetration Ratio: 2009-2013

Country	Data Source
SAINT LUCIA	Central Statistics Office and Caribbean Tourism Organisation
ST VINCENT AND THE GRENADINES	Caribbean Tourism Organisation
SURINAME	Caribbean Tourism Organisation
TRINIDAD AND TOBAGO	Caribbean Tourism Organisation
ANGUILLA	Caribbean Tourism Organisation
BERMUDA	Department of Statistics, Department of Tourism and Bermuda Tourism Authority and Caribbean Tourism Organisation
THE BRITISH VIRGIN ISLANDS	Caribbean Tourism Organisation
THE CAYMAN ISLANDS	Caribbean Tourism Organisation
TURKS AND CAICOS	Caribbean Tourism Organisation Tourist Board

### 1.2.2 (a): Sources of Data for Table 2.2: Number of Hotels Classified by Number of Rooms, Beds and Rooms occupied by Year

Country	Data Source
THE BAHAMAS	The Ministry of Tourism
DOMINICA	Environment Statistics 2014 report
MONTSERRAT	The Statistics Department
JAMAICA	Jamaica Tourist Board
SURINAME	Suriname Tourism Board
TRINIDAD AND TOBAGO	Central Statistical Office
BERMUDA	Department of Statistics, Department of Tourism and Bermuda Tourism Authority
THE CAYMAN ISLANDS	Cayman Islands Department of Tourism

## CHAPTER 2 - TOURISM

### 1.2.3(a): Sources of Data for Table 2.3: Visitor Expenditure and Number Employed in Tourism

Country	Data Source
ANTIGUA AND BARBUDA	Caribbean Tourism Organisation
THE BAHAMAS	Department of Statistics, Expenditure Surveys
BARBADOS	Barbados Statistical Service
BELIZE	Statistical Institute of Belize
DOMINICA	Caribbean Tourism Organisation
GRENADA	Annual Compendium of Statistics, Grenada Board of Tourism
JAMAICA	Jamaica Tourist Board
HAITI	Caribbean Tourism Organisation
MONTserrat	The Statistics Department of Montserrat
ST KITTS AND NEVIS	Caribbean Tourism Organisation
SAINT LUCIA	Saint Lucia Tourist Board
ST VINCENT AND THE GRENADINES	Caribbean Tourism Organisation
SURINAME	Caribbean Tourism Organisation
TRINIDAD AND TOBAGO	Central Statistics Office
ANGUILLA	Caribbean Tourism Organisation
BERMUDA	Department of Statistics, Department of Tourism and Bermuda Tourism Authority
THE BRITISH VIRGIN ISLANDS	Caribbean Tourism Organisation
THE CAYMAN ISLANDS	Cayman Islands Department of Tourism, Visitor Exit Survey
TURKS AND CAICOS	Tourist Board

## CHAPTER 2 - TOURISM

**1.2.4 (a): Sources of Data for Table 2.4: Tourist Arrivals by Type of Accommodation**

Country	Data Source
THE BAHAMAS	The Ministry of Tourism
DOMINICA	Environment Statistics 2014 report
JAMAICA	Jamaica Tourist Board
MONTSERRAT	Statistics Department
SAINT LUCIA	Saint Lucia Tourist Board
ST VINCENT AND THE GRENADINES	2012 Compendium of Environmental Statistics
SURINAME	Traffic and Transport statistics and the Environment publication 2014
BERMUDA	Department of Statistics, Department of Tourism and Bermuda Tourism Authority
THE CAYMAN ISLANDS	Cayman Islands Immigration Department and Cayman Islands Department of Tourism

**1.2.4(b): Notes for Table 2.4: Tourist Arrivals by Type of Accommodation**

Country	Notes
JAMAICA	Data includes visitors and non-resident Jamaicans. Apartments/Villas include guest houses Data for Apartments/Villas and Guest Houses are for "Non-hotels".
SURINAME	Apartment include guest houses
THE CAYMAN ISLANDS	Hotels include guest houses Other includes timeshare

## CHAPTER 2 - TOURISM

### 1.2.5(a): Sources of Data for Table 2.5: Tourist Arrivals by Country of Origin: 2009-2013

Country	Data Source
ANTIGUA AND BARBUDA	Ministry of Tourism
THE BAHAMAS	Department of Immigration and Bahamas Ministry of Tourism Research and Statistics Department .
BARBADOS	Caribbean Tourism Organisation
BELIZE	Caribbean Tourism Organisation
DOMINICA	Caribbean Tourism Organisation
GRENADA	Annual Compendium of Statistics, Grenada Board of Tourism
GUYANA	Caribbean Tourism Organisation
JAMAICA	Caribbean Tourism Organisation
MONTserrat	Statistics Department
ST KITTS AND NEVIS	Caribbean Tourism Organisation
SAINT LUCIA	Saint Lucia Tourist Board and Central Statistics Office
ST VINCENT AND THE GRENADINES	Caribbean Tourism Organisation
SURINAME	Traffic and Transport statistics and the Environment publication 2014
TRINIDAD AND TOBAGO	Central Statistical Office / Caribbean Tourism Organisation
ANGUILLA	Caribbean Tourism Organisation
BERMUDA	Department of Statistics, Department of Tourism and Bermuda Tourism Authority
THE BRITISH VIRGIN ISLANDS	Caribbean Tourism Organisation
THE CAYMAN ISLANDS	Department of Tourism, Cayman Islands Government
TURKS AND CAICOS	Tourist Board

## CHAPTER 3: ENVIRONMENTAL HEALTH



Health is one of the most fundamental requirements of human wellbeing, and as such environmental issues are a growing concern, not only to human health, but also to the health of plants and animals.

Over the past decade the Caribbean region has experienced an increase in the number of cases of respiratory illnesses as well as *dengue fever*, *Chikungunya*, *leptospirosis* and *viral diseases* which are being related to the effects of climate change. Today, countries are concerned about a mosquito-borne virus called Zika, a rare tropical disease which is being associated with birth defects, although this is unconfirmed. The Caribbean Public Health Agency (CARPHA) is the responsible agency for monitoring the Zika cases that have now surfaced in some Caribbean destinations, and to communicate prevention and control measures to residents and visitors.

With the exception of Haiti, most countries in the region have met the MDG drinking water target as most countries reported over 90 percent access. In contrast the MDG target for sanitation has not been met despite an increase in the access to sanitation facilities. It is estimated that 75 per cent of the Caribbean households now uses improved sanitation facilities. In Haiti there has been a reduction in the proportion of population practicing open defecation.

The indicators under this theme are used to assess human health and enable decision makers to monitor the exposure of persons to environmental diseases. Three tables presented are (1) Number of Reported Cases of Environmentally Related Diseases (2) Number of Households by Type of Sanitation Facilities and (3) Number of Households by Type of Water Supply.

# CHAPTER 3: ENVIRONMENTAL HEALTH

Table 3.1: Number of Reported Cases of Environmentally Related Diseases: 2009-2013

Country	Year	Gastroenteritis			Typhoid			Malaria		
		Female	Male	Total	Female	Male	Total	Female	Male	Total
DM	2009	...	...	561	...	...	0	...	...	0
	2010	...	...	1,625	...	...	0	...	...	0
	2011	...	...	1,354	...	...	0	...	...	0
	2012	...	...	1,093	...	...	0	...	...	0
	2013	...	...	1,429	...	...	0	...	...	0
GD	2009	...	...	2,819	...	...	...	...	...	0
	2010	...	...	2,416	...	...	...	...	...	1
	2011	...	...	1,713	...	...	...	...	...	0
	2012	...	...	3,744	...	...	...	...	...	1
	2013	...	...	1,795	...	...	...	...	...	0
MS	2009	10	10	20	0	0	0	0	0	0
	2010	8	4	12	0	0	0	0	0	0
	2011	15	10	25	0	0	0	0	0	0
	2012	7	5	12	0	0	0	0	0	0
	2013	16	9	25	0	0	0	0	0	0
LC	2009	...	...	2,245	...	...	0	...	...	0
	2010	...	...	3,626	...	...	0	...	...	1
	2011	...	...	2,901	...	...	0	...	...	1
	2012	...	...	2,026	...	...	0	...	...	2
	2013	...	...	2,158	...	...	0	...	...	1
SR	2009	...	...	...	...	...	...	486	1,012	1,498
	2010	...	...	...	...	...	...	333	183	544
	2011	...	...	...	...	...	...	358	416	775
	2012	...	...	...	...	...	...	187	332	524
	2013	...	...	...	...	...	...	191	333	530
TT	2009	...	...	22,159	...	...	...	...	...	22
	2010	...	...	30,168	...	...	...	4	9	13
	2011	...	...	25,373	...	...	...	4	6	10
	2012	...	...	24,371	...	...	...	2	13	15
	2013	...	...	22,773	...	...	...	1	7	8
ASSOCIATE MEMBER										
BM	2009	422	363	785	0	0	0	2	1	3
	2010	477	357	834	0	0	0	0	0	0
	2011	349	287	636	0	0	0	1	2	3
	2012	359	299	658	0	0	0	0	0	0
	2013	337	244	581	0	0	0	0	1	1

# CHAPTER 3: ENVIRONMENTAL HEALTH

Table 3.1 cont'd: Number of Reported Cases of Environmentally Related Diseases: 2009-2013

Country	Year	Cholera			Poisoning			Dengue		
		Female	Male	Total	Female	Male	Total	Female	Male	Total
DM	2009	...	...	0	...	...	...	...	...	2
	2010	...	...	0	...	...	...	...	...	641
	2011	...	...	0	...	...	...	...	...	40
	2012	...	...	0	...	...	...	...	...	12
	2013	...	...	0	...	...	...	...	...	233
GD	2009	...	...	...	...	...	108	...	...	28
	2010	...	...	...	...	...	94	...	...	134
	2011	...	...	...	...	...	128	...	...	92
	2012	...	...	...	...	...	109	...	...	85
	2013	...	...	...	...	...	119	...	...	155
MS	2009	0	0	0	0	0	0	0	0	0
	2010	0	0	0	1	0	1	0	0	0
	2011	0	0	0	1	0	1	0	0	0
	2012	0	0	0	0	0	0	0	0	0
	2013	0	0	0	0	1	1	0	1	1
LC	2009	...	...	0	...	...	0	...	...	19
	2010	...	...	0	...	...	0	...	...	97
	2011	...	...	0	...	...	0	...	...	749
	2012	...	...	0	...	...	0	...	...	35
	2013	...	...	0	...	...	0	...	...	282
SR	2009	...	...	...	...	...	...	392	488	880
	2010	...	...	...	...	...	...	218	298	516
	2011	...	...	...	...	...	...	153	253	406
	2012	...	...	...	...	...	...	503	686	1,196
	2013	...	...	...	...	...	...	144	190	336
TT	2009	...	...	...	...	...	422	...	...	2,263
	2010	...	...	...	...	...	594	...	...	4,735
	2011	...	...	...	...	...	359	...	...	6,258
	2012	...	...	...	...	...	217	...	...	2,847
	2013	...	...	...	...	...	172	...	...	3,289
<b>ASSOCIATE MEMBER</b>										
BM	2009	0	0	0	68	53	121	0	0	0
	2010	0	0	0	66	49	115	1	1	2
	2011	0	0	0	48	44	92	1	0	1
	2012	0	0	0	49	32	81	0	0	0
	2013	0	0	0	37	26	63	0	0	0

# CHAPTER 3: ENVIRONMENTAL HEALTH

Table 3.1 cont'd: Number of Reported Cases of Environmentally Related Diseases: 2009-2013

Country	Year	Accidental pesticide			Diarrhoea			Respiratory diseases		
		Female	Male	Total	Female	Male	Total	Female	Male	Total
DM	2009	...	...	...	...	...	...	...	...	1,925
	2010	...	...	...	...	...	...	...	...	1,624
	2011	...	...	...	...	...	...	...	...	1,298
	2012	...	...	...	...	...	...	...	...	1,388
	2013	...	...	...	...	...	...	...	...	2,014
GD	2009	...	...	...	...	...	...	...	...	8,292
	2010	...	...	...	...	...	...	...	...	11,027
	2011	...	...	...	...	...	...	...	...	10,064
	2012	...	...	...	...	...	...	...	...	11,129
	2013	...	...	...	...	...	...	...	...	10,042
MS	2009	0	0	0	0	0	0	31	26	57
	2010	0	0	0	0	0	0	16	18	34
	2011	0	0	0	0	0	0	17	16	33
	2012	0	0	0	0	0	0	24	29	53
	2013	0	0	0	0	0	0	9	17	26
LC	2009	...	...	0	...	...	0	...	...	...
	2010	...	...	0	...	...	0	...	...	...
	2011	...	...	0	...	...	0	...	...	...
	2012	...	...	0	...	...	0	...	...	...
	2013	...	...	0	...	...	0	...	...	...
SR	2009	...	...	...	...	...	...	...	...	...
	2010	...	...	...	...	...	...	...	...	...
	2011	...	...	...	...	...	...	...	...	...
	2012	...	...	...	...	...	...	...	...	...
	2013	...	...	...	...	...	...	...	...	...
TT	2009	...	...	...	...	...	...	...	...	24,751
	2010	...	...	...	...	...	...	...	...	24,855
	2011	...	...	...	...	...	...	...	...	26,221
	2012	...	...	...	...	...	...	...	...	23,834
	2013	...	...	...	...	...	...	...	...	26,943
<b>ASSOCIATE MEMBER</b>										
BM	2009	0	0	0	42	38	80	2,893	2,754	5,647
	2010	2	3	5	56	53	109	2,944	2,588	5,532
	2011	2	2	4	58	45	103	3,026	2,682	5,708
	2012	0	1	1	55	55	110	3,160	2,537	5,697
	2013	0	0	0	63	45	108	3,090	2,540	5,630

# CHAPTER 3: ENVIRONMENTAL HEALTH

Table 3.1 cont'd: Number of Reported Cases of Environmentally Related Diseases: 2009-2013

Country	Year	Tuberculosis			Other			TOTAL CASES, all causes		
		Female	Male	Total	Female	Male	Total	Female	Male	Total
DM	2009	...	...	...	0	1	1	...	...	...
	2010	...	...	...	0	11	11	...	...	...
	2011	...	...	...	3	27	30	...	...	...
	2012	...	...	...	3	4	7	...	...	...
	2013	...	...	...	2,178	1,597	3,775	...	...	...
GD	2009	...	...	...	...	...	...	...	...	...
	2010	...	...	...	...	...	...	...	...	...
	2011	...	...	...	...	...	...	...	...	...
	2012	...	...	...	...	...	...	...	...	...
	2013	...	...	...	...	...	...	...	...	...
MS	2009	0	0	0	0	0	0	41	36	77
	2010	0	0	0	0	0	0	27	24	51
	2011	0	0	0	0	0	0	33	26	59
	2012	0	0	0	0	0	0	31	34	65
	2013	0	0	0	0	0	0	25	28	53
LC	2009	...	...	...	...	...	4	...	...	...
	2010	...	...	...	...	...	17	...	...	...
	2011	...	...	...	...	...	30	...	...	...
	2012	...	...	...	...	...	11	...	...	...
	2013	...	...	...	...	...	29	...	...	...
SR	2009	...	...	...	32	78	110	...	...	...
	2010	...	...	...	50	94	144	...	...	...
	2011	...	...	...	16	65	81	...	...	...
	2012	...	...	...	42	101	143	...	...	...
	2013	...	...	...	21	45	66	...	...	...
TT	2009	...	...	...	...	...	...	...	...	49,742
	2010	...	...	...	...	...	...	...	...	60,505
	2011	...	...	...	...	...	...	...	...	58,413
	2012	...	...	...	...	...	...	...	...	51,461
	2013	...	...	...	...	...	...	...	...	53,329
<b>ASSOCIATE MEMBER</b>										
BM	2009	0	0	0	2,673	2,611	5,284	3,427	3,209	6,636
	2010	0	0	0	2,574	2,336	4,910	3,546	3,051	6,597
	2011	0	0	0	2,637	2,432	5,069	3,485	3,062	6,547
	2012	0	0	0	2,760	2,300	5,060	3,623	2,924	6,547
	2013	0	0	0	2,753	2,295	5,048	3,527	2,856	6,383

# CHAPTER 3: ENVIRONMENTAL HEALTH

*Environmentally related diseases* refer to diseases that cause an interruption, cessation or disorder of human bodily functions, systems or organs due to unfavorable environmental factors. According to the Dictionary of Epidemiology, edited for the International Epidemiological Association by John M. Last, a case in epidemiology is a person in the population or study group identified as having the particular disease, health disorder, or condition under investigation. A variety of criteria may be used to identify cases, e.g. individual physician's diagnoses, registries and notifications, abstracts of clinical records, surveys of the general population, and population screening, among others. The epidemiological definition of a case is not necessarily the same as the ordinary clinical definition. (<http://www.paho.org/English/SHA/be991norms.htm>)

## Types of Environmentally Related Diseases

**Gastroenteritis** is an inflammation of the stomach and intestines with many possible causes, such as: bacteria (responsible for acute food poisoning), parasites, food intolerances, drugs (antibiotics in particular) or most common viral infections. (Please refer to the Center for Disease Control website at <http://www.cdc.gov/ncidod/dvrd/revb/gastro/faq.htm>.)

**Typhoid:** Typhoid fever is a bacterial infection caused by ingesting contaminated food or water. Symptoms are characterized by headaches, nausea and loss of appetite.

**Malaria** is caused by a parasite called *Plasmodium*, which is transmitted via the bites of infected mosquitoes. In the human body, the parasites multiply in the liver, and then infect red blood cells. (Please refer to the World Health Organization's website at <http://www.who.int/topics/malaria/en/>)

**Dengue** is an acute, febrile illness, caused by one of four types of dengue virus. Viral transmission is through the bite of an infected *Aedes aegypti* mosquito. Dengue fever is usually seasonal, with an increase in cases occurring after the onset of the rainy season.

**Cholera** is an acute intestinal infection caused by ingestion of food or water contaminated with the bacterium *Vibrio cholerae*. It has a short incubation period, from less than one day to five days, and produces an enterotoxin that causes a copious, painless, watery diarrhoea that can quickly lead to severe dehydration and death if treatment is not promptly given. Vomiting also occurs in most patients. (Please refer to the World Health Organization's website at <http://www.who.int/topics/cholera/en/>)

**Accidental Pesticide Poisoning:** A case of Accidental Pesticide Poisoning is defined as any person who, after having been exposed to one or more pesticides, presents clinical manifestations of poisoning, or specific laboratory test results compatible with poisoning, in the first 24 hours after contact. Accidental refers to the unintentional and unexpected exposure to pesticides. This includes food poisoning. (PAHO/WHO *Epidemiological Bulletin*, December 2000)

**Poisoning:** A poison is any substance that causes harm if it gets into the body. Harm can be mild (for example, headache or nausea) or severe (for example, fits or very high fever), and severely poisoned people may die. When people are in contact with a poison they are said to be exposed to it.

**Diarrhoea** is the passage of three (3) or more loose or liquid stools per day, or more frequently than is normal for the individual. It is usually a symptom of gastrointestinal infection, which can be caused by a variety of bacterial, viral and parasitic organisms. Infection is spread through contaminated food or drinking-water, or from person to person as a result of poor hygiene. Severe diarrhea leads to fluid loss, and may be life-threatening, particularly in young children and people who are malnourished or have impaired immunity. (Please refer to the World Health Organization's website at <http://www.who.int/topics/diarrhoea/en/>)

**Respiratory tract diseases** are diseases that affect the air passages, including the nasal passages, the bronchi and the lungs. They range from acute infections, such as pneumonia and bronchitis, to chronic conditions such as asthma and chronic obstructive pulmonary disease. (Please refer to the World Health Organization's website at [http://www.who.int/topics/respiratory\\_tract\\_diseases/en/](http://www.who.int/topics/respiratory_tract_diseases/en/))

**Other:** Other refers to any other environmentally related diseases not previously mentioned.

# CHAPTER 3: ENVIRONMENTAL HEALTH

Table 3.2 (a) – Number of Households by Type of Sanitation facilities: 2000 and 2010 Round of Censuses

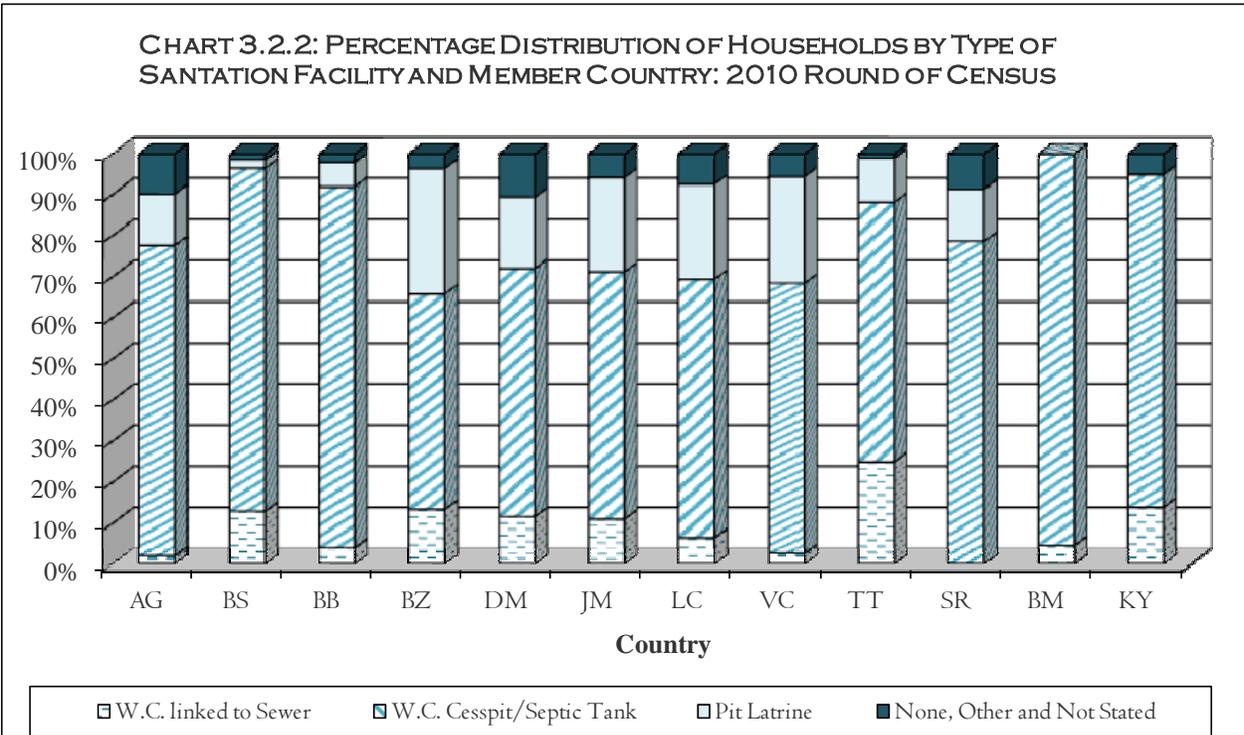
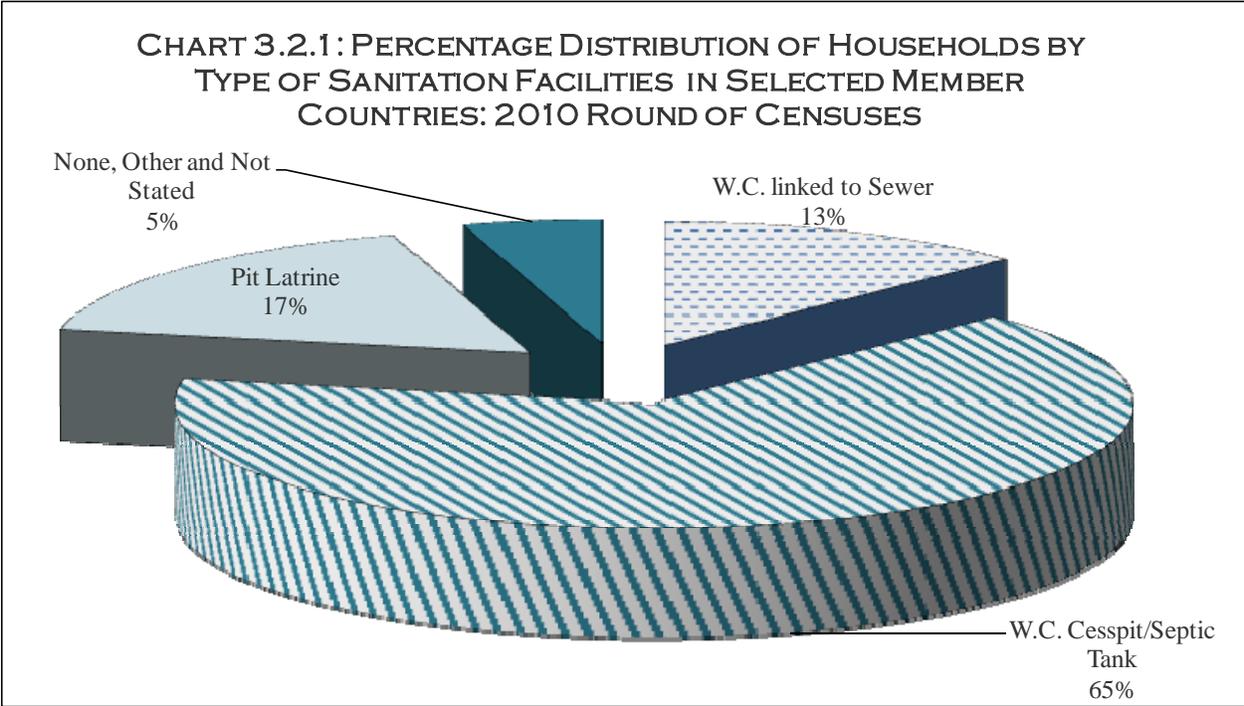
Country	Year	W.C. Linked to sewer	W.C. Cesspit / Septic Tank	Pit Latrine	None	Other	Not Stated	Total
AG	2001	14,868		5,176	293	113		20,450
	2011	619	22,828	3,782	245	2,739		30,213
BS	2000	9,978	66,507	5,445	1,054	4,703	55	87,742
	2010	13,378	85,728	2,125	209	1,318	0	102,758
BB	2000	428	67,511	13,684	487	453	463	83,026
	2010*	3,218	68,812	4,678	1,500	106	59	78,373
BZ	2000	7,851	18,049	22,864	2,222	847	112	51,945
	2010	10,694	41,594	24,294	2,308	386	215	79,491
DM	2001	3,010	8,991	6,332	3,572	454	0	22,359
	2011	2,937	15,132	4,351	2,364	289		25,073
GD	2001	800	16,340	15,056	157	1,125		33,478
GY	2002	10,435	62,815	105,661	3,497	207		182,615
HT	2003	...	83,575	880,373	534,128	295,122		1,793,198
JM	2001	157,851	268,783	273,086	18,978	0	29,628	748,326
	2011	97,552	530,045	201,455	18,104	774	33,159	881,089
MS	2001	355	1,673	170	84	47	0	2,329
KN	2001	124	12,239	2,774	499	44	0	15,680
LC	2001	2,765	22,753	16,815	4,228	469	0	47,030
	2010	3,889	37,002	13,611	3,653	766	0	58,920
VC	2001	193	15,693	13,544	1,057	71	0	30,558
	2012	1,006	24,208	9,529	1,707	102	277	36,829
SR	2004	...	86,697	24,587	5,762	6,417		123,463
	2012	...	110,425	17,767	4,570	7,605		140,367
TT	2000	65,851	152,713	81,318	1,320	2,669	0	303,871
	2011	100,505	253,164	43,596	105	22	3,990	401,382
<b>ASSOCIATE MEMBERS</b>								
AI	2001	3,354	25	144	78	129	0	3,730
	2011	4,795	27	44	38	21	10	4,935
BM	2010	1,273	25,650	0	0	0	0	26,923
KY	1999	1,578	13,182	...	...	148	0	14,908
	2010	3,187	18,395	15		14	1,149	22,760
VG	2001	2,056	6,079	88	77	86	0	8,386
TC	2001	0	4,954	2,000	267	33	0	7,254

# CHAPTER 3: ENVIRONMENTAL HEALTH

Table 3.2 (b) – Percentage distribution of Households by Type of Sanitation facilities: 2000 and 2010 Round of Censuses

Country	Year	W.C. Linked to sewer	W.C. Cesspit / Septic Tank	Pit Latrine	None	Other	Not Stated	Total all Households
AG	2001	72.7	0.0	25.3	1.4	0.6	0.0	100.0
	2011	2.0	75.6	12.5	0.8	9.1	0.0	100.0
BS	2000	11.4	75.8	6.2	1.2	5.4	0.1	100.0
	2010	13.0	83.4	2.1	0.2	1.3	0.0	100.0
BB	2000	0.5	81.3	16.5	0.6	0.5	0.6	100.0
	2010	4.1	87.8	6.0	1.9	0.1	0.1	100.0
BZ	2000	15.1	34.7	44.0	4.3	1.6	0.2	100.0
	2010	13.5	52.3	30.6	2.9	0.5	0.3	100.0
DM	2001	13.5	40.2	28.3	16.0	2.0	0.0	100.0
	2011	11.7	60.4	17.4	9.4	1.2	0.0	100.0
GD	2001	2.4	48.8	45.0	0.5	3.4	0.0	100.0
GY	2002	5.7	34.4	57.9	1.9	0.1	0.0	100.0
HT	2003	...	4.7	49.1	29.8	16.5	0.0	100.0
JM	2001	21.1	35.9	36.5	2.5	0.0	4.0	100.0
	2011	24.0	43.6	32.3	...	0.1	...	100.0
MS	2001	15.2	71.8	7.3	3.6	2.0	0.0	100.0
KN	2001	0.8	78.1	17.7	3.2	0.3	0.0	100.0
LC	2001	5.9	48.4	35.8	9.0	1.0	0.0	100.0
	2010	6.6	62.8	23.1	6.2	1.3	...	100.0
VC	2001	0.6	51.4	44.3	3.5	0.2	0.0	100.0
	2012	2.7	65.7	25.9	4.6	0.3	0.8	100.0
SR	2004	...	70.2	19.9	4.7	5.2	...	100.0
	2012	...	78.7	12.7	3.3	5.4	...	100.0
TT	2000	21.7	50.3	26.8	0.4	0.9	0.0	100.0
	2011	25.0	63.1	10.9	0.0	0.0	1.0	100.0
<b>ASSOCIATE MEMBERS</b>								
AI	2001	89.9	0.7	3.9	2.1	3.5	0.0	100.0
	2011	97.2	0.5	0.9	0.8	0.4	0.2	100.0
BM	2010	4.7	95.3	0.0	0.0	0.0	0.0	100.0
KY	1999	10.6	88.4	...	...	1.0	0.0	100.0
	2010	14.0	80.8	0.1	0.0	0.1	5.0	100.0
VG	2001	24.5	72.5	1.0	0.9	1.0	0.0	100.0
TC	2001	0.0	68.3	27.6	3.7	0.5	0.0	100.0

# CHAPTER 3: ENVIRONMENTAL HEALTH



# CHAPTER 3: ENVIRONMENTAL HEALTH

Table 3.3 (a): Number of Households by Type of Water Supply: 2000 and 2010 Round of Censuses

Country	Year	Piped into dwelling	Piped into yard	Public Piped into dwelling	Private catchments		Public catchments: piped
					Not piped	Piped	
AG	2001	1,794	2,054	11,644	780		
	2011		1,575	20,264	191	1,604	
BS	2000	76,841	1,866	0	2,877	0	
	2010	92,948	1,657		2,040		
BB	2000	75,494	4,636	0	1,592	0	
	2010	74,373	1,988				
BZ	2000	2,050	8,828	13,498	14,190	0	
	2010	6,350	14,904	46,850	2,207	0	
DM	2001	11,495	2,615	0	516	0	
	2011	1,179	1,970	16,254	351	356	
GD	2001	215	3,024	16,325	888	996	
GY	2002	16,912	70,817	52,956	8,829	0	
JM	2001		122,133	374,894	74,445	0	14,659
	2011		145,269	438,014	86,237	56,763	19,348
HT	2003		201,652				
MS	2001	13	222	1,987	1	2	
KN	2001	295	1,887	12,196	70	98	
LC	2001	1,198	9,136	28,250	572	293	
	2010	236	4,949	46,311	884	...	
VC	2001	537	5,217	15,964	880	1,624	
	2012	2,881	4,270	25,365	1,932	0	
SR	2012		13,226	83,252	26,876		
TT	2000	13,561	26,777	183,966	25,341	0	
	2011	15,785	35,921	304,018	18,619		
<b>ASSOCIATE MEMBERS</b>							
AI	2001	1,965	203	0	1,251	0	
	2011	3,605	86	757	284		
BM	2010					26,923	
KY	1999			10,701		2,203	
	2010			19,993		1,557	
VG	2001	2,320	244	3,750	241	1,356	
TC	2001	1,584	n.a.	0	4,927	0	

# CHAPTER 3: ENVIRONMENTAL HEALTH

Table 3.3 (a) cont'd: Number of Households by Type of Water Supply: 2000 and 2010 Round of Censuses

Country	Year	Public standpipe	Public well or tank	Purified Water	Spring Water	Other	Total
AG	2001	3,750	98			330	20,450
	2011	2,579	53		10	3,937	30,213
BS	2000	4,794	589			775	87,742
	2010	2,351	2,041			1,721	102,758
BB	2000	614	8			682	83,026
	2010	337			4	2,234	78,936
BZ	2000	2,207	456	8,767	1,166	783	51,945
	2010	938	4,544		1,639	2,059	79,491
DM	2001	6,109	277			1,347	22,359
	2011	3,645	167			1,152	25,074
GD	2001	3,241	56			1,473	26,218
GY	2002	5,949	1,796		19,390	5,966	182,615
JM	2001	78,467	0		34,051	49,677	748,326
	2011	62,161			26,601	46,696	881,089
HT	2003	125,822			248,460	1,217,264	1,793,198
MS	2001	75	3			26	2,329
KN	2001	843	48			243	15,680
LC	2001	4,076	170			3,338	47,033
	2010	2,595				3,948	58,923
VC	2001	4,467	161		0	1,707	30,558
	2012	944	48		289	1,101	36,829
SR	2012	2,500	1,843	3,801	3,222	5,647	140,367
TT	2000	29,057	0	6,279	4,550	14,340	303,871
	2011	10,773			3,016	13,252	401,382
<b>ASSOCIATE MEMBERS</b>							
AI	2001	59	26			226	3,730
	2011	12	33	12		146	4,935
BM	2010						26,923
KY	1999		1,959			44	14,907
	2010		1,105			105	22,760
VG	2001	8	60			407	8,386
TC	2001	...	434			309	7,254

# CHAPTER 3: ENVIRONMENTAL HEALTH

Table 3.3 (b): Percentage distribution of Households by Type of Water Supply: 2000 and 2010 Round of Censuses

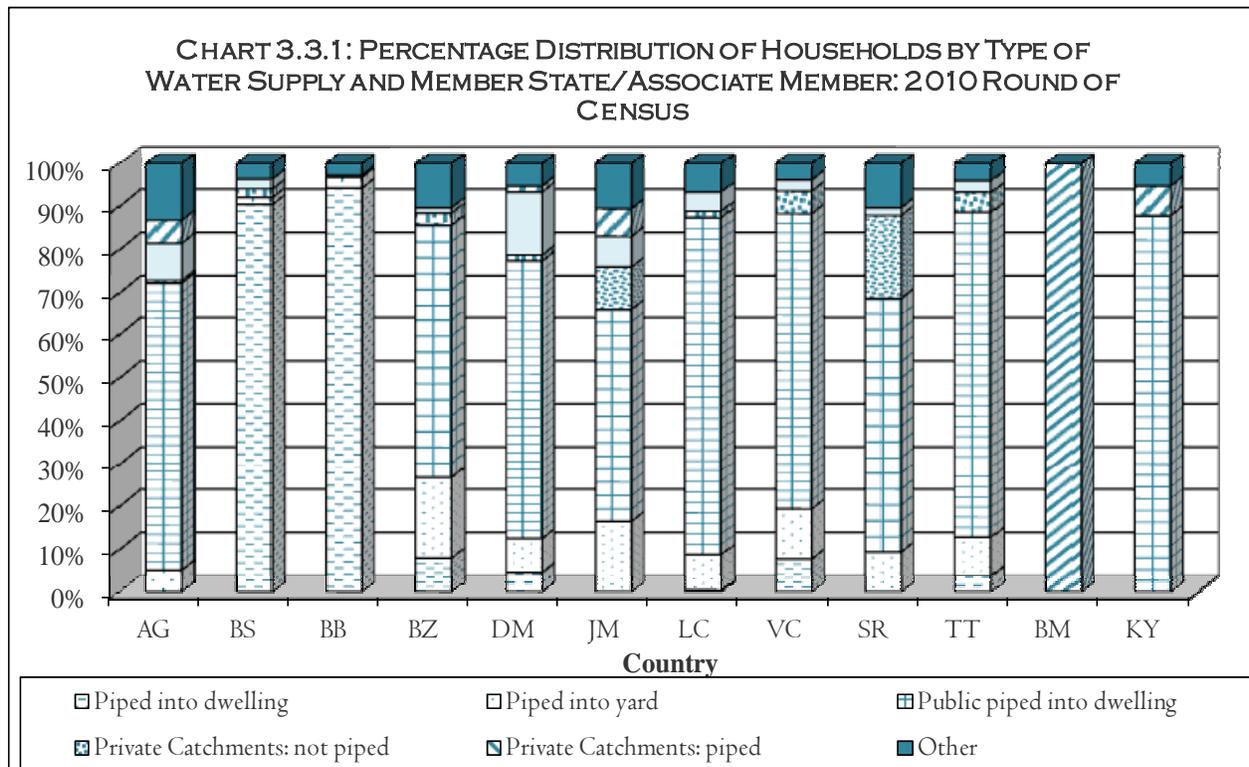
Country	Year	Piped into dwelling	Piped into yard	Public Piped into dwelling	Private catchments		Public catchments: piped
					Not piped	Piped	
AG	2001	8.8	10.0	56.9	3.8		
	2011	0.0	5.2	67.1	0.6	5.3	
BS	2000	87.6	2.1	0.0	3.3	0.0	
	2010	90.5	1.6	0.0	2.0	0.0	
BB	2000	90.9	5.6	0.0	1.9	0.0	
	2010	94.2	2.5	0.0	0.0	0.0	
BZ	2000	3.9	17.0	26.0	27.3	0.0	
	2010	8.0	18.7	58.9	2.8	0.0	
DM	2001	51.4	11.7	0.0	2.3	0.0	
	2011	4.7	7.9	64.8	1.4	1.4	
GD	2001	0.8	11.5	62.3	3.4	3.8	
GY	2002	9.3	38.8	29.0	4.8	0.0	
JM	2001	0.0	16.3	50.1	9.9	0.0	2.0
	2011	0.0	16.5	49.7	9.8	6.4	2.2
HT	2003		11.2				
MS	2001	0.6	9.5	85.3	0.0	0.1	
KN	2001	1.9	12.0	77.8	0.4	0.6	
LC	2001	2.5	19.4	60.1	1.2	0.6	
	2010	0.4	8.4	78.6	1.5	...	
VC	2001	1.8	17.1	52.2	2.9	5.3	
	2012	7.8	11.6	68.9	5.2	0.0	
SR	2012	0.0	9.4	59.3	19.1	0.0	0.0
TT	2000	4.5	8.8	60.5	8.3	0.0	
	2011	3.9	8.9	75.7	4.6	0.0	
<b>ASSOCIATE MEMBERS</b>							
AI	2001	52.7	5.4	0.0	33.5	0.0	
	2011	73.0	1.7	15.3	5.8	0.0	
BM	2010					100.0	
KY	1999			71.8		14.8	
	2010			87.8		6.8	
VG	2001	27.7	2.9	44.7	2.9	16.2	0.0
TC	2001	21.8	n.a.	0.0	67.9	0.0	

# CHAPTER 3: ENVIRONMENTAL HEALTH

Table 3.3 (b) cont'd: Percentage distribution of Households by Type of Water Supply: 2000 and 2010 Round of Censuses

Country	Year	Public standpipe	Public well or tank	Purified Water	Spring Water	Other	Total
AG	2001	18.3	0.5			1.6	100.0
	2011	8.5	0.2		0.0	13.0	100.0
BS	2000	5.5	0.7			0.9	100.0
	2010	2.3	2.0			1.7	100.0
BB	2000	0.7	0.0			0.8	100.0
	2010	0.4	0.0		0.0	2.8	100.0
BZ	2000	4.2	0.9	16.9	2.2	1.5	100.0
	2010	1.2	5.7	0.0	2.1	2.6	100.0
DM	2001	27.3	1.2			6.0	100.0
	2011	14.5	0.7			4.6	100.0
GD	2001	12.4	0.2			5.6	100.0
GY	2002	3.3	1.0	0.0	10.6	3.3	100.0
JM	2001	10.5	0.0		4.6	6.6	100.0
	2011	7.1	0.0		3.0	5.3	100.0
HT	2003	7.0			13.9	67.9	100.0
MS	2001	3.2	0.1			1.1	100.0
KN	2001	5.4	0.3			1.5	100.0
LC	2001	8.7	0.4			7.1	100.0
	2010	4.4	0.0			6.7	100.0
VC	2001	14.6	0.5			5.6	100.0
	2012	2.6	0.1		0.8	3.0	100.0
SR	2012	1.8	1.3	2.7	2.3	4.0	100.0
TT	2000	9.6	0.0	2.1	1.5	4.7	100.0
	2011	2.7	0.0	0.0	0.8	3.3	100.0
<b>ASSOCIATE MEMBERS</b>							
AI	2001	1.6	0.7			6.1	100.0
	2011	0.2	0.7	0.2		3.0	100.0
BM	2010						100.0
KY	1999		13.1			0.3	100.0
	2010		4.9			0.5	100.0
VG	2001	0.1	0.7	0.0	0.0	4.9	100.0
TC	2001	...	6.0			4.3	100.0

# CHAPTER 3: ENVIRONMENTAL HEALTH



Other includes Public Catchments: piped, Public Well or Tank, Purified Water, Spring Water and Other

# CHAPTER 3: ENVIRONMENTAL HEALTH

## Concepts and Definitions

*The number of households by type of water supply* describes the main source of water available to households.

### **Types of Water Supply**

*Piped into dwelling* refers to the water supply received by a household from a private source that is piped into the dwelling unit through water pipes within the walls that constitute a dwelling.

*Piped into yard* describes a situation where the household receives running water from a public source through a pipe in the yard or compound on which the dwelling stands.

*Public piped into dwelling* describes a situation where running water from a public source is piped directly into the dwelling unit.

*Private catchments: not piped* occurs where the water supply to the household is from a private source within the premises and is not piped into the dwelling.

*Private catchments: piped* occurs where the water supply to the household is from a private source piped into the dwelling unit.

*Public standpipe*: This describes a situation where water is available to the household from a standpipe in the street or elsewhere, but not in the compound on which the dwelling stands.

*Public well or tank* applies when the water available to the dwelling unit is from a protected well or tank built by the public authorities or community-based, non-governmental organizations.

*Other* refers to any source other than those listed above (e.g. river, stream, spring, creek, etc).

*The number of households by sanitation facilities* describes the types of toilet facilities available to households.

### **Types of Sanitation Facilities**

*W.C. Linked to Sewer*: This is a flush toilet or water closet (W.C.), which fills from a piped water supply and empties into a sewerage disposal system.

*W.C. Cesspit/Septic Tank* is a waterborne toilet facility and empties into a cesspit or septic tank (a tank in which sewage is decomposed by the action of bacteria).

A *pit latrine* is a type of toilet facility that is available to the household outside of the dwelling. It is not waterborne.

*None* refers to households that are without sanitary facilities.

*Other* refers to all other sanitary facilities not so far mentioned.

## **DATA GAPS**

For the period 2009-2013, missing data exists for thirteen (13) countries in table 3.1, *Number of Reported cases of Environmentally Related Diseases*. In addition four (4) countries out of the seven (7) countries that reported data presented no disaggregation for each category of diseases reporting the total number cases only. Data gaps also exist for one country that presented data for selected diseases rather than all categories required for the table.

Table 3.2 *Households by Type of Sanitation facilities* and table 3.3 *Households by Type of Water Supply* excludes 2010 Population and Housing Census data for seven (7) countries that had no data submissions. It should be noted that data for Barbados refers to occupied households rather than total households within the country,

# CHAPTER 3: ENVIRONMENTAL HEALTH

## 1.3.1 (a) Sources of Data for Table 3.1: Number of Reported Cases of Environmentally Related Diseases: 2009-2013

Country	Data Source
DOMINICA	Health Information Unit, Ministry of Health
GRENADA	Ministry of Health, Epidemiological Department
MONTserrat	Ministry of Health
SAINT LUCIA	Ministry of Health
SURINAME	General Bureau of Statistics
TRINIDAD AND TOBAGO	Ministry of Health
BERMUDA	The Department of Statistics

## 1.3.1 (b) Notes for Table 3.1: Number of Reported Cases of Environmentally Related Diseases: 2009-2013

Country	Data Source
DOMINICA	Other includes leptospirosis, chikungunya and Ciguatera as two other environmental-related diseases
SAINT LUCIA	Other includes Leptospirosis
SURINAME	Other includes Leptospirosis
TRINIDAD AND TOBAGO	2013 - Figure for Poisoning not final

# CHAPTER 3: ENVIRONMENTAL HEALTH

**1.3.2 (a): Sources of Data for Table 3.2 (a) – Number of Households by Type of Sanitation facilities: and Table 3.2(b) - Percentage distribution of Households by Type of Sanitation facilities 2000 Census and 2010 Census**

Country	Data Source
ALL COUNTRIES	Population and Housing Censuses

**1.3.2 (a): Notes for Table 3.2 (a) – Number of Households by Type of Sanitation facilities: and Table 3.2(b) - Percentage distribution of Households by Type of Sanitation facilities 2000 Census and 2010 Census**

Country	Year	Data Source
TRINIDAD AND TOBAGO	2000	Other includes not stated
SURINAME	2004 and 2012	W.C. Cesspit / Septic Tank refers to Closet with water rinse (and septic tank) Other includes River or creek, Open pit or hole in the ground , Other and Unknown None refers to No toilet Provision
BERMUDA	2010	Bermuda Building laws requires all households to have a cesspit. 1 These households are within city limits and are connected to waste treatment plants.

# CHAPTER 3: ENVIRONMENTAL HEALTH

## 1.3.3 (a): Sources of Data for Table 3.3 (a) – Number of Households by Type of Water Supply and Table 3.3(b) - Percentage distribution of Households by Type of Water Supply: 2000 Census and 2010 Census

Country	Data Source
ALL COUNTRIES	2000 Round of Population and Housing Census 2010 Round of Population and Housing Census

## 1.3.3 (a): Notes for Table 3.3 (a) – Number of Households by Type of Water Supply and Table 3.3(b) - Percentage distribution of Households by Type of Water Supply: 2000 Census and 2010 Census

Country	Year	Data Source
THE BAHAMAS	2000	Other includes not stated Rain water is included in piped into dwelling, but can be either piped into dwelling or into yard. Private catchments, not piped refer to friend/relative's pipe. Piped into dwelling is disaggregated by Public or Private Piped into dwelling. Public piped is the government water system and private piped is the individual household private water system. Public Piped = 48962 and private piped = 26796. The cumulative is given.
BARBADOS	2000	Other includes not stated
BELIZE	2000	Other includes not stated
DOMINICA	2001	Other includes not stated
ST KITTS AND NEVIS	2001	Other includes not stated
SAINT LUCIA	2001 2010	Other includes not stated Other includes Private dug well
ST VINCENT AND THE GRENADINES	2001 2008	Other includes private catchment piped Other includes not stated
SURINAME	2012	Public Piped into dwelling refer to Tap water at home Piped into yard refer to Tapwater outdoors <= 200m Public standpipe refer to Tapwater Outdoors > 200m Private catchments refer to Rainwater in tank container barrel Spring Water refer to Creek or river Purified Water refers to Supplied with water tank and Bottled water Other includes Unknown/ No answer
TRINIDAD AND TOBAGO	2000	Other includes Truck borne and Not Stated
ANGUILLA	2001	Other includes not stated
BERMUDA	2010	Other includes not stated
TURKS AND CAICOS	2001	Other includes not stated

## CHAPTER 4: NATURAL DISASTERS



Major natural disasters occurring in the CARICOM region include floods and tropical storms. These adversely impact the natural and built environment as well as human lives. A natural disaster is a physical natural event that overwhelms local capacity for damage control or recovery. As most of the Caribbean people are living in close proximity to the sea or in low lying areas they more vulnerable to flooding as sea level rise. Additionally human impact on the environment particularly land use has exacerbated the effects of natural disasters resulting in repeated incidence of flooding.

Natural disasters also have a great impact because of the location of hotels on beaches. Damages to hotel infrastructure can result in loss of jobs, income and earnings from Tourism, which is the main foreign export earner in some of the island states. Beach and Coral Reef damage from Hurricanes is also a major source of concern. In other instances, the loss of fertile agricultural land due to flooding for example can be a source of major disruption. The Caribbean Disaster Emergency Management Agency (CDEMA) is the regional inter-governmental agency charged with coordinating emergency response and relief efforts to participating states.

The data collected in this report seeks to measure the number of persons affected by these natural events and the impact on the economy through economic losses resulting in infrastructure damage as well as information on the type and date of the occurrence. The source of this information is the National Disaster Management Offices, Meteorology Departments and the Civil Defence Commission in the case of Guyana.

# CHAPTER 4: NATURAL DISASTERS

Table 4.1 Natural Disasters by Year: 2009-2014

Country	Year	Disaster			Total Casualties					Total Population Affected (Number)	Affected persons by flooding, power outage, or general inconvenience	Damage (US\$ Million)
		Type of Disaster	Name of Disaster	Date Started	Total	Dead /Killed	Injured	Missing	Homeless			
BS	2007	Tropical Storm Hurricane	Irene	30-Oct 22-Aug	...	1	...	0	...	6,563	...	10.0
	...				...	...	...	...	...			
DM	2010	Hurricane Landslide Flooding Flooding	Tomas	...	0	...	...	...	...	...	...	...
	2010				3	...	...	...	...	...		
	2011				0	...	...	...	...	...	...	
	2013				0	...	...	...	...	...	...	
GD	2011	Torrential rainfall	...	12-Apr	...	...	...	...	60	...	0.2	
JM	2009	Fires Tropical Depression 16/Tropical Storm Tropical Storm Hurricane	Nicole	26-Sep 29-Sep 22-Oct	2417	52	93	...	2272	...	...	...
	2010				41	16	42	2	...	507,831	507,831	239.6
	2010				292	13	26	2	...	485 a	1,920 b	\$8.1 billion c
	2012				...	1	291	...	...	807 d	681,018 e	\$9.7 billion
MS	2010	Hurricane	Earl	29-Aug	0	0	0	0	...	...	...	

# CHAPTER 4: NATURAL DISASTERS

Table 4.1 (cont'd) Natural Disasters by Year: 2009-2014

Country	Year	Disaster				Total Casualties					Total Population Affected (Number)	Affected persons by flooding, power outage, or general inconvenience	Damage (US\$ Million)
		Type of Disaster	Name of Disaster	Date Started	Total	Dead /Killed	Injured	Missing	Homeless				
LC	2009	Fire at St Jude Hospital	...	09-Sep	...	3	...	...	-	...	...	...	...
	2009	Oil Spill in Corinth River	...	09-Oct	...	0	...	...	0	...	...	...	...
	2009	Drought	...	01-Oct	...	0	...	...	0	...	...	...	...
	2010	Oil Spill in Corinth River	...	16-Mar	...	0	...	...	0	...	...	...	...
	2011	Hurricane Tomas	Tomas	30-Oct	...	7	...	...	2000	...	...	...	333.3
VC	2009	Heavy rains	...	...	...	...	...	...	...	...	...	...	...
SR	2013	Flooding	...	01-Jun	...	...	...	...	...	...	300	...	...
<b>ASSOCIATE MEMBER</b>													
BM	2014	Hurricane	Gonzab	16-Oct	0	0	...	...	...	...	53,426	...	300.00

# CHAPTER 4: NATURAL DISASTERS

## Concepts and Definitions:

A **disaster** is a situation or event, which overwhelms local capacity, necessitating a request to the national or international level for external assistance or an unforeseen and often sudden event that causes great damage, destruction and human suffering. (Please refer to *International Strategy for Disaster Reduction's* website at <http://www.unisdr.org/disaster-statistics/introduction.htm>.)

A **casualty** is defined as any human accessing health or medical services, including mental health services and medical forensics/mortuary care (for fatalities), as a result of a hazard impact.

*Of which:*

**Killed:** Persons confirmed as dead and persons missing and presumed dead.

**Injured:** People suffering from physical injuries, trauma or an illness requiring medical treatment as a direct result of a disaster.

**Homeless:** These are persons who are in need of immediate assistance in the form of shelter as a consequence of a disaster.

**Affected:** People requiring immediate assistance during a period of emergency, i.e. requiring basic survival needs such as food, water, shelter, sanitation and immediate medical assistance.

**Total affected:** The sum of people that have been injured, affected and left homeless after a disaster.

**Estimated damage:** The economic impact of a disaster usually consists of direct (e.g. damage to infrastructure, crops, housing) and indirect (e.g. loss of revenues, unemployment, market destabilisation) consequences on the local economy. <http://www.emdat.be/glossary/9>, *International Agreed Glossary of Basic Terms Related to Disaster Management (1992) UN-DHA, IDNDR, Geneva* and *WHO Mass Casualty Management Systems Strategies and guidelines for building health sector capacity*

## DATA GAPS

Data on natural disasters were submitted by nine (9) countries and gaps exist across all two types of data; disaster data and impact data for all reporting countries. Data gaps occurred for this theme due to non-reporting by countries and the non-existence of data. For reporting countries the table shows that there are missing information on the *Name of disaster*, *Start date* of reported disasters, the *Total Casualties* as well as the *Total population affected*. Additionally the cost of disasters, which is a widely used indicator of the impact of the event was incomplete for most countries. Given the number of countries and degree of missing information, it is difficult to analyse the quality of data that is submitted which suggests the need to improve on data for this section.

# CHAPTER 4: NATURAL DISASTERS

## 1.4.1 (a) Sources of Data for Table 4.1 - Natural Disasters by Year: 2009-2014

Country	Data Source
THE BAHAMAS	Department of Statistics
DOMINICA	Dominica Environment Statistics 2014
GRENADA	National Disaster Management Agency - NaDMA
JAMAICA	The Statistical Institute of Jamaica State of the Environment Report 2010 Office of Disaster Preparedness and Emergency Management (ODPEM)
MONTserrat	Disaster Management and Co-ordination Agency
SAINT LUCIA	National Emergency Management Office - Saint Lucia Disaster Catalogue
ST VINCENT AND THE GRENADINES	The Statistical Office, 2010 Environmental Statistics Report
SURINAME	The General Bureau of Statistics Suriname National Coordination Center For Disaster Relief in Suriname (NCCR)
BERMUDA	Department of Statistics

## 1.4.1 (b) Notes for Table 4.1 - Natural Disasters by Year:2009-2014

Country	Data Source
DOMINICA	2011: Mattier Dam- Layou Valley Flooding (destruction of agricultural lands) Massacre flooding (destruction of building and roads) 2013: Newtown Disaster (destruction of homes)
JAMAICA	a. maximum 485 persons sheltered b. family welfare assessment c. \$8.1 billion does not include losses obtained by the Education, Tourism and Agriculture Sectors d. number of houses totally destroyed during the hurricane e. persons who were directly or indirectly affected Damages for 2010 and 2012 in Jamaican dollars.

# CHAPTER 5: ENERGY AND MINERALS



Minerals are non-renewable resources, and the most important ones in the CARICOM region include gold, diamonds and bauxite. Unsustainable exploitation will cause depletion in the long term, which can ultimately have a great impact on the economy of a country. The activities associated with *mineral production*, such as explosions, drilling and smelting, are a major source of air, water and soil pollution caused by the discharges of mineral wastes or mine tailings. In addition, these activities can also cause loss of habitats of wildlife.

The indicators used in this chapter include:

1. Energy Consumption by Type and Year
2. Number of Households by Type of Fuel Used for Cooking
3. Number of Households by Type of Fuel Used for Lighting
4. Mineral Production by Type
5. Mineral Reserves by Type

The proportion of households using solid fuels is one of the indicators for monitoring the Millennium Development Goals. There are important linkages between household solid fuel use, indoor air pollution, deforestation and soil erosion and greenhouse gas emissions. The type of fuel and participation in cooking tasks are important predictors of exposure to indoor air pollution.

# CHAPTER 5: ENERGY AND MINERALS

Table 5.1 - Energy consumption by type and year: 2009-2013

Country	Year	Solid Fuels (tonnes)	Liquid Fuels	Gaseous Fuels	Primary electricity ('000kwh)	Traditional fuels		
						Charcoal	Fuelwood	Bagasse (boe)
AG	2009	...	...	...	220,829	...	...	...
	2010	...	...	...	237,030	...	...	...
	2011	...	...	...	255,424	...	...	...
	2012	...	...	...	250,588	...	...	...
	2013	...	...	...	244,266	...	...	...
DM	2009	...	...	...	36,369	...	...	...
	2010	...	...	...	39,473	...	...	...
	2011	...	...	...	40,419	...	...	...
	2012	...	...	...	40,785	...	...	...
	2013	...	...	...	40,800	...	...	...
GY	2009	...	...	...	602,021	CuMetre 12,869	CuMetre 16,846	...
	2010	...	...	...	627,370	14,585	16,688	...
	2011	...	...	...	645,234	12,517	23,349	...
	2012	...	...	...	690,521	12,533	24,254	...
	2013	...	...	...	710,995	11,652	27,072	...
JM	2009	63	...	...	3,233,154	...	...	402
	2010	54	...	...	3,235,183	...	...	418
	2011	65	...	...	3,175,490	...	...	579
	2012	56	...	...	3,103,023	...	...	570
	2013	89	...	...	3,045,049	...	...	626
VC	2009	...	...	...	142,213	...	...	...
	2010	...	...	...	139,988	...	...	...
	2011	...	...	...	140,708	...	...	...
	2012	...	...	...	142,788	...	...	...
	2013	...	...	...	...	...	...	...
SR	2009	...	...	Cooking gas kg 14,273,465	993,881	...	...	...
	2010	...	...	14,763,113	1,085,237	...	...	...
	2011	...	...	15,639,819	1,099,954	...	...	...
	2012	...	...	16,138,486	1,173,634	...	...	...
	2013	...	...	16,668,861	1,253,711	...	...	...
TT	2009	...	(Mt) 9,754,046	(terrajoules) 4,221	...	...	...	...
	2010	...	7,884,987	4,411	...	...	...	...
	2011	...	9,119,390	4,236	...	...	...	...
	2012	...	6,497,094	4,205	...	...	...	...
	2013	...	2,878,924	2176*	...	...	...	...
<b>ASSOCIATE MEMBERS</b>								
BM	2009	...	...	...	656,082	...	...	...
	2010	...	...	...	650,571	...	...	...
	2011	...	...	...	636,517	...	...	...
	2012	...	...	...	606,346	...	...	...
	2013	...	...	...	586,704	...	...	...

# CHAPTER 5: ENERGY AND MINERALS

## Concepts and Definitions:

**Energy consumption** refers to all the energy used for heat, power, and electricity generation, regardless of where the energy was produced.

**Solid fuels** include hard coal, lignite, peat, patent fuel, lignite briquettes, peat briquettes, coke and bituminous sands.

**Liquid fuels** include crude oil, natural gas liquids, plant condensate, gasoline, petroleum products, jet fuel, kerosene, liquefied petroleum gas, refinery gas, feedstock, naphtha, lubricants, gas/diesel oils and residual (heavy) fuel oils and bitumen.

**Gaseous fuels** include natural gas and other petroleum gases, such as gasworks gas, coke oven gas and blast furnace gas.

**Primary electricity** refers to electricity generated by noncombustible energy sources and includes electrical energy of geothermal, hydro, nuclear, tide, wind, wave/ocean and solar origin.

**Traditional fuels** include estimates of the consumption of charcoal, fuel wood and bagasse.

**Charcoal** is solid residue consisting mainly of carbon and obtained by the destructive distillation of wood in the absence of air.

**Fuel wood** is all wood in the rough that is used for fuel purposes.

**Bagasse** is the cellulosic residue left after sugar is extracted from sugar cane.

*Energy Statistics: Definitions, Units of Measure, and Conversion Factors (see [http://unstats.un.org/unsd/publication/SeriesF/SeriesF\\_44E.pdf](http://unstats.un.org/unsd/publication/SeriesF/SeriesF_44E.pdf) [last accessed: June 20 2012]).*

**Fuel** is defined as combustible matter used to maintain fire, such as coal, wood, oil, or gas, in order to create heat or power.

**Fuel used for cooking** refers to the fuel used predominantly for the preparation of principal meals.

**The number of households by type of fuel used for cooking** describes the types of fuels that households use for cooking.

## **Types of Cooking Fuel**

**Charcoal** (in the table format it is coal – the terms need to be harmonized) is a solid residue that consists mainly of carbon and is obtained by the destructive distillation of wood in the absence of air.

**Wood** refers to all wood in the rough that is used for fuel.

**Liquefied Petroleum Gas (LPG)/Gas (Natural Gas):** *LPG* is a combination of hydrocarbons (propane, butane and ethane) which are gaseous under conditions of normal temperature and pressure, but are liquefied by compression or cooling to facilitate storage, handling and transportation. *Natural gas* is a mixture of hydrocarbon compounds and small quantities of non-hydrocarbons existing in the gaseous phase or in solution with oil in natural underground reservoirs.

**Kerosene** is medium oil that is distilled between 150°C and 300°C. It is used as an illuminant and as a fuel and is often referred to as burning oil, vaporizing oil, power kerosene or illuminating oil.

**Electricity** is an electric current used as a source of power.

**Other** refers to types of cooking fuel not mentioned above.

*Energy Statistics: Definitions, Units of Measure, and Conversion Factors (see [http://unstats.un.org/unsd/publication/SeriesF/SeriesF\\_44E.pdf](http://unstats.un.org/unsd/publication/SeriesF/SeriesF_44E.pdf) [last accessed: July 2nd 2009]).*

**Type of lighting** refers to the source of lighting predominantly used by occupants of a housing unit.

**The number of households by type of lighting** describes the types of fuels that members of households use for lighting.

## **Types of Fuel Used for Lighting**

**Gas (Natural gas)** is a mixture of hydrocarbon compounds and small quantities of non-hydrocarbons existing in the gaseous phase or in solution with oil in natural underground reservoirs.

**Kerosene** is medium oil that is distilled between 150°C and 300°C. It is used as an illuminant and as a fuel and is often referred to as burning oil, vaporizing oil, power kerosene or illuminating oil.

**Electricity** is an electric current used as a source of power.

**Other** is other types of lighting fuel not so far mentioned.

*Energy Statistics: Definitions, Units of Measure, and Conversion Factors (see [http://unstats.un.org/unsd/publication/SeriesF/SeriesF\\_44E.pdf](http://unstats.un.org/unsd/publication/SeriesF/SeriesF_44E.pdf) [last accessed: July 2nd 2009]).*

## Units:

**‘000kwh** - Thousand Kilowatt hours

**m<sup>3</sup>** - cubic meters

**Bbbls** - barrels

**mT** - metric Tonnes

**BOE** - Barrels of energy

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Table 5.2 (a): Number of Households by Type of Fuel used for cooking: 2000 and 2010 Round of Censuses

Country	Year	Charcoal	Wood	LPG/Gas	Kerosene	Electricity	Solar Energy	None	Not Stated	Other	Total
AG	2001	306	84	19,564	33	141			63	259	20,450
	2011	n/a	294	29,132	11	408				368	30,213
BS	2000	293	388	65,126	898	19,563			1,474		87,742
	2010	68	239	80,010	217	20,873			1,351		102,758
BB	2000	72		75,869	1,883	2,491			2,257	454	83,026
	2010	60		73,348	384	3,543			1,344	257	78,936
BZ	2000	...	8,197	41,281	780	299			440	948	51,945
	2010	...	11,304	63,274	310	953			3,313	338	79,492
DM	2001	954	2,556	18,054	308	67				420	22,359
GD	2001	943	1,319	30,611	205	61				337	33,476
GY	2002	1,143	23,982	71,660	82,158	2,600			110	956	182,609
HT	2003	889,573	1,070,492	82,043	134,882	3,916				6,876	2,187,782
JM	2001	36,148	80,686	597,578	3,009	11,958				18,947	748,326
	2011	53,895	78,987	709,096	680	15,508		12,762	9,799	362	881,089
MS	2001	38	41	2,207	3	11				29	2,329
KN	2001	159	233	14,521	140	393				234	15,680
LC	2001	3,288	1,880	41,105	96	189				472	47,030
	2010	2,007	1,301	53,337	97	224		697		1,257	58,920
VC	2001	1,193	927	27,585	129	320		0	0	404	30,558
	2012	593	742	34,531	42	261		364	256	40	36,829

# CHAPTER 5: ENERGY AND MINERALS

Table 5.2 (a) cont'd: Number of Households by Type of Fuel used for cooking: 2000 and 2010 Round of Censuses

Country	Year	Charcoal	Wood	LPG/Gas	Kerosene	Electricity	Solar Energy	None	Not Stated	Other	Total
SR	2004		19,941	97,166	916	993		937	3,329	181	123,463
	2012		15,999	115,488	922	2,066	106	1,047	3,961	778	140,367
TT	2000	2,237		282,408	1,555	13,219		1,710	2,435	307	303,871
	2011	879		373,803	534	21,559	3	2,498	1,752	354	401,382
ASSOCIATE MEMBERS											
AI	2001	51		3,468	3	45			128	35	3,730
	2011	28		4,765	1	70			38	33	4,935
BM	2010			9,832		17,091					26,923
KY	2010	8		8,663	n/s	13,975				114	22,760
VG	2001	21	6	7,891	5	400				63	8,386
TC	2001	217		3,711	112	3,214					7,254

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Table 5.2 (b): Percentage Distribution of Households by Type of Fuel used for cooking: 2000 and 2010 Round of Censuses

Country	Year	Charcoal	Wood	LPG/Gas	Kerosene	Electricity	Solar Energy	None	Not Stated	Other	Total
AG	2001	1.5	0.4	95.7	0.2	0.7			0.3	1.3	100.0
	2011	n/a	1.0	96.4	0.0	1.4				1.2	100.0
BS	2000	0.3	0.4	74.2	1.0	22.3			1.7		100.0
	2010	0.1	0.2	77.9	0.2	20.3			1.3		100.0
BB	2000	0.1		91.4	2.3	3.0			2.7	0.5	100.0
	2010	0.1		92.9	0.5	4.5			1.7	0.3	100.0
BZ	2000	...	15.8	79.5	1.5	0.6			0.8	1.8	100.0
	2010	...	14.2	79.6	0.4	1.2			4.2	0.4	100.0
DM	2001	4.3	11.4	80.7	1.4	0.3				1.9	100.0
GD	2001	2.8	3.9	91.4	0.6	0.2				1.0	100.0
GY	2002	0.6	13.1	39.2	45.0	1.4			0.1	0.5	100.0
HT	2003	40.7	48.9	3.8	6.2	0.2				0.3	100.0
JM	2001	4.8	10.8	79.9	0.4	1.6				2.5	100.0
	2011	6.1	9.0	80.5	0.1	1.8		1.4	1.1	0.0	100.0
MS	2001	1.6	1.8	94.8	0.1	0.5				1.2	100.0
KN	2001	1.0	1.5	92.6	0.9	2.5				1.5	100.0
LC	2001	7.0	4.0	87.4	0.2	0.4				1.0	100.0
	2010	3.4	2.2	90.5	0.2	0.4		1.2		2.1	100.0
VC	2001	3.9	3.0	90.3	0.4	1.0		0.0	0.0	1.3	100.0
	2012	1.6	2.0	93.8	0.1	0.7		1.0	0.7	0.1	100.0

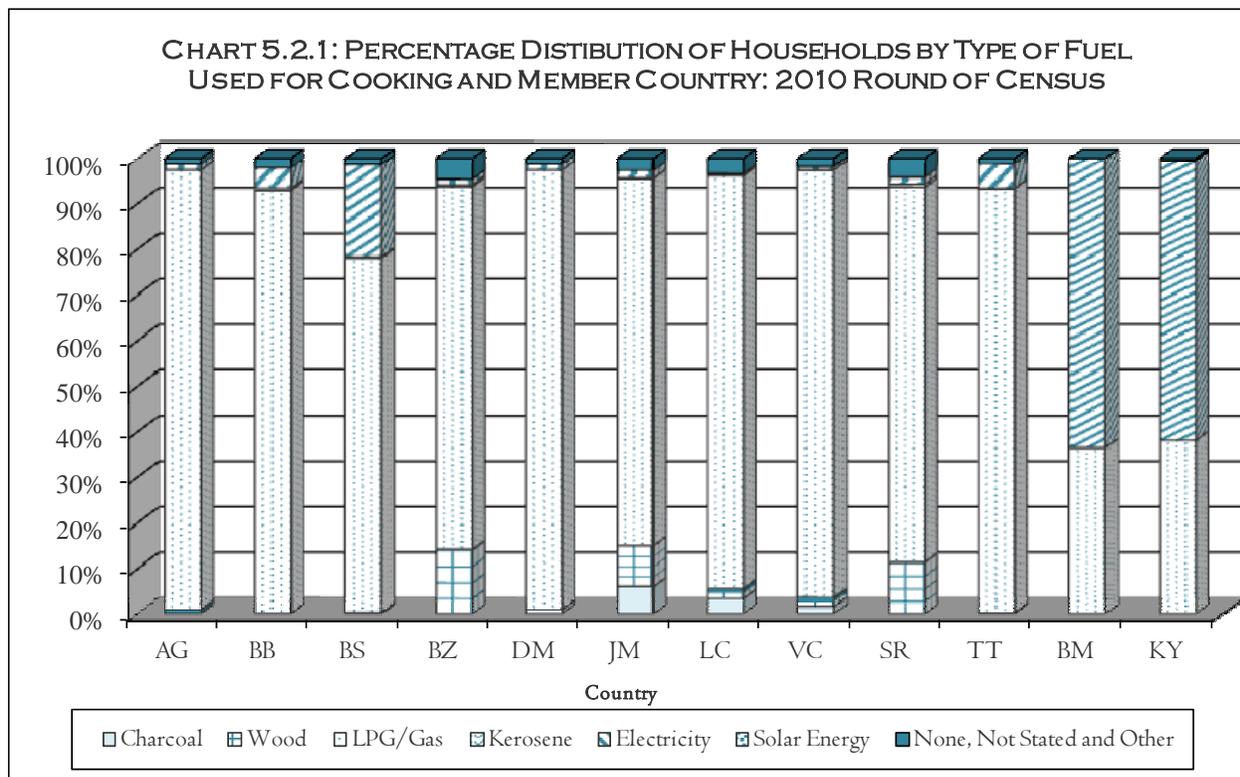
# CHAPTER 5: ENERGY AND MINERALS

Table 5.2 (b) cont'd: Percentage Distribution of Households by Type of Fuel used for cooking: 2000 and 2010 Round of Censuses

Country	Year	Charcoal	Wood	LPG/Gas	Kerosene	Electricity	Solar Energy	None	Not Stated	Other	Total
SR	2004		16.2	78.7	0.7	0.8		0.8	2.7	0.1	100.0
	2012		11.4	82.3	0.7	1.5	0.1	0.7	2.8	0.6	100.0
TT	2000	0.7		92.9	0.5	4.4		0.6	0.8	0.1	100.0
	2011	0.2		93.1	0.1	5.4	0.0	0.6	0.4	0.1	100.0
ASSOCIATE MEMBERS											
AI	2001	1.4		93.0	0.1	1.2			3.4	0.9	100.0
	2011	0.6		96.6	0.0	1.4			0.8	0.7	100.0
BM	2010			36.5		63.5					100.0
KY	2010	0.0		38.1	n/s	61.4				0.5	100.0
VG	2001	0.3	0.1	94.1	0.1	4.8				0.8	100.0
TC	2001	3.0		51.2	1.5	44.3					100.0

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CHART 5.2.1: PERCENTAGE DISTRIBUTION OF HOUSEHOLDS BY TYPE OF FUEL USED FOR COOKING AND MEMBER COUNTRY: 2010 ROUND OF CENSUS



# CHAPTER 5: ENERGY AND MINERALS

Table 5.3 (a) Number of Households by Type of Fuel used for Lighting: 2000 and 2010 Round of Censuses, 2009-2013

Country	Year	Gas	Kerosene	Electricity	Solar	None	Not Stated	Other	Total
AG	2001	61	566	19,206		163	32	422	20,450
	2009	...	...	28,237		...	...	...	28,237
	2010	...	...	28,343	...	...	...	...	28,343
	2011	99	263	28,104				1,747	30,213
	2012	...	...	27,903	...	...	...	...	27,903
	2013	...	...	28,121	...	...	...	...	28,121
	2014	...	...	28731	...	...	...	...	28,731
	BS	2000	837	2,075	84,115			72	643
	2010	2,128	833	99,054	64			679	102,758
BB	2000	69	1,807	80,126			559	465	83,026
BZ	2000	1,068	6,859	42,417			113	1,488	51,945
	2010		3,699	71,477		570	211	3,534	79,491
DM	2001	58	1,764	19,605		303		629	22,359
	2011	64		23,354	358	684	580	32	25,072
GD	2001	58	3,720	28,885				813	33,476
GY	2002	9,821	44,301	126,201			202	2,084	182,609
HT	2003	1,475,545		458,935				549,576	2,484,056
JM	2001		79,066	651,405				17,855	748,326
	2011		48,712	809,746			15,421	7,210	881,089
MS	2001		24	2,233		26		46	2,329
KN	2001	54	655	14,665		129		177	15,680

# CHAPTER 5: ENERGY AND MINERALS

Table 5.3 (a) cont'd: Number of Households by Type of Fuel used for Lighting: 2000 and 2010 Round of Censuses, 2009-2013

Country	Year	Gas	Kerosene	Electricity	Solar	None	Not Stated	Other	Total
LC	2001	112	2,411	41,890		490		2,128	47,031
	2010	143	733	54,951		691		2,402	58,920
VC	2001	71	3,877	24,940		432		1,198	30,518
	2012	241	939	32,824	33	373	416	2,003	36,829
SR	2004			101,814	0	10,248	2,867	5,228	120,157
	2012			124,172	196	1,083	2,101	6,777	134,329
TT	2000	711	22,392	277,413			1,809	1,546	303,871
	2011	56	4,958	394,682	113		557	1,017	401,382
<b>ASSOCIATE MEMBERS</b>									
AI	2001	1	95	3,491		23	110	10	3,730
	2011		38	4,836		17	44		4,935
BM	2010			26,923					26,923
KY	2010	25	5	22,638				66	22,734
VG	2001	30	11	8,320		7		18	8,386
TC	2001	21	167	6,938				128	7,254

# CHAPTER 5: ENERGY AND MINERALS

Table 5.3 (b): Percentage distribution of Households by Type of Fuel used for lighting: 2000 and 2010 Round of Censuses

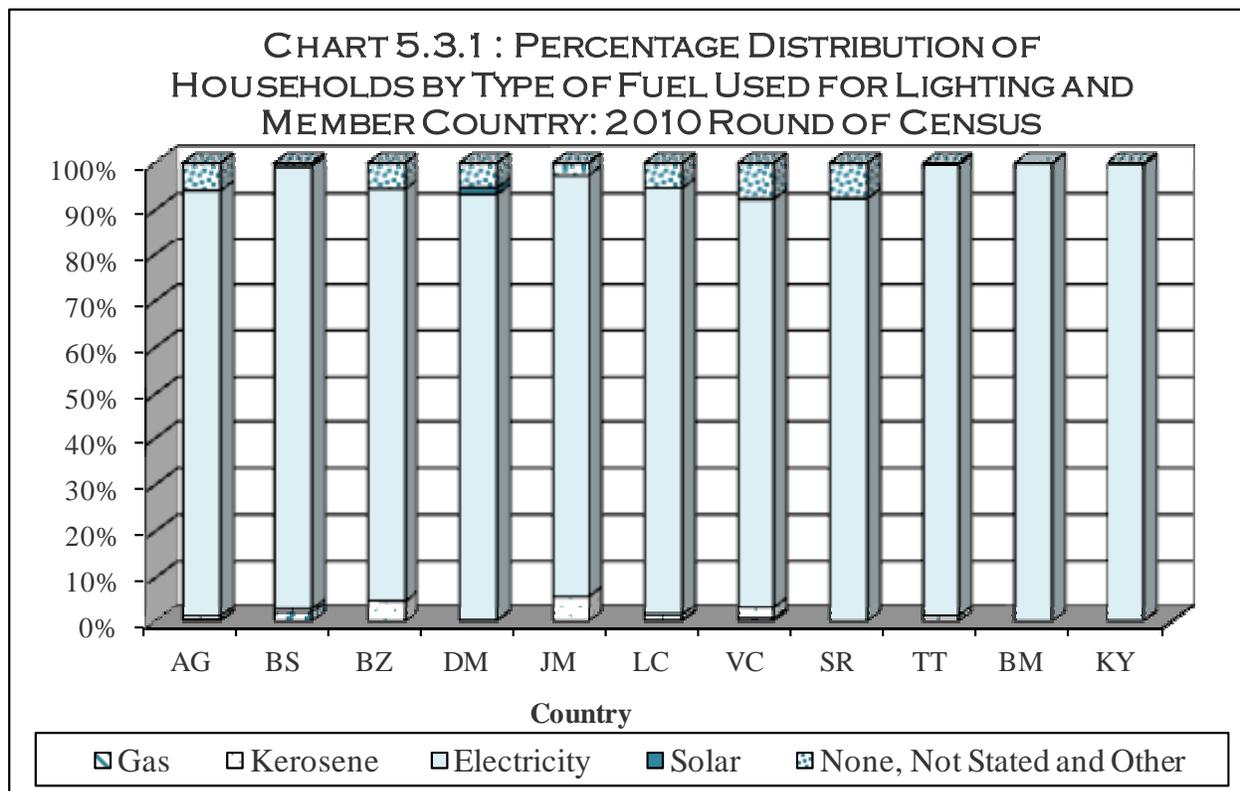
Country	Year	Gas	Kerosene	Electricity	Solar	None	Not Stated	Other	Total
AG	2001	0.3	2.8	93.9		0.8	0.2	2.1	100.0
	2011	0.3	0.9	93.0		0.0	0.0	5.8	100.0
BS	2000	1.0	2.4	95.9		0.0	0.1	0.7	100.0
	2010	2.1	0.8	96.4	0.1	0.0	0.0	0.7	100.0
BB	2000	0.1	2.2	96.5		0.0	0.7	0.6	100.0
BZ	2000	2.1	13.2	81.7		0.0	0.2	2.9	100.0
	2010	0.0	4.7	89.9		0.7	0.3	4.4	100.0
DM	2001	0.3	7.9	87.7		1.4	0.0	2.8	100.0
	2011	0.3	0.0	93.1	1.4	2.7	2.3	0.1	100.0
GD	2001	0.2	11.1	86.3				2.4	100.0
GY	2002	5.4	24.3	69.1		0.0	0.1	1.1	100.0
HT	2003	59.4	0.0	18.5		0.0	0.0	22.1	100.0
JM	2001		10.6	87.0				2.4	100.0
	2011		5.5	91.9	0.0	0.0	1.8	0.8	100.0
MS	2001		1.0	95.9		1.1		2.0	100.0
KN	2001	0.3	4.2	93.5		0.8	0.0	1.1	100.0

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Table 5.3 (b) cont'd: Percentage distribution of Households by Type of Fuel used for lighting: 2000 and 2010 Round of Censuses

Country	Year	Gas	Kerosene	Electricity	Solar	None	Not Stated	Other	Total
LC	2001	0.2	5.1	89.1		1.0	0.0	4.5	100.0
	2010	0.2	1.2	93.3		1.2	0.0	4.1	100.0
VC	2001	0.2	12.7	81.7		1.4	0.0	3.9	100.0
	2012	0.7	2.5	89.1	0.1	1.0	1.1	5.4	100.0
SR	2004	0.0	0.0	84.7		8.5	2.4	4.4	100.0
	2012	0.0	0.0	92.4	0.1	0.8	1.6	5.0	100.0
TT	2000	0.2	7.4	91.3		0.0	0.6	0.5	100.0
	2011	0.0	1.2	98.3	0.0	0.0	0.1	0.3	100.0
<b>ASSOCIATE MEMBERS</b>									
AI	2001	0.0	2.5	93.6		0.6	2.9	0.3	100.0
	2011		0.8	98.0		0.3	0.9		100.0
BM	2010			100.0					100.0
KY	2010	0.1	0.0	99.6		0.0	0.0	0.3	100.0
VG	2001	0.4	0.1	99.2		0.1	0.0	0.2	100.0
TC	2001	0.3	2.3	95.6		0.0	0.0	1.8	100.0

# CHAPTER 5: ENERGY AND MINERALS



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Table 5.4- Mineral Production by Type: 2009 - 2013

Country	Year	Gold	Iron	Nickel	Crude oil	Salt	Silver
BS		KG	Mt	Mt	Mt	Mt	Mt
	2009	48.98	0.12	0.02	0.13	0.63	0.71
	2010	2.26	0.00	0.09	0.46	0.67	0.00
	2011	586.04	0.00	0.00	34.66	0.62	0.07
	2012	17.69	0.94	0.00	2.60	0.93	0.98
	2013	...	0.00	0.33	...	0.62	0.24

Country	Year	Bauxite	Sand	Gold	Aggregate	Loam
GY		mT	mT	KG	mT	mT
	2009	1,448,311	478,572	9,491.0	340,016	2,000
	2010	1,099,880	652,175	9,592.4	514,932	...
	2011	1,827,555	674,880	11,291.8	534,058	12,133
	2012	2,210,182	1,478,184	13,641.8	483,858	92,064
	2013	1,601,707	2,334,000	14,962.2	654,995	94,559

Country	Year	Bauxite	Aluminum	Sand & Gravel	Crude oil
SR		(1000 mT)	(1000 mT)	(m <sup>3</sup> )	(millions of barrels)
	2009	3,388	1,536	177,433	5.86
	2010	3,097	1,486	316,432	5.80
	2011	3,236	1,421	1,037,750	5.99
	2012	2,874	1,203	300,310	5.94
	2013	2,671	1,149	913,887	5.98

Country	Year	Sand	Sand & Gravel	Limestone	Clay	Porcellanite
TT	2009	874,861.4	2,373,308.5	3,306,460.0	139,602.0	16,027.1
	2010	1,314,779.7	2,423,591.6	3,035,809.7	157,477.7	26,967.3
	2011	1,605,152.7	2,968,010.4	5,520,452.8	366,300.6	33,262.6
	2012	1,643,932.6	2,431,962.5	5,224,069.1	400,529.9	44,626.0
	2013	1,644,413.5	2,711,978.8	3,438,366.1	374,506.7	44,558.8
	2014	1,467,388.4	1,596,921.0	2,032,600.9	204,036.9	29,803.9

# CHAPTER 5: ENERGY AND MINERALS

Table 5.4 (cont'd): Mineral Production by Type: 2009 - 2013

Country	Year	Bauxite	Sand & Gravel	Limestone	Clay	Pozzolan	Gypsum & Anhydrite	Shale	Silica sand	Marl & Fill
JM	2010	8,540	2,750	1,956.1	5.0	139.5	147.1	202	13.0	2,155.0
	2011	10,189	2,475	2,451.0	4.2	130.4	79.5	227	14.0	1,140.2
	2012	9,339	2,599	2,232.6	300.6	107.2	64.8	251	13.9	1,197.3
	2013	9,435	1,902	1,949.4	12.0	112.3	48.3	205	15.8	1,197.6
	2014	9,677	2,118	2,138.0	34.2	129.2	45.2	308	15.8	1,031.8

Table 5.5 - Mineral reserves by Type: 2009-2013

Country	Year	Unit	Bauxite	Sand & Gravel	Limestone	Porcellanite	Andesite	Gypsum	Clay	Plastering Sand
TT	2013	mT	...	326.0	79.1	6.5	6.5	...	9.8	39.2
JM	2012	000' tonnes	1,600,000	600,000	8,565,000	...	...	29,000	160,000	...

A '*Mineral Reserve*' is the economically mineable part of a measured or indicated mineral resource. It is inclusive of diluting materials and allows for losses that may occur when the material is mined.

A '*Mineral Resource*' is a concentration or occurrence of material of intrinsic economic interest in or on the Earth's crust (a deposit) in such form and quantity that there are reasonable prospects for eventual economic extraction.

# CHAPTER 5: ENERGY AND MINERALS

## DATA GAPS

An examination of Table 5.1 reveals that twelve (12) countries did not provide data on *Energy consumption by type and year* for the reporting period. The table also reveals a general lack of data as four (4) countries reported data on *electricity consumption* only. This was the most available data and seven (7) out of eight (7) countries presented data for this indicator. Data on the consumption of other types of fuel were scattered throughout the table with one country reporting data on *Solid fuels*, another country with data for *Liquid fuels* and two (2) countries submitted data for *Gaseous fuels*. Data gaps were also large for the category consumption of traditional fuels as only two (2) countries submitted data. It should be noted that the unit of quantities were different for all countries which does not allow for comparison.

While data was presented in Table 5.2 on the *Households by type of fuel used for cooking* for all countries, seven (7) countries submitted no data for the 2010 round of Population and Housing Census. Additionally two (2) countries had no data for the 2000 round of Population and Housing Census.

Similarly for table 5.3, all countries reported data on *Households by type of fuel used for lighting* however (2) countries had no data for the 2000 round of Population and Housing Census and eight (8) countries submitted no data for the 2010 round of Population and Housing Census. One country also submitted data from the Utilities Authority on the number of households that are supplied with electricity.

Data on the production of various minerals were reported by five (5) countries. Unfortunately information on production of the resources was provided in different format and units which do not allow for comparison. Data availability is limited for countries do not engage in the production of minerals as they do not possess the necessary mineral resources.

There exist a large number of data gaps for this table as data on *Mineral reserves* were scarcely reported and were available for two (2) countries. For the countries submitting data, both countries reported data for one year only.

# CHAPTER 5: ENERGY AND MINERALS

## 1.5.1 (a) Sources of Data for Table 5.1 - Energy Consumption by Type and Year: 2009-2013

Country	Data Source
ANTIGUA AND BARBUDA	Antigua and Barbuda Public Utilities Authority (APUA)
DOMINICA	Environmental Statistics 2014, Central Statistical Office Dominica
GUYANA	Guyana Bureau of Statistics
JAMAICA	Ministry of Science, Technology, Energy & Mining
SURINAME	General Bureau of Statistics
TRINIDAD AND TOBAGO	Ministry of Energy and Energy Industries
BERMUDA	Department of Statistics Bermuda Electric Light Company Ltd.

## 1.5.1 (b) Notes for Table 5.1 - Energy Consumption by Type and Year: 2009-2013

Country	Data Source
ANTIGUA AND BARBUDA	Data is only available for Primary Electricity
JAMAICA	Figures refer to generation minus losses.
TRINIDAD AND TOBAGO	* denotes incomplete data collection

# CHAPTER 5: ENERGY AND MINERALS

**1.5.2 (a): Sources of Data for Table 5.2(a) - Number of Households by Type of Fuel Used for Cooking and Table 5.2(b) - Percentage distribution of Households by Type of Fuel Used for Cooking: 2000 and 2010 Round of Censuses**

Country	Year	Data Source
ALL COUNTRIES	2000-2004	2000 Round of Population and Housing Census
	2010-2012	2010 Round of Population and Housing Census

**1.5.2 (b): Notes for Table 5.2(a) - Number of Households by Type of Fuel Used for Cooking and Table 5.2(b) - Percentage distribution of Households by Type of Fuel Used for Cooking: 2000 and 2010 Round of Censuses**

Country	Year	Data Source
ANTIGUA AND BARBUDA	2011	Other. Not stated- None = 368 Wood/charcoal goes together in the census. Additionally, the other years are not available.
BELIZE	2000 and 2010	Wood refers to wood and charcoal
GRENADA	2001	Other includes not stated
HAITI	2003	Other includes 1500 households using solar panels
SURINAME	2004	None refers to Doesn't cook Not Stated refers to Unknown Wood refers to Wood/Charcoal
TRINIDAD AND TOBAGO	2000	Charcoal refers to Wood/Charcoal
ANGUILLA	2001	Charcoal refers to Wood/Charcoal
BERMUDA	2010	Bermuda Electric Light Company Ltd.
THE CAYMAN ISLANDS	2010	Other refers to Other/Not Stated
TURKS AND CAICOS	2001	Charcoal refers to Wood/Charcoal

# CHAPTER 5: ENERGY AND MINERALS

**1.5.3 (a): Sources of Data for Table 5.3(a) - Number of Households by Type of Fuel Used for Lighting and Table 5.3 (b) Percentage distribution of Households by Type of Fuel used for Lighting: 2000 and 2010 Round of Censuses, 2005-2009**

Country	Year	Data Source
ALL COUNTRIES	2000-2004 2010-2012	2000 Round of Population and Housing Census 2010 Round of Population and Housing Census
ANTIGUA AND BARBUDA	2009-2013	Antigua Public Utilities Authority, Statistics Department

**1.5.3 (b): Notes for Table 5.3(a) - Number of Households by Type of Fuel Used for Lighting and Table 5.3 (b) Percentage distribution of Households by Type of Fuel used for Lighting: 2000 and 2010 Round of Censuses, 2005-2009**

Country	Year	Data Source
ANTIGUA AND BARBUDA	2011	Other/Not stated represents, electricity - private generator, solar, none, other and not stated.
GRENADA	2001	Other includes not stated
GUYANA	2002	Other includes generator/inverter and other.
JAMAICA	2001	Other includes not stated
BERMUDA	2010	Bermuda Electric Light Company Ltd.
THE CAYMAN ISLANDS	2010	Gas includes 16 households using Private Generators Other refers to Other/Not Stated

# CHAPTER 5: ENERGY AND MINERALS

## 1.5.4 (a): Sources of Data for Table 5.4 - Mineral Production by Type: 2009-2013

Country	Data Source
THE BAHAMAS	Department of Statistics
GUYANA	Guyana Geology & Mines Commission
JAMAICA	Mines and Geology Division
SURINAME	General Bureau of Statistics
TRINIDAD AND TOBAGO	Ministry of Energy and Energy Industries

## 1.5.4 (b): Notes for Table 5.4 - Mineral Production by Type: 2009-2013

Country	Data Source
GUYANA	Aggregate includes quarriable stone, crushed and uncrushed.

## 1.5.5 (a): Sources of Data for Table 5.5 - Mineral Reserves by Type: 2009-2013

Country	Data Source
JAMAICA	Mines and Geology Division
TRINIDAD AND TOBAGO	Ministry of Energy and Energy Industries

## CHAPTER 6: LAND USE AND AGRICULTURE



*Land use* refers to the functional division of land for different human purposes or economic activities. This data assists policy makers in understanding the impact of human activities on the environment and enables them to respond to changes in environmental conditions in a timely and efficient manner.

A number of human activities such as agriculture mainly through the use of pesticides and insecticides; mining, industry, infrastructure development and urbanization often result in abrupt and unplanned changes in the use of the land which can lead to a decline in both the quality and quantity of water available to ensure the continued sustainability of ecosystems and living organisms. Economic activities also use significant volumes of water which can put a strain on water resources threatening the livelihood of marine life, and reducing the amount of water available for irrigation and agricultural purposes.

The challenges to collection of data in this area remain the need for training in the classification and categorization of land use types as used internationally. The absence of comprehensive land-use and development/management plans, coupled with unclear legislation and the non- implementation of a legal framework all contribute to the lack of capacity in being able implement zoning of areas as well as to accurately collect and compile data in this area. Further the technological capacity and the IT infrastructure needs to be developed so as to better facilitate the sharing of geo-spatial data and information amongst national and regional agencies.

# CHAPTER 6: LAND USE AND AGRICULTURE

Table 6.1 - Land Use: 2009 - 2013

Unit = km<sup>2</sup>

Country	Year	Agricultural land					Total
		Arable land	Land under permanent crops	Land under permanent meadows and pastures	All other agricultural land, n. e. s.	Fallow and other agricultural land	
<b>AG</b>							
	Antigua (2010)	83.0	27.7	70.2		1.4	
	Barbuda (2010)	N/A	0.1	116.5		Unknown	
<b>GY</b>							
	2012	3,261	3,180	1,763	81	122	
<b>JM</b>							
	2009	...	732	...	1,386	1,813	3,931
	2010	...	723	...	1,387	1,727	3,837
	2011	...	715	...	1,387	1,642	3,744
	2012	...	708	...	1,388	1,557	3,653
	2013	...	698	65	1,389	1,471	3,623
<b>SR</b>							
	2009	556.7	54.4	173.7			
	2010	547.6	55.5	173.0			
	2011	580.7	48.5	170.2			
	2012	524.4	49.3	161.5			
	2013	599.5	59.6	172.0			

# CHAPTER 6: LAND USE AND AGRICULTURE

Table 6.1 - Land Use (cont'd): 2009 - 2013

Unit = km<sup>2</sup>

Country	Year	Forest and other wooded land	Built-up and related land	Wet open land	Dry open land with special vegetation cover	Open land without, or with insignificant, vegetation cover	Other Lands	Total land area	Waters	Total area of the country
AG	Antigua (2010)	87.1	75.9	8.7	Unknown	3.3		275.5	107,914	108,368
	Barbuda (2010)	20.8	4.5	30.2	Unknown	Unknown		179.8	N/A	N/A
GY	2012	185,716	348		1,269	14,328				
JM	2009	5,612	1,114	139	...	157		10,953	38	10,991
	2010	5,640	1,190	142	...	142		10,951	40	10,991
	2011	5,667	1,253	145	...	140		10,949	42	10,991
	2012	5,695	1,313	147	...	139		10,947	44	10,991
	2013	5,723	1,313	150		135		10,945	46	10,991
SR	2009	152,335		3,279				156,000		163,820
	2010	152,257		3,279				156,000		163,820
	2011	152,180		3,279				156,000		163,820
	2012	152,103		3,279				156,000		163,820
	2013	152,026		3,279				156,000		163,820

## CHAPTER 6: LAND USE AND AGRICULTURE

Table 6.2: Use of fertilizers by type and year: 2009-2013

		Unit: Tonne				
Country	Year	Nitrogenous fertilizers	Phosphate fertilizers	Potash fertilizers	NPK MIX	TOTAL
AG	2009	62,717	3,694	81	151,040	217,533
	2010	16,359	781	611	138,994	156,744
	2011	57,869	0	825	78,992	137,686
	2012	93,212	4	3,093	212,492	308,800
	2013	93,921	0	313	125,758	219,991
BB	2009	3,282	0	11	2,125	5,417
	2010	3,231	0	79	2,654	5,964
	2011	3,783	0	58	991	4,832
	2012	5,276	0	539	1,862	7,677
	2013	3,940	7	174	743	4,864
BS	2009	17.1	3.9	2.4		23
	2010	10.9	2.2	2.3		15
	2011	7.9	0.1	2.0		10
	2012	19.0	0.4	2.3		22
	2013	5.5	0.1	0.6		6
BZ	2009	12,816.5	2.2	7,697.7	7,940	28,456
	2010	5,893.0	141.9	6,727.0	6,294	19,056
	2011	7,814.6	4.9	216.5	27,452	35,488
	2012	9,782.2	41.5	390.0	16,469	26,683
	2013	9,074.0	290.5	3,136.3	24,792	37,293
DM	2009	309	0	0	1,225	1,534
	2010	140	0	1	692	833
	2011	2	1	0	60	63
	2012	0	0	0	47	47
	2013	4	0	0	40	44
GD	2009	0	0	0	456	456
	2010	77	0	0	793	870
	2011	0	0	0	483	483
	2012	0	0	0	498	499
	2013	3	1	48	704	756

## CHAPTER 6: LAND USE AND AGRICULTURE

Table 6.2 (cont'd): Use of fertilizers by type and year: 2009-2013

Unit: Tonne

Country	Year	Nitrogenous fertilizers	Phosphate fertilizers	Potash fertilizers	NPK MIX	TOTAL
GY	2009	17,081	4,519	1,780	2,062	25,441
	2010	36,304	38,412	2,311	9,030	86,056
	2011	21,130	35,456	1,180	2,848	60,614
	2012	30,455	21,283	1,467	4,354	57,559
	2013	42,983	16,605	16,209	3,300	79,097
JM	2009	14,036	0	6,371	6,088	26,495
	2010	14,065	0	3,166	6,508	23,739
	2011	11,582	0	9,542	8,733	29,857
	2012	12,404	0	3,301	8,253	23,959
	2013	13,215	3	8,815	5,955	27,987
MS	2009	0.0	0.0	0.0	2.7	2.7
	2010	1.1	0.0	0.2	8.7	10.0
	2011	0.4	0.0	0.0	3.7	4.1
	2012	0.0	0.0	0.0	5.7	5.8
	2013	1.2	0.0	0.0	8.7	9.9
KN	2009	24	3	0	85	113
	2010	32	6	0	110	148
	2011	12	30	13	30	84
	2012	15	15	1	93	124
	2013	20	8	2	111	140
LC	2009	238	0	9	2,270	2,517
	2010	1,348	0	0	850	2,198
	2011	305	0	26	987	1,319
	2012	258	0	6	1,888	2,152
	2013	383	21	1	1,759	2,164
VC	2009	189	0	913	1,801	2,903
	2010	101	0	0	2,273	2,373
	2011	334	0	0	691	1,026
	2012	115	0	0	1,341	1,456
	2013	50	0	0	1,635	1,685

## CHAPTER 6: LAND USE AND AGRICULTURE

**Table 6.2 (cont'd): Use of fertilizers by type and year: 2009-2013**

Unit: Tonne

Country	Year	Nitrogenous fertilizers	Phosphate fertilizers	Potash fertilizers	NPK MIX	TOTAL
<b>SR</b>	2009	18,208.6	105.8	99.4	5,407.3	23,821
	2010	24,523.5	95.8	34.8	6,256.4	30,911
	2011	20,383.6	102.5	152.8	8,846.3	29,485
	2012	12,260.4	163.7	52.6	11,013.6	23,490
	2013	12,975.2	298.4	125.2	10,424.4	23,823
<b>TT</b>	2009	1,665	367	2,691	3,240	7,962
	2010	2,547	251	1,590	2,077	6,464
	2011	3,303	524	1,704	1,985	7,516
	2012	4,615	429	1,286	1,945	8,275
	2013	4,073	288	1,396	1,981	7,737
<b>ASSOCIATE MEMBER</b>						
<b>BM(\$)</b>	2009	99,614	13,169	13,778	488,135	614,696
	2010	119,543	63,854	4,128	389,117	576,642
	2011	182,686	249	3,516	353,556	540,007
	2012	105,071	29	116	344,253	449,469
	2013	131,917	17	360	361,788	494,082

# CHAPTER 6: LAND USE AND AGRICULTURE

Table 6.3: Use of Pesticides by type and year: 2009-2013

Unit: Tonne

Country	Year	Insecticides	Herbicides	Fungicides, bactericides and seed treatments	Plant growth regulators	Rodenticides	Others (including mineral oils)	TOTAL
AG	2009	371.5	30.4	3.9	26.0	7.5		439.3
	2010	260.8	26.7	3.3	0.7	12.3		303.7
	2011	227.1	41.1	3.3	0.9	9.2		281.6
	2012	195.8	22.9	6.8	0.0	4,237.9		4,463.4
	2013	235.8	35.7	2.2	0.3	9.7		283.7
BB	2009	414.4	497.1	11.9	24.0	32.0		979.5
	2010	477.6	352.0	25.9	27.7	23.6		906.8
	2011	305.8	499.8	10.2	33.5	23.8		873.1
	2012	599.9	352.0	16.5	15.0	6.3		989.6
	2013	312.4	462.2	27.4	16.7	13.8		832.5
BS	2009	182.0	18.0	8.0	...	25.0	39.0	272.0
	2010	161.0	17.0	9.0	...	20.0	13.0	220.0
	2011	314.0	18.0	8.0	...	18.0	35.0	393.0
	2012	336.0	14.0	10.0	...	29.0	51.0	440.0
	2013	169.0	8.0	2.0	...	8.0	16.0	203.0
BZ	2009	791.5	808.5	535.9	54.7	35.3		2,226.0
	2010	652.2	614.0	579.8	32.0	14.8		1,892.8
	2011	746.7	834.8	694.2	35.2	6.7		2,317.6
	2012	937.5	907.6	603.3	26.2	19.4		2,493.9
	2013	1,028.0	1,178.7	425.1	4.7	9.0		2,645.5
DM	2009	82.0	70.0	5.0		29.0		186.0
	2010	34.0	24.0	1.0		17.0		76.0
	2011	107.0	61.0	4.0		54.0		226.0
	2012	73.0	52.0	2.0		33.0		160.0
	2013	83.0	80.0	3.0		31.0		197.0
GD	2009	188.1	19.6	0.5	0.2	10.8		219.1
	2010	197.2	30.9	1.4	0.2	4.2		233.9
	2011	123.4	11.4	1.0	0.2	8.3		144.1
	2012	124.2	9.8	1.5	0.1	7.6		143.3
	2013	133.2	16.2	1.8	0.3	8.7		160.2

# CHAPTER 6: LAND USE AND AGRICULTURE

Table 6.3 (cont'd): Use of Pesticides by type and year: 2009-2013

		Unit: Tonne						
Country	Year	Insecticides	Herbicides	Fungicides, bactericides and seed treatments	Plant growth regulators	Rodenticides	Others (including mineral oils)	TOTAL
GY	2009	377.3	436.5	7.9	7.0	105.4		934.1
	2010	548.3	396.6	20.9	12.8	59.9		1,038.5
	2011	665.9	479.8	53.3	5.5	21.3		1,225.8
	2012	549.1	594.3	26.3	3.6	56.5		1,229.8
	2013	6,561.9	9,030.0	38.9	11.1	49.4		15,691.3
JM	2009	135.4	825.7	459.8	127.9	77.7	4.7	1,631.2
	2010	151.1	628.4	170.5	32.2	45.9	4.2	1,032.3
	2011	102.6	694.4	211.0	32.5	67.2	7.2	1,114.9
	2012	255.6	903.8	440.1	60.0	41.6	8.3	1,709.4
	2013	145.2	795.9	235.1	3.5	87.9	8.3	1,275.9
MS	2009	18.2	0.8	3.7	0.0	0.5		23.2
	2010	13.0	0.4	0.7	0.0	0.5		14.6
	2011	13.5	0.6	0.0	0.6	0.6		15.3
	2012	15.3	0.7	1.0	0.1	1.3		18.4
	2013	17.1	0.9	5.6	0.3	1.6		25.5
KN	2009	90.3	16.0	2.4	1.9	7.4		118.0
	2010	84.4	13.4	0.8	2.4	5.9		107.0
	2011	92.9	13.7	0.3	3.2	5.4		115.4
	2012	101.6	7.9	1.0	2.3	3.7		116.6
	2013	126.9	8.8	2.8	2.6	6.1		147.1
LC	2009	262.2	89.2	33.7	3.5	10.4		399.1
	2010	354.4	49.5	20.1	1.9	16.4		442.4
	2011	329.3	95.7	13.9	0.5	14.7		454.2
	2012	307.3	71.1	17.0	3.6	19.2		418.1
	2013	295.7	32.8	31.6	0.6	22.6		383.2
VC	2009	241.0	44.7	99.4	0.2	2.9		388.2
	2010	286.5	7.2	96.9	1.1	15.2		407.0
	2011	294.8	4.3	73.6	12.8	1.8		387.3
	2012	2,347.9	8.6	82.4	0.3	1.2		2,440.4
	2013	309.1	3.0	78.4	3.9	1.4		395.9

# CHAPTER 6: LAND USE AND AGRICULTURE

Table 6.3 (cont'd): Use of Pesticides by type and year: 2009-2013

		Unit: Tonne						
Country	Year	Insecticides	Herbicides	Fungicides, bactericides and seed treatments	Plant growth regulators	Rodenticides	Others (including mineral oils)	TOTAL
SR	2009	243.7	728.9	337.4	0.0	15.6	23.5	1,349.0
	2010	244.7	705.9	429.0	0.0	11.0	31.0	1,421.6
	2011	213.3	681.3	684.4	0.0	8.3	15.0	1,602.2
	2012	351.0	461.2	474.3	0.0	1.4	3.1	1,291.1
	2013	73.1	277.2	447.4	0.0	3.5	5.2	806.5
TT	2009	1,435.7	728.3	355.0	57.9	26.4	49.3	2,652.7
	2010	1,190.4	532.5	122.4	16.9	42.3	80.3	1,984.7
	2011	1,275.2	1,604.9	141.7	20.5	31.8	71.8	3,145.8
	2012	1,920.6	681.6	251.1	3.1	26.5	267.3	3,150.1
	2013	1,554.5	716.8	273.2	1.9	28.5	291.8	2,866.8
<b>ASSOCIATE MEMBER</b>								
BM (\$)	2009	612,986	227,217	78,906			529,456	1,448,565
	2010	744,680	148,754	126,015			382,246	1,401,695
	2011	815,541	146,616	163,484			148,722	1,274,363
	2012	801,569	238,032	111,941			234,952	1,386,494
	2013	854,812	311,135	134,383			232,110	1,532,440

## CHAPTER 6: LAND USE AND AGRICULTURE

### Concepts and Definitions

**Land use** refers to the functional division of land for different human purposes or economic activities. *(Please refer to the OECD's Glossary of Statistical Terms website at <http://stats.oecd.org/glossary/>)*

### **Land Types**

**Agricultural land** includes land under scattered farm buildings, yards and their annexes and permanently uncultivated land, such as uncultivated patches, banks, footpaths, ditches, headlands and shoulders.

**Arable land** refers to all land generally under rotation whether for temporary crops or meadows or left fallow.

**Land under permanent crops** signifies land used for crops occupying it for a long period of time and which do not have to be planted for several years after each harvest. Land under trees and shrubs producing flowers, such as roses and jasmine, is so classified, as are nurseries (except those for forest trees); permanent meadows and pastures are excluded.

**Fallow and other agricultural land** is arable land not under rotation that is set at rest for a period of time ranging from one to five years before it is cultivated again. It includes land usually under permanent crops, meadows or pastures, which is not being used for that purpose for a period of at least one year. Arable land which is normally used for the cultivation of temporary crops but which is temporarily used for grazing is included. Also included are scattered farm buildings, that is, isolated buildings not belonging to closed villages or similar rural localities.

**Land under permanent meadows and pastures** means land used permanently (that is, for five years and more) for herbaceous forage crops. Permanent meadows and pastures on which trees and shrubs are grown are included in this category only if the growing of forage crop is the most important use of the area.

**Forest and other wooded land** includes forest nurseries and seed orchards that constitute an integral part of the forest; forest roads, cleared tracts, firebreaks and other small open areas within the forest; forest in national parks, nature reserves and other protected areas such as those of special environmental, scientific, historical, cultural or spiritual interest; and windbreaks and shelterbelts of trees with an area of more than half a hectare and a width of more than twenty metres. Rubberwood plantations and cork oak stands are included but land predominantly used for agricultural practices are excluded.

**Land under forest** refers to land under natural or planted stands of trees, whether productive or not. This category includes land from which forests have been cleared but that will be reforested in the foreseeable future, but it excludes woodland or forest used only for recreation purposes.

**Other wooded land** refers to land either with a tree crown cover of five to ten per cent of trees able to reach a height of five metres at maturity; or a crown cover of more than ten per cent of trees not able to reach a height of five metres at maturity and shrub or bush cover.

**Built-up and related land** refers to land under houses, roads, mines and quarries, and other facilities, including  
*(continued)*

## CHAPTER 6: LAND USE AND AGRICULTURE

(continued from page 116)

their auxiliary spaces, deliberately installed for the pursuit of human activities. Land under closed villages or similar rural localities and open land closely related to these activities, such as waste tips, derelict land in built-up areas, junk yards, city parks and gardens, etc, are included in this category. Land occupied by scattered farm buildings, yards and their annexes are excluded.

**Wet open land** refers to non-wooded sites either partially, temporarily or permanently water-logged, the water of which may be fresh, brackish or saline, on blanket or raised peatlands. The water may be either stagnant or running, and is usually shallow, especially if it is saline.

**Dry open land with special vegetation cover** refers to non-wooded land that is covered by low (less than two metres high) vegetation.

**Open land without, or with insignificant, vegetation cover** refers to non-built-up land whose surface is either not covered at all by vegetation or scarcely covered by some vegetation.

**Waters** relate to the part of the national territory to be reported which is covered by surface waters. The national territory to be reported is defined as the surface enclosed by all inland borders and, if applicable, the normal base-line on the seaward side.

**Total area** is the total area of the country, including area under inland and tidal water bodies but excluding uninhabited islands. **Total land area** is the total area excluding area under inland water bodies (major rivers, lakes, etc).

*Fertilizers* are compounds given to plants to promote growth. They are usually applied either via the soil, for uptake by plant roots, or by foliar feeding, for uptake through leaves. Fertilizers can be organic (composed of organic matter), or inorganic (made of simple, inorganic chemicals or minerals). They can be naturally occurring compounds such as peat or mineral deposits, or manufactured through natural processes (such as composting) or chemical processes (such as the Haber process).

### Types of Fertilizers

**Nitrogenous fertilizers** refer to the nitrogen content of commercial inorganic fertilizers.

**Phosphate fertilizers** refer to commercial phosphoric acid ( $P_2O_5$ ) and cover the  $P_2O_5$  of super-phosphates, ammonium phosphate and basic slag.

**Potash fertilizers** refer to the potassium oxide ( $K_2O$ ) content of commercial potash, muriate, nitrate and sulphate of potash, manure salts, kainite and nitrate of soda potash.

**NPK Mix:** NPK is an acronym for nitrogen, phosphorus and potassium: the three nutrients that compose a complete fertilizer. They are also the three nutrients plants extract from soil in the greatest quantity and are available in synthetic, organic, and mineral forms.

*Please refer to The CARICOM Environment in Figures 2002, Caribbean Community Secretariat, United Nations (2003)*

## CHAPTER 6: LAND USE AND AGRICULTURE

A *pesticide* is any substance or mixture of substances intended for preventing, destroying or controlling any pest, including vectors of human or animal disease, unwanted species of plants or animals causing harm during or otherwise interfering with the production, processing, storage, transport or marketing of food, agricultural commodities, wood and wood products or animal feedstuffs, or substances which may be administered to animals for the control of insects, arachnids or other pests in or on their bodies. The term pesticide also includes substances intended for use as a plant growth regulator, defoliant, desiccant (agent for thinning fruit or preventing the premature fall of fruit), and substances applied to crops either before or after harvest to protect the commodity from deterioration during storage and transport.

### Types of Pesticides

**Insecticides** are agents of chemical or biological origin that control insects. Control may result from killing the insect or otherwise preventing it from engaging in behaviours deemed destructive. Insecticides may be natural or manmade and include chlorinated hydrocarbons, organo-phosphates, carbonates-insecticides, pyrethroids, and botanical and biological products. Examples include Chlordane and DDT.

**Herbicides** are used to kill unwanted plants. Selective herbicides kill specific targets while leaving the desired crop relatively unharmed. Some selective herbicides act by interfering with the growth of the weed and are often based on plant hormones. Nonselective herbicides, on the other hand, kill all plant material with which they come into contact. Herbicides include phenoxy hormone products, triazines, amides, carbonates-herbicides, dinitroanilines, urea derivatives, sulfonyl urea, bipiridils

and uracil.

**Fungicides** are chemical compounds used to prevent the spread of fungi or plants in gardens and crops, which can cause serious damage resulting in loss of yield and thus profit. Fungicides can either be contact or systemic. A contact fungicide kills fungi when sprayed on its surface; a systemic fungicide has to be absorbed by the plant.

**Bactericides** destroy, suppress or prevent the spread of bacteria. Examples are swimming pool chemicals containing chlorine, and products used to control black spot (bacterial blight) on garden plants or in orchards. Disinfectants for household and industrial use are excluded and are not considered pesticides

**Seed treatments** are chemical or biological substances or physical processes applied to seeds or seedlings. They help to protect the seeds and assure optimum emergence of the plant or crop. Application of a chemical to seeds is a very well-targeted method of reducing pest and disease attacks on the growing plant.

**Plant growth regulators** are substances or mixture of substances intended, through physiological action, to accelerate or retard the rate of growth or maturation, or otherwise alter the behavior of plants or their produce. Additionally, plant regulators are characterized by their low rates of application (high application rates of the same compounds often are considered herbicidal).

**Rodenticides** are pesticides used specifically for controlling rodents, such as mice and rats, and include anti-coagulants.

**Other** refers to pesticides not so far mentioned.

*Source: FAO*

## CHAPTER 6: LAND USE AND AGRICULTURE

### DATA GAPS

#### *Land Use*

There are many gaps in *Land Use* data and even where data are available they contain missing values for various land use types. Generally, land use data can be obtained by using methods such as remote sensing and agricultural surveys for data on agricultural land however the costliness of these methods have obtaining this information. Sixteen (16) countries did not submit any data on land use by type. For countries submitting data, two (2) countries reported data for one year only and the remaining two (2) countries reported data for the period under review.

#### *Use of Fertilizers by type and year and Use of Pesticides by type and year*

Missing data exists for five (5) countries for which no data are available for both tables. Since most countries do not produce fertilizers and pesticides in large quantities, the best-practice is the use imports as a proxy. The CARICOM Trade database was used to extract data for countries that did not report data.

## CHAPTER 6: LAND USE AND AGRICULTURE

### 1.6.1 (a): Sources of data for Table 6.1 Land Use: 2009-2013

Country	Notes
ANTIGUA AND BARBUDA	Environment Division, Ministry of Health and the Environment
GUYANA	Guyana Lands and Surveys Commission Guyana National Use Plan
JAMAICA	Forestry Department, June 2016
SURINAME	General Bureau of Statistics Ministry of Agriculture, Animal Husbandry and Fisheries.

### 1.6.1 (b): Notes for Table 6.1 Land Use: 2009-2013

Country	Notes
ANTIGUA AND BARBUDA	Data on land use was extracted from Antigua & Barbuda's 2010 land use plan <a href="http://www.environmentdivision.info/wp-content/uploads/2012/01/NPDP-SIRMZP-2012.pdf">http://www.environmentdivision.info/wp-content/uploads/2012/01/NPDP-SIRMZP-2012.pdf</a>
GUYANA	There is a difference on classification for the respective definitions Fallow agricultural land Defined as " includes bare soils and bare previously cultivated land"  All other agricultural land, n.e.s.; consists of agricultural lands within bamboo and secondary forest. 2013 data from land-use assessment conducted by Forestry Department. Data for other years are extrapolated from 2013 and 1998 land-use.

## CHAPTER 6: LAND USE AND AGRICULTURE

1.6.2 (a): Sources of Data for Table 6.2 - Use of Fertilizers by Type and Year: 2009-2013

Country	Data Source
ANTIGUA AND BARBUDA	Department of Statistics-Trade Section
THE BAHAMAS	Department of Statistics External Trade Section
JAMAICA	Statistical Institute of Jamaica
SURINAME	General Bureau of Statistics, Trade Statistics Section
BERMUDA	Department of Statistics
OTHER COUNTRIES	CARICOM Trade database

1.6.2 (a): Notes for Table 6.2 - Use of Fertilizers by Type and Year: 2009-2013

Country	Data Source
JAMAICA	Data represents imports of inorganic fertilisers only; does not include animal or vegetable fertilisers.
BERMUDA	Data on quantities imported are not available.

## CHAPTER 6: LAND USE AND AGRICULTURE

1.6.3(a): Sources of Data for Table 6.3 - Use of Pesticides by Type and Year: 2009-2013

Country	Data Source
ANTIGUA AND BARBUDA	Department of Statistics-Trade Section
THE BAHAMAS	Department of Statistics External Trade Section
JAMAICA	Pesticide Control Authority, Statistical Institute of Jamaica
SURINAME	General Bureau of Statistics Ministry of Agriculture, Animal Husbandry and Fisheries.
TRINIDAD AND TOBAGO	Central Statistical Office, Trade Section
BERMUDA	Department of Statistics
OTHER COUNTRIES	CARICOM Trade database

1.6.3 (a): Notes for Table 6.3 - Use of Pesticides by Type and Year: 2009-2013

Country	Data Source
THE BAHAMAS	Plant Growth regulators have combined with Fungicides, bactericides and seed treatments
JAMAICA	2013 Data does not include mineral oils.
BERMUDA	Data on quantities imported are not available.

## 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 seaward 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

Country	Year	Marine Area	
		Total	Protected
AG	2009	77,147.0	...
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
<b>ASSOCIATE MEMBERS</b>			
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

Country	Metric Tonnes				
	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							Total Quantity (Metric Tonnes)
		Flying Fish	Tuna and pelagics	Dolphin	Conch	Lobster	Wahoo	Other/ Misc.	
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			Total Quantity (Metric Tonnes)
		Needlefish/Gar	Red Hind	Triggerfish; Queen	
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						Total Quantity (Metric Tonnes)
		Squids	Perciformes	Clupeoids	Bonito	Mackerel	Wahoo	
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						Total Quantity (Metric Tonnes)
		Snappers (Lutjanidae sp.)	Groupers (Serranidae sp.)	Jacks and related species	Tuna and pelagics	Shark	Other/ Misc.	
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](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](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 exist 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.

# CHAPTER 8: BIODIVERSITY



Biological diversity describes the variety of life on Earth. It refers to the wide variety of ecosystems and living organisms: animals, plants, their habitats and their genes. The CARICOM region supports a wealth of biodiversity within its terrestrial ecosystems, with a high proportion of species that are endemic, or unique, to the region. Added to this the majority of the population of CARICOM countries live along the coast and are dependent on the coastal zone for their livelihoods.

The Caribbean's biodiversity is at serious risk of species extinctions. Some of the contributory factors to these threats identified include habitat loss from population and tourism pressures, habitat contamination toxic wastes, unsustainable agriculture and forestry practices, and climate change and sea level rise. To address these threats CARICOM countries have received support from regional and international agencies in the conservation, protection and maintenance of biodiversity. Under the Caribbean Challenge Initiative (CCI) participating Caribbean countries have agreed to effectively conserve and manage at least 20 percent of the marine and coastal environment by 2020.

One of the main challenges in this area continues to be the absence of accurate and updated geospatial data to define protected area sites. The data collected on protected areas is useful for identifying new areas as well as monitoring the alterations in the biology of areas that have been changing overtime. The table on biodiversity seeks to collect the Total Area, Protected Area (land and marine) and Protected Area as a per cent of Total Surface Area.

# CHAPTER 8: BIODIVERSITY

**Table 8.1 - Protected Area as a percentage of Total Area: 2009-2013**

Unit: km<sup>2</sup>

Country	Year	Total Area	Protected Area	Protected Area as a % of Total Area
BB	2009-2010	183,865.9	3.2	0.0017
BZ	2009	22,970.0	10,617.4	46.0
DM	2013	751	162.8	21.7
HT	2009	27,065.3	650.7	2.4
JM	2010		3,576	
VC	2010	389.3	122.7	31.5
SR	2011-2013	163,820	22,665	14
<b>ASSOCIATE MEMBER</b>				
BM	2010	4,290.5	319.7	7.5

## Concepts and Definition:

A protected area is a clearly defined geographical space, recognised, dedicated and managed, through legal or other effective means, to achieve the long term conservation of nature with associated ecosystem services and cultural values.

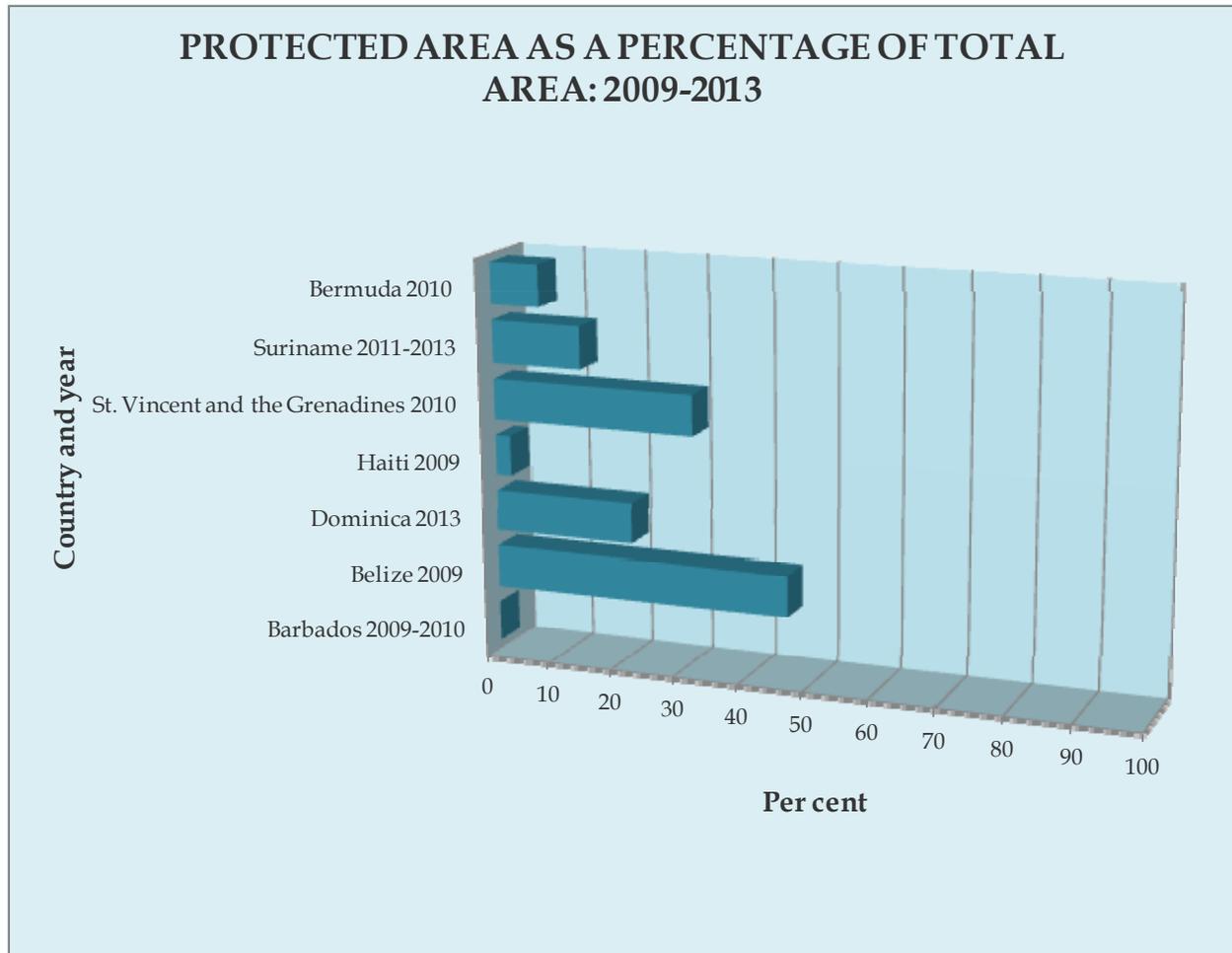
IUCN categorises protected areas by management objective and has identified six distinct categories of protected areas:

A protected area includes six categories, which are:

- Category I(a): Strict Nature Reserve
- Category I(b): Wilderness Area
- Category II: National Park
- Category III: National Monument
- Category IV: Habitat/Species Management Area
- Category V: Protected Landscape/Seascape
- Category VI: Managed Resource Protected Area

(Please refer to [https://cmsdata.iucn.org/downloads/iucn\\_categoriesmpa\\_eng.pdf](https://cmsdata.iucn.org/downloads/iucn_categoriesmpa_eng.pdf) [last accessed: July 7th 2016])

# CHAPTER 8: BIODIVERSITY



## Data Gaps:

The data in Table 8.1 measures the Ratio of area protected to maintain biological diversity to surface area. Data gaps exist for twelve (12) countries that did not submit any data for this table. For the eight (8) countries that submitted data, six (6) countries reported data for one year only, one country for a three-year period and another for a two-year period. It should be noted that this data would not change much during a five year period.

Data on the total protected areas was also extracted from an environment report for one country in an effort to reduce data gaps.

# CHAPTER 8: BIODIVERSITY

## 8.1.1 (a): Sources of Data for Table 8.1 - Protected Area As A Percentage of Total Area: 2009-2013

Country	Data Source
BARBADOS	Ministry of the Environment, Water Resources and Drainage
BELIZE	Prepared by the Statistical Institute of Belize
DOMINICA	Dominica Environment Statistics 2014
HAITI	Prepared by Institut Haïtien de Statistique et d'Informatique - IHSI
JAMAICA	National Environment and Planning Agency
ST VINCENT AND THE GRENADINES	2010 Environmental Statistics Report
SURINAME	Forest Service of Suriname, Division Nature Conservation
BERMUDA	Department of Planning

## 8.1.1 (b): Notes for Table 8.1 - Protected Area As A Percentage of Total Area: 2009-2013

Country	Data Source
DOMINICA	21.7% represents Protected Area as a % of Land Area ONLY.
THE BAHAMAS	The protected areas are inclusive of proposed protected areas

# CHAPTER 9: FORESTS



Forests provide an important habitat to many species of birds and wild animals including many endangered species as well as supporting, varying types of ecosystems. They also protect the conservation and livelihood of these species by serving as a barrier against the ravages of hurricanes and tropical storms and restrict the prevalence of landslides and erosion which would otherwise impact negatively on the biological conservation of the environment.



Most of the forest cover in the smaller islands of the region have been cleared by natural or man made causes and with forest loss, species have disappeared. Some countries have recognised the importance of the forest and have begun to enact laws to promote the sustainable utilization of forests. Countries with more extensive forest resources, such as in Guyana and Suriname where eighty to ninety percent of the total land area is forest area, have clear forestry policies to monitor and control logging in addition to setting aside new protected areas. Additionally the countries are benefitting from the Reduced Emissions from Deforestation and Degradation (REDD+) mechanism for keeping deforestation and forest degradation at very low levels.



In the CARICOM region, FAO monitors the forests and their management and uses through the Forest Resources Assessment Programme which is conducted at 5 to 10 year intervals. Any downward change in the area of forest cover, must be viewed as a potential threat to the environment as this means that more areas now become vulnerable to the effects of climate change. It is for this reason that the indicators presented in this theme are critical to the overall monitoring of the environment and maintain the ecological balance.

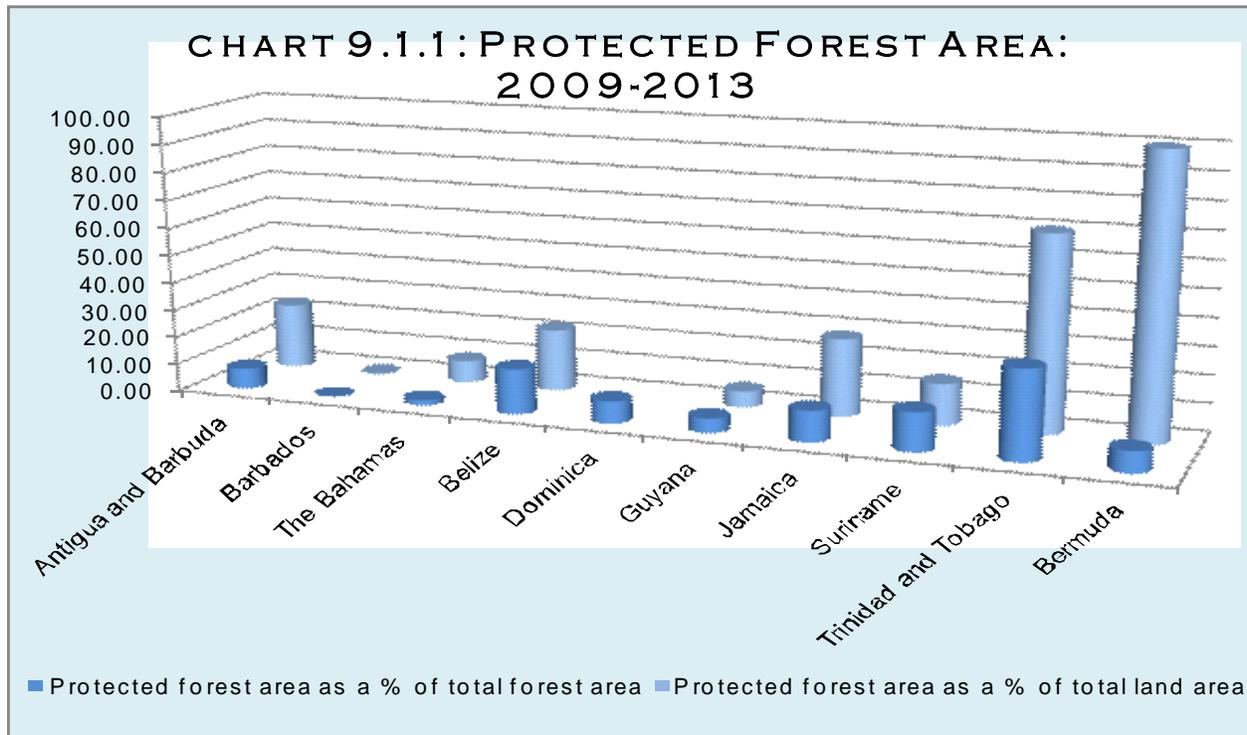
# CHAPTER 9: FORESTS

**Table 9.1 Forest Area: 2009-2013**

Unit = km<sup>2</sup>

Country	Year	Total Land area	Total forest area	Protected forest area	Protected forest area as a % of Total forest area	Protected forest area as a % of Total land area
AG	2009		137.1	32.42	23.65	7.33
BB	2009		74.43	0.20	0.27	0.05
BS	2009	13,957	3,266	259	8.00	1.86
BZ	2009	22,800	16,530	3,727	22.50	16.30
DM	2013	751		60		7.96
GY (ha)	2009	21,129	18,397	405	2.20	1.90
	2010	21,129	18,397	405	2.20	1.90
	2011	21,129	18,378	405	2.20	1.90
	2012	21,128	15,800	1,100	6.90	5.20
	2013	21,128	18,500	1,090	5.90	5.10
JM	2009	1,095.3	337.5	113.2	33.6	10.3
	2010	1,095.1	337.1	113.1	33.6	10.3
	2011	1,094.9	336.7	113.0	33.6	10.3
	2012	1,094.7	336.4	112.9	33.6	10.3
	2013	1,094.5	439.9	122.7	27.9	11.2
SR	2009	163,820	152,335	22,665	15.00	14.00
	2010	163,820	152,257	22,665	15.00	14.00
	2011	163,820	152,180	22,665	15.00	14.00
	2012	163,820	152,103	22,665	15.00	14.00
	2013	163,820	152,026	22,665	15.00	14.00
TT	2009-2013		2,344.76	1,642	70.00	32.00
<b>ASSOCIATE MEMBER</b>						
BM	2010	54.35	4.16*	...	100.00	7.65

# CHAPTER 9: FORESTS



## CONCEPTS AND DEFINITIONS

*Forest* is land spanning more than 0.5 hectares with trees higher than 5 meters and a canopy cover of more than 10 percent, or trees able to reach these thresholds in situ. It does not include land that is predominantly under agricultural or urban land use. (FAO, Global Forest Resources Assessment 2010, Annex 2: Terms and definitions used in FRA 2010 <http://www.fao.org/docrep/013/i1757e/i1757e.pdf>.)

*Protected forest area as a percentage of total land area* is the area of protected forest as a share of total land area, where land area is the total country area excluding the area of inland water bodies (major rivers, lakes and water reservoirs).

## DATA GAPS

For this chapter, ten (10) countries submitted no data for the requested indicators on Forestry. Of the countries that submitted data, six (6) countries had data for one year only and the remaining four (4) countries reported data for the entire reporting period. In addition, four (4) reporting countries did not also have information on *one* of the *five* (5) indicators while one country had missing data for *two* indicators within the table.

# CHAPTER 9: FORESTS

9.1.1 (a): Sources of Data for Table 9.1 - Forest Area: 2009-2013

Country	Data Source
ANTIGUA AND BARBUDA	National Office for Disaster Services Director, Antigua National Parks Director, Barbuda National Parks
THE BAHAMAS	Dept of Lands and Survey
BARBADOS	Ministry of the Environment, Water Resources, and Drainage Barbados Land Registry
BELIZE	Statistical Institute of Belize
GUYANA	Guyana Forestry Commission
JAMAICA	Forestry Department, June 2016
SURINAME	General Bureau of Statistics
TRINIDAD AND TOBAGO	Ministry of Environment and Water Resources, Forestry Division
BERMUDA	Department of Statistics

9.1.1 (b): Notes for Table 9.1 - Forest Area: 2009-2013

Country	Notes
THE BAHAMAS	<p>The table illustrates the amount of forest area kept and governed by the Bahamas Government. There are three distinct types of forest namely; protected forest, conservation forest and forest reserves. This table also shows the various types of forest as a percentage of total forest area and the amount of forest area as a percentage of total land.</p> <p>Historically, substantial plots of land were cleared for large scale commercial hotels, luxury houses, apartments, condominiums, and golf courses. Additionally, substantial amounts of forest land has been devoted to farming which includes crops such as cotton, pineapple, tomatoes, sugarcane, sisal and citrus.</p>

# CHAPTER 10 - AIR



The sources of air pollution in the CARICOM region include vehicular and industrial emissions and open burning of waste. While contributions to air emissions are comparably low at the global level, the effects are still being felt. For example, data on reported cases of environmentally related diseases reveal that there has been increased cases of respiratory diseases in CARICOM countries which studies show can be linked to exposure to common air pollutants. Most CARICOM countries do not have ambient air quality standards or policy and air quality monitoring is not conducted regularly. As a result there is a general lack of data on air emissions for CARICOM countries.



Given the global prominence of reducing air emissions, CARICOM countries have implemented initiatives to reduce emissions. To reduce vehicle emissions, countries have discouraged the importation of used cars to help cut on carbon emissions through taxation and policy and also encourage public transportation. In industry, governments have encouraged investments in renewable energy, pollution control technologies and energy efficiency. Open burning of waste which occurs frequently in countries despite garbage collection services is discouraged through awareness and regulations.



Statistics on *Air Emissions* were previously compiled by the UNSD/UNEP and made available to the CARICOM Secretariat. This area is now being compiled directly by the CARICOM Secretariat. There are eight (8) indicators covered under this section: *Emissions of Sulfur Dioxide (SO<sub>2</sub>)*, *Emissions of Nitrogen Oxides (NO<sub>x</sub>)*, *Emissions of Non-Methane Volatile Organic Compounds (NM-VOCs)*, *Emissions of Carbon Dioxide (CO<sub>2</sub>)*, *Emissions of Methane (CH<sub>4</sub>)*, *Emissions of Nitrous Oxide (N<sub>2</sub>O)*, *Emissions of Lead (P<sub>b</sub>)* and *Consumption of Leaded Petrol*. There were no data submissions for these tables for the fourth round of data collection. As a result data were compiled from International Sources.

# CHAPTER 10 - AIR

**Table 10.1 Carbon dioxide emissions (CO<sub>2</sub>): 2009-2011**

<b>Country</b>	thousand metric tons of CO <sub>2</sub>		
	<b>2009</b>	<b>2010</b>	<b>2011</b>
Antigua and Barbuda	509.71	524.38	513.38
Bahamas	1,642.82	2,464.22	1,906.84
Barbados	1,624.48	1,518.14	1,565.81
Belize	469.38	553.72	550.05
Dominica	128.35	135.68	124.68
Grenada	253.02	260.36	253.02
Guyana	1,565.81	1,719.82	1,782.16
Haiti	2,262.54	2,119.53	2,211.20
Jamaica	8,591.78	7,190.99	7,755.71
Montserrat	77.01	77.01	80.67
Saint Kitts and Nevis	260.36	260.36	267.69
Saint Lucia	385.04	403.37	407.04
Saint Vincent and the Grenadines	231.02	234.69	238.36
Suriname	2,475.23	2,394.55	1,910.51
Trinidad and Tobago	48,331.06	50,916.30	49,574.17
<b>Associate Members</b>			
Anguilla	146.68	150.35	143.01
Bermuda	465.71	476.71	392.37
British Virgin Islands	165.02	172.35	176.02
Cayman Islands	561.05	564.72	583.05
Turks and Caicos Islands	179.68	190.68	190.68

Source: United Nations Statistics Division Millennium Development Goals Database

# CHAPTER 11: WASTE



The adequate management of waste in the region is essential for the protection of public health and the environment. Inadequate waste management can encourage the spread of environmentally related diseases, air and marine pollution. In most CARICOM countries the management of waste is the responsibility of the municipality. There are seven (7) tables reported in this section. These are:

1. Generation of Waste by Source
2. Management of Hazardous Waste
3. Management of Municipal Waste
4. Composition of Municipal Waste
5. Management of Municipal Waste-City data
6. Waste Treatment and Disposal Facilities
7. Generation and Recycling of Selected Waste Materials

The generation of hazardous wastes, including wastes that are toxic, poisonous, explosive, corrosive, flammable, ecotoxic and infectious, is an important concern worldwide. When such wastes are dumped indiscriminately, spilled accidentally or managed improperly, they can cause health problems to humans, plants or animals, or poison water and land. The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal was adopted in 1989, and entered into force on May fifth, 1992. This global environmental treaty strictly regulates the transboundary movements of hazardous wastes.

Data for the indicators under this theme are being collected directly by the United Nations Statistics Division under a collaborative arrangement with the CARICOM Secretariat.

# CHAPTER 11: WASTE

Table 11.1 Generation of Waste by Source: 2009-2013

										1000 t		
Country	Year	Agriculture, forestry and fishing (ISIC 01-03)	Mining and quarrying (ISIC 05-09)	Manufacturing (ISIC 10-33)	Electricity, gas, steam and air conditioning supply (ISIC 35)	Construction (ISIC 41-43)	Other economic activities excluding ISIC 38	Households	Total waste generation (Tonnes)			
<b>AG</b>	2009			0.2	A	7.9	9.6	B	22.7	136.4	C	
	2010			0.3	A	4.9	9.4	B	24.3	136.6	C	
	2011			0.2	A	3.6	9.2	B	22.3	121.2	C	
	2012			0.1		4.8	9.4		20.9	122.5		
<b>KN</b>	2009	0	0	1.8	0	8.2	24.1		11.8	45.9		
	2010	0	0	1.4	0	9.5	24.5		11.8	47.2		
	2011	0	0	0.7	0	6.7	23.0		11.4	41.9		
	2012	0	0	0.6	0	5.9	20.5		10.3	37.3		
<b>LC</b>	2009					8.0				84.0		
	2010					7.0				82.0		
	2011					5.0				82.0		
	2012					4.0				78.0		
<b>SR</b>	2009	12.2	A B C	29.5	A B F		4.5	A B C G	30.5	A B C D	76.6	A B C D E F G
	2010	14.7	A B C	26.5	A B F		5.0	A B C G	36.1	A B C D	82.2	A B C D E F G
	2011	14.5	A B C	24.2	A B F		4.1	A B C G	41.1	A B C D	84.0	A B C D E F G
	2012	11.9	A B C	23.7	A B F		3.6	A B C G	37.9	A B C D	77.2	A B C D E F G
	2013	11.9	A B C E	24.5	A B F		4.4	A B C G	38.2	A B C D	79.0	A B C D E F G
<b>BM</b>	2009								30.2	B		
	2010								30.2	B		
	2011								27.0	B		
	2012								27.0	B		

# CHAPTER 11: WASTE

Table 11.2: Management of Hazardous Waste: 2009-2013

		(Tonnes)			
Country	Year	Stock of hazardous waste at the beginning of the year	Hazardous waste generated during the year	Hazardous waste imported during the year	Hazardous waste exported during the year
AG	2009				
	2010				
	2011				
	2012				
LC	2012	17.3		0.0	0.0
SR	2009		4.2	A B C	
	2010		4.3	A B C	
	2011		3.5	A B C	
	2012		3.4	A B C	
	2013		3.7	A B C	
BM	2009	87.0	623.0		598.0
	2010	112.0	582.0		585.0
	2011	109.0	590.0		601.0
	2012	98.0	525.0		501.0

# CHAPTER 11: WASTE

Table 11.2 (cont'd): Management of Hazardous Waste: 2009-2013

Country	Year	Hazardous waste treated or disposed of during the year					Stock of hazardous waste at the end of the year
		Recycling	Incinerated	Landfilled	Other	Total	
AG	2009	49	A	53	B		
	2010	47		23	B		
	2011	47		157	B		
	2012	47		8	B		
LC	2012	0	0	0	0	0	17
SR	2009						
	2010						
	2011						
	2012						
	2013						
BM	2009	370	6	222		598	112
	2010	365	5	215		585	109
	2011	352	7	242		601	98
	2012	362	5	209		501	122

# CHAPTER 11: WASTE

Table 11.3: Management of Municipal Waste: 2009-2013

Country	Year	1000 t				
		Municipal waste collected from households (1)	Municipal waste collected from other origins (2)	Total amount of municipal waste collected (=1+2)	Municipal waste imported for treatment/disposal	Municipal waste exported for treatment/disposal
AG	2009	22.7 <sup>A</sup>	113.7 <sup>A</sup>	136.4 <sup>A B</sup>	0.0	176.8
	2010	24.3 <sup>A</sup>	112.3 <sup>A</sup>	136.6 <sup>A B</sup>	0.0	202.6
	2011	22.3 <sup>A</sup>	98.9 <sup>A</sup>	121.2 <sup>A B</sup>	0.0	270.8
	2012	20.9 <sup>A</sup>	101.6 <sup>A</sup>	122.5 <sup>A B</sup>	0.0	332.5
BZ	2009					
	2010					
	2011					
	2012					
LC	2009			45.0	0.0	0.0
	2010			46.0	0.0	0.0
	2011			52.0	0.0	0.0
	2012			45.0	0.0	0.0
SR	2009	30.5 <sup>A B C</sup>	46.2 <sup>A B C</sup>	76.6 <sup>A B C</sup>		
	2010	36.1 <sup>A B C</sup>	46.1 <sup>A B C</sup>	82.2 <sup>A B C</sup>		
	2011	41.1 <sup>A B C</sup>	42.8 <sup>A B C</sup>	84.0 <sup>A B C</sup>		
	2012	37.9 <sup>A B C</sup>	39.3 <sup>A B C</sup>	77.2 <sup>A B C</sup>		
	2013	38.2 <sup>A B C</sup>	40.8 <sup>A B C</sup>	79.0 <sup>A B C</sup>		
BM	2009	30.2	60.3	90.5	0.0	
	2010	30.2	60.4	90.6	0.0	
	2011	27.0	54.0	81.0	0.0	
	2012	27.0	55.0	82.0	0.0	

## Definitions & Technical notes:

**Municipal waste**, collected by or on behalf of municipalities, by public or private enterprises, includes waste originating from: households, commerce and trade, small businesses, office buildings and institutions (schools, hospitals, government buildings). It also includes bulky waste (e.g., white goods, old furniture, mattresses) and waste from selected municipal services, e.g., waste from park and garden maintenance, waste from street cleaning services (street sweepings, the content of litter containers, market cleansing waste), if managed as waste. The definition excludes waste from municipal sewage network and treatment, municipal construction and demolition waste.

# CHAPTER 11: WASTE

Table 11.3 cont'd: Management of Municipal Waste: 2009-2013

		1000 t						Total population served by municipal waste collection (%)	Urban population served by municipal waste	Rural population served by municipal waste	
Country	Year	Municipal waste managed in the country Amounts going to:									
		Recycling	Composting	Incineration	Landfilling	Controlled landfilling	Other				Total
<b>AG</b>											
	2009	0.0 <sup>A C</sup>	0.0 <sup>A</sup>	0.0 <sup>A</sup>	136.4 <sup>A D</sup>	136.4 <sup>A D</sup>	0.0 <sup>A</sup>	313.2 <sup>A</sup>	95 <sup>E</sup>	E	E
	2010	0.0 <sup>A C</sup>	0.0 <sup>A</sup>	0.0 <sup>A</sup>	136.6 <sup>A D</sup>	136.6 <sup>A D</sup>	0.0 <sup>A</sup>	339.2 <sup>A</sup>	95 <sup>E</sup>	E	E
	2011	0.0 <sup>A C</sup>	0.0 <sup>A</sup>	0.0 <sup>A</sup>	121.2 <sup>A D</sup>	121.2 <sup>A D</sup>	0.0 <sup>A</sup>	392.0 <sup>A</sup>	99 <sup>F</sup>	F	F
	2012	0.0 <sup>A C</sup>	0.0 <sup>A</sup>	0.0 <sup>A</sup>	122.5 <sup>A D</sup>	122.5 <sup>A D</sup>	0.0 <sup>A</sup>	455.0 <sup>A</sup>	99 <sup>F</sup>	F	F
<b>BZ</b>											
	2009							45.6	100		
	2010							45.3	100		
	2011							45.2	100		
	2012							45.1	100		
<b>LC</b>											
	2009				45.0			45.0	100	100	100
	2010				46.0			46.0	100	100	100
	2011				52.0			52.0	100	100	100
	2012				45.0			45.0	100	100	100
<b>SR</b>											
	2009										
	2010										
	2011										
	2012							79.5 <sup>A C D</sup>	93.4 <sup>A B</sup>	65.6 <sup>A E</sup>	
	2013										
<b>BM</b>											
	2009	1.6	15.0	63.9	10.0			90.5	100	100	100
	2010	1.6	15.0	64.0	10.0			90.6	100	100	100
	2011	1.6	15.0	54.4	10.0			81.0	100	100	100
	2012	1.6	15.0	55.4	10.0			82.0	100	100	100

## Definitions & Technical notes (cont'd):

**Municipal waste collected** refers to waste collected by or on behalf of municipalities, as well as municipal waste collected by the private sector. It includes mixed waste, and fractions collected separately for recovery operations (through door-to-door collection and/or through voluntary deposits).

**Total population served by municipal waste collection** is the proportion of the total population covered by regular municipal waste removal service in relation to the total population of the country.

# CHAPTER 11: WASTE

Table 11.4: Composition of Municipal Waste: 2009-2013

Country	Year	Paper, paperboard	Textiles	Plastics	Glass	Metals	%			TOTAL	
							Other inorganic material	Organic material (Total)	Organic material of <i>which</i> : food and garden waste		
BZ	2010	16.0		19.0	8.0	5.0	14.0	A	38.0	33.0	100.0
GY	2009	10.0	5.0	18.0	5.0	4.5	4.5		53.0	50.0	100.0
JM	2013	14.8	5.1	12.2	2.8	2.4	0.5		62.2		100.0
BM	2010	29.0	17.0	13.0	9.0	6.0	9.0		17.0		100.0

# CHAPTER 11: WASTE

Table 12.5: Management of Municipal Waste - City Data: 2009-2013

Country	Year	Total population of the city (1000 inh.)	Percentage of city population served by municipal waste collection (%)	Municipal waste collected from households (1)	Municipal waste collected from other origins (2)	Total amount of municipal waste collected (=1+2)	1000 t	
							Municipal waste imported for treatment/disposal	Municipal waste exported for treatment/disposal
<b>BZ - Belize City</b>								
	2010	57.2	100.0					
	2011	58.0	100.0					
	2012	58.7	100.0					
<b>GY - Georgetown</b>								
	2009		95.0	35.5	51.7	87.2		
<b>SR - Paramaribo</b>								
	2009		98.0					
	2012	240.924 <sup>B</sup>	90.0					

Table 12.5 con't: Management of Municipal Waste - City Data: 2009-2013

Country	Year	Municipal waste managed in the country <i>Amounts going to:</i>						1000 t
		Recycling	Composting	Incineration	Landfilling	Controlled landfilling	Other	Total
<b>BZ - Belize City</b>								
	2010	0.3 <sup>A</sup>			16.9 <sup>A</sup>			17.3 <sup>A</sup>
	2011	0.3 <sup>A</sup>			17.2 <sup>A</sup>			17.5 <sup>A</sup>
	2012	0.3 <sup>A</sup>			17.4 <sup>A</sup>			17.7 <sup>A</sup>
<b>GY - Georgetown</b>								
	2009	1.2			86.0			87.2
<b>SR - Paramaribo</b>								
	2009							
	2012							

# CHAPTER 11: WASTE

## DATA GAPS

### *Table 11.1 Generation of Waste by Source*

Missing data exists within this table as fifteen (15) countries submitted no data on Generation of Waste by Source. Additionally there were missing data within the table for the five (5) reporting countries such as one country reporting *household* data only or another reporting *generation of waste* by the *construction* industry only.

### *Table 12.2 Management of Hazardous Waste: 2009-2013*

There was generally a lack of data for this table as four (4) countries reported data. Of the four (4) countries, just one country reported figures for all variables while the remaining countries reported on not more than two variables.

### *Table 11.3 Management of Municipal Waste*

Fifteen (15) countries submitted no data on the *Management of Municipal Waste*. For reporting countries, only two (2) had complete datasets for this table whereas the remaining three (3) countries had missing data for the indicators submitted.

### *Table 11.4 Composition of Municipal Waste*

Data on the *composition of municipal waste* was not reported by sixteen (16) countries. The four (4) reporting countries submitted data for one year only.

### *Table 12.5 Management of Municipal Waste - City Data*

Some data on the *Management of Municipal Waste in Cities* were reported by three (3) out of twenty (20) countries. For these countries, not more than three years data were reported. Two reporting countries submitted data on two out of seven indicators in the table while one country reported data for four indicators. As a result, data gaps were numerous within this table.

# CHAPTER 11: WASTE

## 1.11.1: Notes for Table 11.1: Generation of Waste by Source: 2009-2013

Country	Notes
ANTIGUA AND BARBUDA	<p>A Manufacturing =Industrial Sector.</p> <p>B The other economic activities are commercial, institutes, medical and cruise ships. Records for 2005 had ICI (Industrial, commercial, Institutes) together but for 2006 and 2007 they were separate.</p> <p>C These values for total waste generated, which were provided by the National Solid Waste Management Authority (NSWMA), includes waste generated from other sources not specified in the worksheet, for example, 'clean bulk, bulk waste, street sweep, sewage and tyres'.</p>
SAINT LUCIA	<p>Data is provided for fiscal years - April to March. Information for Lines 1, 3, 4, 6 and 7 is included in the total waste generated. available.</p> <p>Household waste is collected together with other municipal waste.</p>
SURINAME	<p>A Unit: thousand cubic meters. For the categories : agriculture, forestry and fishing, manufacturing, other economic activities, households and total waste generation.</p> <p>B The figures cover the capital city (district Paramaribo) and the second largest district of Wanica. For the categories : agriculture, forestry and fishing, manufacturing, other economic activities, households and total waste generation.</p> <p>C The figures cover data for the Agricultural Waste , Waste of Fish and Meat and Dangerous Waste Materials.</p> <p>D This data contains agricultural waste and waste of Fish and meat. Waste of forestry is not included.</p> <p>E The figures cover data of the sectors Expired Foodstuff and Asbestos en Glass.</p> <p>F Contains Enterprise waste.</p> <p>G Other waste contain the following categories: Expired Foodstuff/ Dangerous Waste Materials/ Asbestos and Glass/ Tires ( only collected in 2015)</p>
BERMUDA	<p>A Total ash generated by incineration of ash (R1.7) to generate electricity which included metals improperly disposed of by the public.</p> <p>B Public Works municipal waste collected from households plus the household waste dropped by members of the public at the public drop off located at Tynes Bay Waste-to-Energy Facility.</p>

## 1.11.2 (a): Sources of Data for Table 11.2: Management of Hazardous Waste: 2009-2013

Country	Data Source
ANTIGUA AND BARBUDA	Antigua and Barbuda Waste Recycling Corporation (ABWRC)
SAINT LUCIA	The Ministry of Agriculture, Food Production, Fisheries and Rural Development is the source of this information
SURINAME	Ministry of Public Works Division Garbage and Processing

# CHAPTER 11: WASTE

## 1.11.2 (b): Notes for Table 11.2: Management of Hazardous Waste: 2009-2013

Country	Data Source
ANTIGUA AND BARBUDA	<p>A - Data for Hazardous waste was provided by the Antigua and Barbuda Waste Recycling Corporation (ABWRC) and only dates back as far as 2006. This includes only car batteries (3518 batteries @ an estimated 30 lbs each). The figure that was originally recorded for 2006 was in standard tonnes, however the questionnaire requested metric tonnes; therefore that figure had to be changed. The figure now recorded is the accurate one.</p> <p>B - Hazardous waste gone to landfill is all waste generated from the medical sector so it is partly hazardous material but not all hazardous. The specific amount of how much medical waste is hazardous is unknown.</p>
SAINT LUCIA	This stock of hazardous waste does not include 31,700 litres which is currently in a shipping container awaiting shipment overseas for disposal.
SURINAME	<p>A Unit: thousand cubic meters. For the categories : agriculture, forestry and fishing, manufacturing, other economic activities, households and total waste generation.</p> <p>B The figures cover the capital city (district Paramaribo) and the second largest district of Wanica.</p> <p>C The data is from the Ministry of Public Works Division Garbage and Processing.</p>
BERMUDA	All waste materials designated under this category are sent off Island for recycling/disposal. None are treated or disposed off on island therefore <b>Hazardous waste exported during the year</b> and <b>Hazardous waste treated or disposed of during the year</b> are the same.

## 1.11.3 (a): Sources of Data for Table 11.3: Management of Municipal Waste: 2009-2013

Country	Data Source
ANTIGUA AND BARBUDA	National Solid Waste Management Authority (NSWMA).
SURINAME	Ministry of Public Works Division Garbage and Processing

# CHAPTER 11: WASTE

## 1.11.3 (b): Notes for Table 11.3: Management of Municipal Waste: 2009-2013

Country	Data Source
ANTIGUA AND BARBUDA	<p>A Data were provided by the National Solid Waste Management Authority (NSWMA).            B Data refer to total waste generation.            D Waste collected by the National Solid Waste Management Authority (NSWMA) is not recycled. The only waste that is recycled is what is collected by the Antigua and Barbuda Waste Recycling Corporation.            C Data were provided by the Antigua and Barbuda Waste Recycling Corporation.            E This estimate of the total population served by municipal waste was based on the entire country. There is no estimation by urban and rural populations.            F Estimate was taken from the 2011 Population and Household Census.</p>
SAINT LUCIA	Municipal waste from all sources is collected together and as a result there is no characterization by origin.
SURINAME	<p>A Unit: thousand cubic meters.            B The figures cover the capital city (district Paramaribo) and the second largest district of Wanica.            C Picked -up once per week, Picked -up twice per week, Brought to Dumping Place, Put in a container, Dumped Somewhere else, Different Combinations, Other.            D The total population all 10 districts            E The eight (8) rural districts including the interior ( Saramacca, Coronie, Nickerie, Commewijne, Para, and the interior (Marowijne, Brokopondo, Sipaliwini).            F The data is from the Ministry of Public Works Division Garbage and Processing.</p>

## 1.11.4: Notes for Table 11.4: Composition of Municipal Waste: 2009-2013

Country	Notes
BELIZE	A Includes textile waste.
BERMUDA	Beginning in 2006 the Waste Management Section of the Ministry of Public Works began conducting a municipal waste audit every two years.

## 1.11.5: Notes for Table 11.5: Management of Municipal Waste - City Data: 2009-2013

Country	Data Source
BELIZE	A Estimate.
SURINAME	B The data is 2012 Census data for all 10 districts.

## CHAPTER 12: WATER



The conservation of this precious commodity continues to be very critical to the region, given that most countries have limited fresh water resources. The increased demand for this resource by the tourist industry, coupled with increased urbanization and agricultural activities, prolonged dry spells owing to the effects of climate change have combined to make the sustainability of this scarce resource all the more necessary.



Its impact on the environment is far reaching and extends to all aspects of biodiversity in particular marine life. Agricultural pollutants and industrial waste can lead to changes in water quality, oxygen levels and salinity which can in turn affect the ability of less tolerant species to adapt. These changes can also affect the distribution and composition of aquatic organisms. The loss of these species in turn can affect the survival of others who depend on them for food, but may also cause the increase in other species that provided them with food.



The indicators under this theme provide an estimate of the quantity of *renewable fresh water resources available* and captures data on its consumption by its main users and the purpose for its use. Data on the water supply industry It also provides data on the individual water treatment facilities of countries as well as their capacity.

Data for the indicators under this theme are being collected directly by the United Nations Statistics Division under a collaborative arrangement with the CARICOM Secretariat.

# CHAPTER 12: WATER

Table 12.1 Renewable Freshwater Resources: 2009-2013

							mio m <sup>3</sup> /y
Country	Year	Precipitation (1)	Actual evapotranspiration (2)	Internal flow (3)=(1)- (2)	Inflow of surface and groundwaters (4)	Total renewable fresh water resources (5)=(3+4)	Outflow of surface and groundwaters to neighbouring countries
<b>AG</b>	2009	276.9	A				
	2010	463.9	A				
	2011	450.2	A				
	2012	279.7					
<b>JM</b>	2009	17,830					0
	2010	25,247					0
	2011	20,205					0
	2012	18,488					0
<b>KN</b>	2009	161.4					
	2010	347.2					
	2011	279.6					
	2012	173.2					
<b>VC</b>	2009	5,616.3					
	2010	7,237.5					
	2011	8,289.2					
	2012	5,649.6					
<b>SR</b>	2009	1,833.8					
	2010	2,319.0					
	2011	2,074.6					
	2012	1,805.2					
	2013	2,076.0					
<b>ASSOCIATE MEMBER</b>							
<b>BM</b>	2009	77.4	0.3	77.1	0.0	77.1	

# CHAPTER 12: WATER

Table 12.2 Freshwater Abstraction and Use: 2009-2013

Country	Year	Freshwater abstracted of which abstracted by:								mio m <sup>3</sup> /y
		1 Fresh surface water abstracted (1)	2 Fresh groundwater abstracted (2)	3 Freshwater abstracted (=1+2)	Water supply industry (ISIC 36)	Households	Agriculture, forestry and fishing (ISIC 01-03)	Manufacturing (ISIC 10-33)	Electricity industry (ISIC 351)	Other economic activities
AG	2009	2.3	1.6	4.0						
	2010	2.2	1.6	3.8						
	2011	2.6	1.2	3.8						
	2012	2.6	1.2	3.8						
BZ	2009	7.6	1.9	9.4						
	2010	7.6	1.9	9.5						
	2011	7.7	1.9	9.6						
	2012	7.9	2.0	9.9						
GY	2009			109.2						
	2010									
	2011									
	2012	14.9	120.2	135.0						
JM	2009				299.0	A				
	2010				285.0	A				
	2011				303.0	A				
	2012				302.0	A				
TT	2009	4.9	2.2	7.1						4.9
	2010	4.3	3.1	7.4						4.3
	2011	4.4	3.7	8.1						4.4
	2012	4.2	3.5	7.7						4.2
BM	2009			6.8	1.8	3.9	0.0	0.0	0.0	1.1

# CHAPTER 12: WATER

Table 12.2 cont'd Freshwater Abstraction and Use: 2009-2013

Country	Year	4	5	6	7	8	9	10
		Desalinated water	Reused water	Imports of water	Exports of water	Total freshwater available for use (=3+4+5+6-7)	Losses during transport	Total freshwater use (=8-9) (=W4,1)
AG	2009	4.4				8.4		8.4
	2010	4.3				8.1		8.1
	2011	4.9				8.6		8.6
	2012	5.1				8.9		8.9
BZ	2009	0.6		0.0	0.0	10.0	2.9	7.1
	2010	0.6		0.0	0.0	10.1	2.7	7.4
	2011	0.6		0.0	0.0	10.3	2.8	7.5
	2012	0.7		0.0	0.0	10.6	2.9	7.6
GY	2009							
	2010							
	2011							
	2012							
JM	2009							
	2010							
	2011							
	2012							
TT	2009	0.0	0	0	0	7.1	4	3.3
	2010	0.0	0	0	0	7.4	4	3.5
	2011	0.0	0	0	0	8.1	4	3.8
	2012	0.0	0	0	0	7.7	4	3.6
BM	2009	1.9 <sup>D</sup>				8.7	0	8.7

# CHAPTER 12: WATER

Table 12.2 cont'd Freshwater Abstraction and Use: 2009-2013

		mio m <sup>3</sup> /y											
Country	Year	Total freshwater use of which used by:(=14-15)											
		Households		Agriculture, forestry and fishing (ISIC 01-03)		Manufacturing (ISIC 10-33)		Electricity industry (ISIC 351)		Other economic activities		Total	
AG	2009											5.0	
	2010	3	B	0	B C	0	B C	0	B C	1	B D	4.9	
	2011	3	B	0	B C	0	B C	0	B C	2	B D	5.2	
	2012	3	B	0	B	0	B C	0	B C	2	B D	5.4	
BZ	2009												
	2010												
	2011												
	2012												
GY	2009												
	2010												
	2011												
	2012												
JM	2009												
	2010												
	2011												
	2012												
TT	2009												
	2010												
	2011												
	2012												
BM	2009	6.2	A B	0.0		0.0		0.0		2.5	C	8.7	A

# CHAPTER 12: WATER

Table 12.3: Water Supply Industry (ISIC 36): 2009-2013

Country	Year	Gross freshwater supplied by water supply industry (ISIC 36)	Losses during transport by ISIC 36	Net freshwater supplied by water supply industry (ISIC 36)	Net freshwater supplied by water supply industry (ISIC 36) of which supplied to:					Population supplied by water supply industry (ISIC 36) (%)
					Households	Agriculture, forestry and fishing (ISIC 01-03)	Manufacturing (ISIC 10-33)	Electricity industry (ISIC 351)	Other economic activities	
AG	2009	8.4	3.36 A	5.03						
	2010	8.1	3.24 A	4.87	2.8 B	0.0 B C	0.0 B C	0.0 B C	1.5 B D	82 E
	2011	8.6	3.45 A	5.18	2.7 B	0.0 B C	0.0 B C	0.0 B C	1.6 B D	
	2012	8.9	3.57 A	5.35	2.7 B	0.0 B C	0	0.0	2 B D	
BZ	2009	10.0	2.9 A	7.08						
	2010	10.1	2.7 A	7.36						57.3 B C
	2011	10.3	2.8 A	7.49						57.4 B C
	2012	10.6	2.9 A	7.65						57.6 B C
GY	2012	135.0	8.0	127.0						
JM	2009	299 A	206 A	93.0 A						
	2010	285 A	187 A	98.0 A						
	2011	303 A	200 A	103.0 A						
	2012	302 A	208 A	94.0 A						
SR	2009	35.0 A	2.1 A	32.9	14.1		3.4		2.5	67.9 B
	2010	36.0 A	2.3 A	33.6	14.6		3.6		2.7	
	2011	41.0 A	2.3 A	38.7	15.5		3.7		2.8	
	2012	42.8 A	2.4 A	40.4	16.9		3.9		2.9	
	2013	45.9 A	2.5 A	43.5	17.6		4.1		3.1	
ASSOCIATE MEMBER										
BM	2009	3.9	0.0 A	3.9 B	2.5 C	0.0	0.0	0.0	1.4 D	1.4 E

# CHAPTER 12: WATER

Table 12.4 Population connected to WasteWater Treatment: 2009-2013

Country	Year	Population connected to wastewater	Population connected to wastewater treatment		Population with independent wastewater	Population not connected to wastewater
		% of pop.	Total %	<i>of which at least secondary treatment %</i>	% of pop.	% of pop.
BZ	2010	60.4	10.6		49.8	39.6
GY	2009	7.2	0.0	0.0	0.0	100.0
KN	2009	0.0	5.0	2.5	94.0	1.0
	2010	0.0	5.0	2.5	94.0	1.0
	2011	0.0	5.0	2.5	94.0	1.0
	2012	0.0	5.0	2.5	94.0	1.0
<b>ASSOCIATE MEMBER</b>						
BM	2009	5.0 <sup>A</sup>	5.0	1.5	95.0 <sup>B</sup>	0.0

# CHAPTER 12: WATER

## DATA GAPS

### ***Table 12.1 Renewable Freshwater Resources: 2009-2013***

Missing data exists for fourteen (14) countries for which data were not submitted. For the six (6) countries which submitted data on *Renewable Freshwater Resources* there were missing data for most categories in all but one country. Five (5) out of six (6) reporting countries submitted data on *Precipitation* but had no data for the other variables in the table. Additionally, all but one country has data for the period 2009-2012.

### ***Table 12.2 Freshwater Abstraction and Use***

The table revealed that fourteen (14) countries submitted no data on *Freshwater Abstraction and Use* for the period under review. The six (6) countries that submitted data for this table had missing information for most variables. Five (5) countries submitted data for the period 2009-2012 and one country had data for 2008 only.

### ***Table 12.3 Water supply industry***

Data gaps exist for fourteen (14) countries on the water supply industry that submitted no data. This information was submitted by six (6) countries of which two (2) countries had data for one year only. Three (3) reporting countries submitted data up to 2012 and one country reported data for the period 2009 to 2013. Three (3) reporting countries had missing data for the *Net freshwater supplied by water supply industry by category*.

### ***Table 12.4 Population connected to wastewater treatment***

Four (4) countries reported data for the table on *Population connected to wastewater treatment* while sixteen (16) countries submitted no data. Three (3) countries submitted data for just one year and one country submitted data for the period 2009-2012.

In summary there were many data gaps in this section on Water Statistics as data were reported by at most six (6) countries out of twenty (20). Further within the tables there were missing data for some variables. As a result this allows for no comparison across countries nor analysis of the variables reported.

# CHAPTER 12: WATER

## 1.12.1 (a): Sources of Data for Table 12.1 - Renewable Freshwater Resources: 2009-2013

Country	Data Source
ALL COUNTRIES	National

## 1.12.1 (b): Notes for Table 12.1 - Renewable Freshwater Resources: 2009-2013

Country	Notes
ANTIGUA AND BARBUDA	A - The data on the precipitation was provided by the Meteorological Center.
SURINAME	Data unit is mm

## 1.12.2 (a): Sources of Data for Table 12.2 - Freshwater Abstraction and Use

Country	Data Source
ALL COUNTRIES	National

# CHAPTER 12: WATER

## 1.12.2 (b): Notes for Table 12.2 - Freshwater Abstraction: 2009-2013

Country	Notes
ANTIGUA AND BARBUDA	<p>A - The quantity of water lost during transport is estimated at 40% of the total freshwater available for use.</p> <p>B - These represented the amount of water that the consumers actually used and were billed for.</p> <p>C - The value was less than half the unit of measurement.</p> <p>D - Other Economic Activities include the sum from the commercial sector and the cruise ship industry.</p>
BELIZE	Information consists only for the population connected to the main water systems.
JAMAICA	Refers to average production of water per day.
ST. KITTS AND NEVIS	All data in table are for St. Kitts only.
BERMUDA	<p>A - Fresh water sources: The primary source of water for domestic use in Bermuda is rainwater collected by roof catchments.</p> <p>B - Supplied by household catchments.</p> <p>C - Supplied by other roof and constructed water catchments.</p> <p>D - 1.8 mio m<sup>3</sup>/year ground water abstracted for the Government of Bermuda brackish RO plants; 0.6 mio m<sup>3</sup>/year ground water abstracted for the Bermuda Water Works brackish EDR plant.</p> <p>E - 1.24 mio m<sup>3</sup>/year ground water abstracted for the Government of Bermuda brackish RO plants; 0.6 mio m<sup>3</sup>/year ground water abstracted for the Bermuda Water Works brackish EDR plant.</p> <p>F - Private Wells: 0.68 mio m<sup>3</sup>/year (State of Environment Report - 2005).</p> <p>G - Others (incl. bottling unit): 0.125 mio m<sup>3</sup>/year</p>

# CHAPTER 12: WATER

## 1.12.3: Sources of Data for Table 12.3 - Water Supply Industry (ISIC 36): 2009-2013

Country	Data Source
ALL COUNTRIES	National

## 1.12.3: Notes for Table 12.3 - Water Supply Industry (ISIC 36): 2009-2013

Country	Notes
ANTIGUA AND BARBUDA	<p>A - The quantity of water lost during transport is estimated at 40% of the total freshwater available for use.</p> <p>B - These represented the amount of water that the consumers actually used and were billed for.</p> <p>C - The value was less than half the unit of measurement.</p> <p>D - Other Economic Activities include the sum from the commercial sector and the cruise ship industry.</p> <p>E - Figures taken from 2011 Population and Housing Census.</p>
BELIZE	<p>A - Water loss is due to leakage, illegal connection, malfunctioning of meters, etc.</p> <p>B - Refers to population with access to water supplied by the Belize Water Services Limited. Mostly Urban areas with a few villages that are connected to the system.</p> <p>C - Estimate.</p> <p>Rudimentary Water System for rural areas are not metered therefore information is not available.</p>
JAMAICA	<p>A - Data refers to public water supply only and is reported In megalitres. Losses during transport refers to non-revenue water which are losses from theft, leakage and underestimated consumption.</p>
SURINAME	<p>A - The unit is 1,000,000 m<sup>3</sup>. One million Cubic meters for water Production for the districts Paramaribo, Wanica, Para, Nickerie and Parts of Marowijne.</p> <p>B - This is data for all 10 districts and it data for tap water at home, tapwater outdoors, supplied with water tank/truck and bottled water.</p>
BERMUDA	<p>D - Bermuda Government has a new seawater RO desalination plant at 500,000 Imp gpd = 0.83 mio m<sup>3</sup>/y</p> <p>E - Leakage during transport might be around 15 to 20% but there are no supporting data.</p>

# CHAPTER 12: WATER

## 1.12.5(a): Sources of Data for Table 12.6 - Wastewater Treatment Facilities: 2009-2013

Country	Data Source
ALL COUNTRIES	National

## 1.12.6 (b): Notes for Table 12.6 - Wastewater Treatment Facilities:: 2009-2013

Country	Notes
BELIZE	Information only available from the Population and Housing Census, 2010
BERMUDA	<p>A - City of Hamilton, Town of St. George's and part of Prospect residential area have sewage collection systems (~ 1 mio lgpd = 1.66 mio m<sup>3</sup>/y)</p> <p>B - a) 21000 cesspits - Total capacity of 3.5 mio lgpd = 5.8 mio m<sup>3</sup>/y;  b) 86 deep sealed boreholes - 300,000 lmp gpd = 0.5 mio m<sup>3</sup>/y.</p>

# ANNEX I

STATUS OF NATIONAL DATA REPORTED BY MEMBER STATES IN "THE CARICOM ENVIRONMENT IN FIGURES 2014"  
CLASSIFIED BY ENVIRONMENT INDICATORS / STATISTICS

Theme/ Chapter	Name of Indicator / statistic	Antigua & Barbuda	The Bahamas	Barbados	Belize	Dominica	Grenada	Guyana	Haiti	Jamaica	Monserrat
1	2	3	4	5	6	7	8	9	10	11	12
Population and Households <i>(Data obtained primarily from Population Census)</i>	PH1: Number of Households by Type of Dwelling	√	√	√	√	√	√	√		√	√
	PH2: Number of Households by Type of Tenure	√	√	√	√	√	√	√		√	√
	PH3: Number of Households by Type of Material of Outer Walls	√	√	√	√	√	√	√		√	√
	PH4: Number of Households by Type of Material Used for Roofing	√	√	√	√	√	√	√		√	√
	PH5: Households by Number of Bedrooms	√	√	√	√	√	√	√		√	√
	PH6: Population by Size of Household	√	√	√	√	√	√	√		√	√
Tourism	TO1(a): Tourist Arrivals by Type of Arrival and Number of Tourist Nights Spent										
	1. Non-residents	√	√	√	√	√	√	√	√	√	√
	2. Non-residents (stop over)	√	√	√	√	√	√	√	√	√	√
	3. Cruise passengers	√	√	√	√	√	√	n.a	√	√	√
	4. Cruise ships arrivals	√	√	√	√	√	√	n.a		√	√
	5. No. of tourists nights spent	√	√	√	√	√	√	n.a		√	√
	TO1(b): Tourist Intensity and Tourist Penetration Ratio										
	1. Tourism Intensity Rate			√		√					
	2. Tourism Density Ratio	√	√	√	√	√	√	√	√	√	√
	3. Tourist penetration ratio	√	√	√	√	√	√	√	√	√	√
	TO2: Number of Hotels classified by number of rooms, Beds and Rooms occupied by Year										
	1. Number of hotels by number of rooms					√				√	√
	3. Total number of rooms occupied									√	
	4. Total number of beds		√							√	
	5. Room occupancy rate		√							√	
	TO3: Visitor Expenditure										
	1. Visitor expenditure (in US\$)	√	√	√	√	√	√	√		√	√
	1.1 Int'l and domestic tourism expenditure							√			
	1.2 Expenditure on same-day visits										
	1.3 Expenditure on accommodation, meals and drinks, shopping, entertainment etc.										
1.4. Total directly employed in tourism			√							√	
TO4: Tourist Arrivals by Type of Accommodation		√				√				√	
TO5: Tourist Arrivals by Country of Origin	√	√	√	√	√	√	√			√	
Environmental Health	EH1: Number of Reported Cases of Environmentally Related Diseases					√	√				√
	EH2: Number of Households by Type of Sanitation Facilities <i>(Data obtained primarily from Population Census)</i>	√	√	√	√	√	√	√	√	√	√
	EH3: Number of Households by Type of Water Supply <i>(Data obtained primarily from Population Census)</i>	√	√	√	√	√	√	√	√	√	√
Natural Disasters	ND1(a): Natural Disasters by Year	n.a	√	n.a	n.a	√	√	n.a	n.a	√	√

Notes:

Blank : No data

n.a : Not applicable

√ : National data reported by Member States in "The Caricom Environment in figures 2014".

The indicators/tables where data gaps exists for more than 10 countries are highlighted

**STATUS OF NATIONAL DATA REPORTED BY MEMBER STATES IN "THE CARICOM ENVIRONMENT IN FIGURES 2014"  
CLASSIFIED BY ENVIRONMENT INDICATORS / STATISTICS**

Theme/ Chapter	Name of Indicator / statistic	Antigua & Barbuda	The Bahamas	Barbados	Belize	Dominica	Grenada	Guyana	Haiti	Jamaica	Monserrat
1	2	3	4	5	6	7	8	9	10	11	12
Energy and Minerals	EM1: Energy Consumption by Type and Year	√				√		√		√	
	EM2: Number of Households by Type of Fuel Used for Cooking (Data obtained primarily from Population Census)	√	√	√	√	√	√	√	√	√	√
	EM3: Number of Households by Type of Fuel Used for Lighting (Data obtained primarily from Population Census)	√	√	√	√	√	√	√	√	√	√
	EM4: Mineral Production by Type		√					√		√	
	EM5: Mineral Reserves by Type									√	
Coastal and Marine Resources	MR1: Total and Protected Marine Area	√	√	√		√			√	√	
	MR2: Fish Landings by Type	√	√	√	√	√	√	√		√	
	MR3: Population of Coastal Area		√	√	√	√				√	
Land Use and Agriculture	LA1: Land Use	√						√		√	
	LA2: Use of Fertilizers by Type and Year	√	√	√	√	√	√	√		√	√
	LA3: Use of Pesticides by Type and Year	√	√	√	√	√	√	√		√	√
Biodiversity	BIO1: Protected Area as a Percentage of Total Area			√	√	√			√	√	
Forests	FOR1: Forest Area	√	√	√	√	√		√		√	
Air	AIR1: Emissions of Sulfur Dioxide (SO2)	<b>NO DATA SUBMISSION</b>									
	AIR2: Emissions of Nitrogen Oxides (NOx)										
	AIR3: Emissions of Non-Methane Volatile Organic Compounds (NM-VOCs)										
	AIR4: Emissions of Carbon Dioxide (CO2)										
	AIR5: Emissions of Methane (CH4)										
	AIR6: Emissions of Nitrous Oxide (N2O)										
	AIR7: Emissions of Lead (Pb) and Consumption of Leaded Petrol										
Waste	WA1: Generation of Waste by Source	√									
	WA2: Management of Hazardous Waste	√									
	WA3: Management of Municipal Waste	√			√						
	WA4: Composition of Municipal Waste				√			√		√	
	WA5: Management of Municipal Waste — City Data				√			√			
Water	WT1: Renewable Freshwater Resources	√								√	
	WT2: Freshwater Abstraction and Use	√			√			√		√	
	WT3: Water Supply Industry (ISIC 36)	√			√			√		√	
	WT4: Population Connected to Wastewater Treatment				√			√			

**Notes:**

- Blank : No data
  - n.a : Not applicable
  - √ : National data reported by Member States in "The Caricom Environment in figures 2014".
- The indicators/tables where data gaps exists for more than 10 countries are highlighted

**STATUS OF NATIONAL DATA REPORTED BY MEMBER STATES IN "THE CARICOM ENVIRONMENT IN FIGURES 2014"  
CLASSIFIED BY ENVIRONMENT INDICATORS / STATISTICS**

Theme/ Chapter	Name of Indicator / statistic	St. Kitts & Nevis	Saint Lucia	St. Vinc. & Grenadines	Suriname	Trinidad & Tobago	Anguilla	Bermuda	British Virgin Islands	Turks & Caicos Islands	The Cayman Islands
1	2	13	14	15	16	17	18	19	20	21	22
<b>Population and Households</b> <i>(Data obtained primarily from Population Census)</i>	PH1: Number of Households by Type of Dwelling	√	√	√	√	√	√	√	√	√	√
	PH2: Number of Households by Type of Tenure	√	√	√	√	√	√	√	√	√	√
	PH3: Number of Households by Type of Material of Outer Walls	√	√	√	√	√	√	√	√	√	√
	PH4: Number of Households by Type of Material Used for Roofing	√	√	√	√	√	√	√	√	√	√
	PH5: Households by Number of Bedrooms	√	√	√	√	√	√	√	√	√	√
	PH6: Population by Size of Household	√	√	√	√	√	√	√	√	√	√
<b>Tourism</b>	TO1(a): Tourist Arrivals by Type of Arrival and Number of Tourist Nights Spent										
	1. Non-residents	√	√	√	√	√	√	√	√	√	√
	2. Non-residents (stop over)	√	√	√	√	√	√	√	√	√	√
	3. Cruise passengers	√	√	√	n.a	√	n.a	√	√	√	√
	4. Cruise ships arrivals	√	√	√	n.a	√	n.a	√	√	√	√
	5. No. of tourists nights spent		√	√			√	√			√
	TO1(b): Tourist Intensity and Tourist Penetration Ratio										
	1. Tourism Intensity Rate		√					√			
	2. Tourism Density Ratio	√	√	√	√	√	√	√	√	√	√
	3. Tourist penetration ratio	√	√	√	√	√	√	√	√	√	√
	TO2: Number of Hotels classified by number of rooms, Beds and Rooms occupied by Year										
	1. Number of hotels by number of rooms					√					
	3. Total number of rooms occupied							√			√
	4. Total number of beds							√			
	5. Room occupancy rate							√			
	TO3: Visitor Expenditure										
	1. Visitor expenditure (in US\$)	√	√	√	√	√	√	√	√	√	√
	1.1 Int'l and domestic tourism expenditure										
	1.2 Expenditure on same-day visits							√			
	1.3 Expenditure on accommodation, meals and drinks, shopping, entertainment etc.						√	√			
1.4. Total directly employed in tourism							√				
TO4: Tourist Arrivals by Type of Accommodation		√		√			√			√	
TO5: Tourist Arrivals by Country of Origin	√	√	√	√	√	√	√		√	√	
<b>Environmental Health</b>	EH1: Number of Reported Cases of Environmentally Related Diseases		√		√	√		√			
	EH2: Number of Households by Type of Sanitation Facilities <i>(Data obtained primarily from Population Census)</i>	√	√	√	√	√	√	√	√	√	
	EH3: Number of Households by Type of Water Supply <i>(Data obtained primarily from Population Census)</i>	√	√	√		√	√	√	√	√	
<b>Natural Disasters</b>	ND1(a): Natural Disasters by Year	n.a	√	√	√	n.a	n.a	√	n.a	n.a	n.a

**Notes:**

- Blank : No data
  - n.a : Not applicable
  - √ : National data reported by Member States in "The Caricom Environment in figures 2014".
- The indicators/tables where data gaps exists for more than 10 countries are highlighted

**STATUS OF NATIONAL DATA REPORTED BY MEMBER STATES IN "THE CARICOM ENVIRONMENT IN FIGURES 2014"  
CLASSIFIED BY ENVIRONMENT INDICATORS / STATISTICS**

Theme/ Chapter	Name of Indicator / statistic	St. Kitts & Nevis	Saint Lucia	St. Vinc. & Grenadines	Suriname	Trinidad & Tobago	Anguilla	Bermuda	British Virgin Islands	Turks & Caicos Islands	The Cayman Islands
		13	14	15	16	17	18	19	20	21	22
1	2										
Energy and Minerals	EM1: Energy Consumption by Type and Year				√	√		√			
	EM2: Number of Households by Type of Fuel Used for Cooking (Data obtained primarily from Population Census)	√	√	√	√	√	√	√	√	√	√
	EM3: Number of Households by Type of Fuel Used for Lighting (Data obtained primarily from Population Census)	√	√	√	√	√	√	√	√	√	√
	EM4: Mineral Production by Type				√	√					
	EM5: Mineral Reserves by Type					√					
Coastal and Marine Resources	MR1: Total and Protected Marine Area			√				√			√
	MR2: Fish Landings by Type		√	√				√		√	
	MR3: Population of Coastal Area				√						√
Land Use and Agriculture	LA1: Land Use				√						
	LA2: Use of Fertilizers by Type and Year	√	√	√	√	√		√			
	LA3: Use of Pesticides by Type and Year	√	√	√	√	√		√			
Biodiversity	BIO1: Protected Area as a Percentage of Total Area			√				√			
Forests	FOR1: Forest Area				√	√		√			
Air	AIR1: Emissions of Sulfur Dioxide (SO2)	<b>NO DATA SUBMISSION</b>									
	AIR2: Emissions of Nitrogen Oxides (NOx)										
	AIR3: Emissions of Non-Methane Volatile Organic Compounds (NM-VOCs)										
	AIR4: Emissions of Carbon Dioxide (CO2)										
	AIR5: Emissions of Methane (CH4)										
	AIR6: Emissions of Nitrous Oxide (N2O)										
	AIR7: Emissions of Lead (Pb) and Consumption of Leaded Petrol										
Waste	WA1: Generation of Waste by Source	√	√		√	√		√			
	WA2: Management of Hazardous Waste		√		√			√			
	WA3: Management of Municipal Waste		√		√			√			
	WA4: Composition of Municipal Waste							√			
	WA5: Management of Municipal Waste — City Data				√						
Water	WT1: Renewable Freshwater Resources	√		√				√			
	WT2: Freshwater Abstraction and Use					√		√			
	WT3: Water Supply Industry (ISIC 36)				√			√			
	WT4: Population Connected to Wastewater Treatment	√						√			

**Notes:**

- Blank : No data
  - n.a : Not applicable
  - √ : National data reported by Member States in "The Caricom Environment in figures 2014".
- The indicators/tables where data gaps exists for more than 10 countries are highlighted

