

THIRTY-NINTH MEETING OF
THE STANDING COMMITTEE OF
CARIBBEAN STATISTICIANS (SCCS)

SCCS/2014/39/6

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STATUS REPORT ON ENVIRONMENT STATISTICS AND PROGRAMME OF WORK
2014/2015

1. Introduction

Since the publication of the third regional report, “**CARICOM Environment in Figures 2009**” in October 2013, the focus of the work on environment statistics at the Caribbean Community (CARICOM) Secretariat has centered on (i) preparation for the CARICOM workshop on environment statistics which was conducted in April 2014, (ii) filling of the data gaps arising out of information obtained as a result of the conduct of the workshop and otherwise, (iii) refining the Environment statistics metadata document and (iv) the undertaking of an assessment of the impact of capacity building over the years.

This paper focuses on the CARICOM Workshop on Environment Statistics held in St. Vincent and the Grenadines, highlights on the participation in the United Nations Statistics Division (UNSD) seminar which was held in Saint Lucia, Initial work undertaken relative to the assessment of the impact of capacity building efforts in this area of statistics, the Work Plan in Environment Statistics 2014/2015, and Actions required of the Thirty Ninth Meeting of the Standing Committee of Caribbean Statisticians (SCCS).

2. CARICOM Workshop on Environment Statistics

The Caribbean Community (CARICOM) Secretariat convened the CARICOM Workshop on Environment Statistics on 7-8 April 2014 in Kingstown, St. Vincent and the Grenadines. The workshop was funded by the European Union (EU) under the Tenth European Development Fund (EDF), CARICOM Single Market and Economy (CSME) and Economic Integration Programme. The UNSD provided support for the participation of a representative from the Ministry of Environment of Belize and representatives from the Associate Members. Technical assistance in supporting the facilitation of the workshop was also provided by the UNSD through Ms. Reena Shah, Chief of the Environment Statistics Section.

The workshop was aimed at reviewing the existing data gaps based on statistics and indicators submitted by countries under the specific themes, identifying of methods that can be used in filling these data gaps, reviewing the methodologies used in the production and compilation of Environment Statistics and strengthening capacity in the bridging of the existing gaps. The workshop was attended by all Member States and Associate Members with the exception of, Barbados, Guyana and Haiti.

Over the two days of the workshop, participants were informed about the Development of Environment Statistics and Indicators in CARICOM, the status of data submitted by Member Countries and key challenges, and the 2014/2015 work plan for Environment Statistics. Participants were also informed about the development of an attachment programme in all areas of statistics including statistics on the environment.

The UNSD representative informed the workshop about the Framework for the Development of Environment Statistics 2013(FDES 2013). It is necessary for countries and the CARICOM Secretariat to review this document to determine the compatibility of the CARICOM Environment Indicators and metadata with the FDES framework. The CARICOM Secretariat representative from the Sustainable Development Programme gave an overview and historical perspective of the programme by tracing its

involvement in the Rio summits from as early as 1992 to its most recent interventions in coordinating the Region's response relative to the Post 2015 development agenda.

The Meeting also received reports by countries on inter-agency activities that occurred within countries, and on other elements of the work plan which were put in place by countries to sustain the production of environment statistics and on the challenges and requirements to develop this area of Statistics.

During presentations and discussions focusing on the themes that contained the most data gaps (Land Use, Waste, Water and Air), a number of recommendations emerged such as on collaboration with stakeholders, regularisation of data collection, and continuous training of relevant staff. In addition the need for improvement in the sources of data and technical assistance were identified. These sources of data included country reports to the various International Conventions such as on Biodiversity and on the use of Geographic Information System (GIS)/Satellite Imagery. The National Institute of Statistics and Geography of Mexico (INEGI) was identified as a source relative to obtaining satellite imagery to fill data gaps on Land Use.

Among the outcomes of this Workshop was the refinement of the work plan created in 2011 at the Workshop on Environment Statistics in St. Kitts and Nevis. In addition, the formation of a Technical Working Group (TWG) in Environment Statistics was achieved. The representatives from Antigua and Barbuda, Bermuda, The British Virgin Islands, Belize, Jamaica, Turks and Caicos Islands, St. Kitts and Nevis and St. Vincent and the Grenadines have volunteered. It was proposed that the Member State of Suriname (absent from the workshop) should be a member of the TWG. The participant from Bermuda volunteered to chair the TWG with the participant from St. Kitts and Nevis as co-chair (provisional).

3. Participation in the United Nations Statistics Division Seminar

The CARICOM Secretariat attended the Seminar organised by the UNSD on the System of Environmental-Economic Accounting (SEEA) Central Framework and SEEA Experimental Ecosystem Accounting for the CARICOM from 6-7 February 2014, in Castries, Saint Lucia. The SEEA Central Framework is the internationally agreed framework for measuring the environment and its relationship with the economy. It was stated that in the CARICOM region, work has not started on the SEEA. The seminar therefore sought to raise awareness of the SEEA and its applications for policy applications and for providing the statistical reference for the development of basic statistics.

Other organisations apart from the CARICOM Secretariat attending the workshop included: the Eastern Caribbean Central Bank (ECCB), the UN Economic Commission for Latin America and the Caribbean (ECLAC), Statistics Canada, the United Nations Development Programme (UNDP) Barbados and the Organisation of Eastern Caribbean States (OECS), the United Nations Environment Programme (UNEP), the World Bank and UN World Tourism Organisation (WTO).

At this forum, the CARICOM Secretariat presented on the current status of environment statistics data collection/compilation, the challenges and the next steps. The Secretariat representative stated that while countries at the Thirty-Eight SCCS have indicated implementation of the SEEA was not a priority given the challenges and the capacity constraints in National Statistical Offices (NSOs), the SCCS recommended the use of a modular approach and that countries could also volunteer to pilot the SEEA.

4. Initial Work on Assessing the Impact of Capacity Building

Over the years the CARICOM Secretariat has spearheaded a number of capacity building activities in collaboration with international development partners with the aim of developing the area of Environment Statistics in Member States and Associate Members. In order to assess the impact of these capacity building activities the

CARICOM Secretariat has commenced a review of the environment statistics data submissions from the inception of the CARICOM/UNSD Environment Statistics Project to the present. This review is to obtain evidence on the results of the capacity building that have been executed. Environment Statistics production in CARICOM countries commenced with the UNSD/CARICOM Project, “Strengthening Capacity in the Compilation of Statistics and Indicators for Conference Follow-up in the CARICOM Region”. Some of the results achieved under the project included:

- the identification of a core data set – initially by NSOs and representatives of regional Environment Ministries/Agencies;
- the compilation of the statistics and indicators of the core data set by countries,
- the convening of a regional workshop in 2000 in Belize (at which twenty-nine (29) participants from the fifteen (15) Member States attended and in most cases, one participant was from the National Statistical Office and the other from the national Environmental Agency/Ministry) and an expert group meeting to review the data collected under the project;
- the production of national compendia and a regional publication on environment statistics,
- trained personnel in IT and the provision of IT equipment; and
- increased inter-agency collaboration at the national and regional levels.

Two consultants were also provided to the CARICOM Secretariat to strengthen capacity and to provide technical assistance in countries. There was also another consultant that was specifically recruited in the area of Environment Statistics to support data compilation including a small-group workshop and the regional publication. At that time Belize was the only country that had produced an Environment Statistics publication.

The end of the UNSD/CARICOM Project gave rise to the beginning of a CARICOM Programme the objective of which sought to institutionalize the production of both Environment and Social/Gender statistics beyond the initial project, to inform policy for sustainable development. Some of the activities and results of the programme included:

- A review of the former project including the core data sets,

- The continued development of statistical capacity in environment and social/gender statistics;
- A phased approach to the compilation of statistics and indicators in the two areas with publications to be produced in alternate years.
- Regional training workshops
- The second regional publication, CARICOM Environment in Figures 2004
- Technical assistance/attachment visit to three Member States (Trinidad and Tobago, St. Vincent and the Grenadines and Dominica) by experts from Belize, Jamaica and Suriname.

The Regional capacity building workshops conducted in Environment Statistics post the UNSD/CARICOM project were as follows:

- 2005 in The Bahamas (seventeen (17) participants from eleven (11) countries attended)
- 2009 in Antigua and Barbuda (fourteen (14) participants from thirteen (13) countries attended);
- 2010 in Suriname at which fourteen (14) participants from fourteen (14) countries attended;
- 2011 in St. Kitts and Nevis which saw the attendance of fifteen (15) participants from fourteen (14) countries and;
- 2014 in St. Vincent and the Grenadines in which twenty-one (21) participants from seventeen (17) countries and one observer country attended.

The CARICOM Workshops on Environment Statistics have provided a forum where participants received training directly through information interchange and discussions in an effort to build capacity and strengthen data compilation and dissemination. The workshops have also established a network of environment statisticians among the countries of the Region. Countries that are in need of guidance in the development of environment statistics can receive support from member countries with experienced and qualified personnel in the area through attachment programmes and technical assistance visits.

Countries usually compile data under twelve (12) themes which are: 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. However Water and Waste are collected by the UNSD and shared with the Secretariat under a collaborative arrangement while data for the other themes are submitted to the Secretariat. Data are also collected from the Caribbean Tourism Organisation (CTO) and the Caribbean Environmental Health Institute (CEHI) on Tourism and Environment Health, respectively, in an effort to fill data gaps in these areas. The CARICOM Secretariat also received environment reports from Member countries as well as collect data from the Population and Housing Census.

**Table 1: Number of Countries submitting data by Indicator and year: 1998 – 2009
Themes –Tourism and Environmental Health**

Name of Table/Indicator	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
TOURISM												
TOR1(a): Tourists, Cruise Ship Arrivals and Average Tourist Nights Spent by Year	18	18	20	20	20	20	20	20	20	20	19	19
TOR1(b): Tourism Density Ratio and Tourist Penetration Ratio	-	-	15	17	14	15	16	14	15	14	13	12
TOR2: Number of Hotels Classified by Size, Beds and Rooms by Year	7	8	8	8	8	8	8	8	8	8	7	7
TOR3: Visitor Expenditure	13	13	20	20	20	20	20	18	18	18	18	17
TOR4: Tourist Arrivals by Type of Accommodation	7	7	7	8	10	10	10	8	8	8	8	7
TOR5: Tourist Arrivals by Country of Origin	17	17	20	20	20	19	20	19	19	18	18	18
ENVIRONMENTAL HEALTH												
EH1: Number of Reported Cases and Incidence of Environmentally Related Diseases	5	6	7	8	8	8	6	8	8	7	6	3
EH2: Number of Households by Type of Sanitation Facilities	0	0	5	11	1	0	2	1	2	1	2	1
EH3: Number of Households by Type of Water Supply	0	0	4	11	1	1	0	1	1	1	2	1

Table 1 shows the number of countries submitting data under the two themes, Tourism and Environment. The data reveal that there was an improvement in the data available at the Secretariat for tourism over the period 1998-2009, which was as a result of the collaboration with the CTO, for three tables/indicators. However indicators TOR 2 and TOR 4 still prove to be challenging. Data under the theme Environment Health show fluctuations in the data availability by countries for all indicators. It is hoped that interactions with The Caribbean Public Health Agency (CARPHA) and collaboration with the Ministries of Health in the respective countries could see an improvement in Environment Health data. For indicators EH 2 and EH 3 data are sparse due to the fact that this data are sourced primarily from the Population and Housing Census and are not available outside the census years for most countries. Similarly, the availability of Information on the housing stock, populations and households are also affected such as seen in indicator EH 2.

Other instances of data gaps existed where countries do not produce minerals under the theme Energy and Mineral and where information on the forest stock and land use are collected every five to ten years in collaboration with the Food and Agriculture Organization (FAO). These deficiencies were highlighted at the CARICOM Workshop on Environment Statistics in April 2014. Among the recommendations of this workshop were the following:

- Capacity building activities in-country including the south-south cooperation mechanism to improve data collection in Environment Statistics.
- The use of Geographic Information Systems (GIS) and satellite imagery to determine Land Use
- The National Institute of Statistics and Geography of Mexico (INEGI) could be a source for acquiring assistance in producing Satellite Imagery which can be used to fill the data gaps for Land Use.
- The Agriculture Census is a source of Land Use data especially for Agriculture Land Use.

- The following sources were identified as possible sources of data on Air Emissions:
 - The Caribbean Community Climate Change Center (CCCCC).
 - The Intergovernmental Panel on Climate Change (IPCC)
 - The United Nations Framework Convention on Climate Change (UNFCCC)
 - The Latin America Energy Organisation (OLADE).

- A minimum list of priority indicators on Waste could be sent to countries in addition to the detailed worksheet.
- The Departments of Environmental Health and the National Solid Waste Management Authority were identified as sources of Waste data.
- Regular contact should be made with data providers.
- Dedicated and trained staff members are required at the NSOs and at stakeholder agencies.
- A short form of the UNSD/UNEP Water questionnaire could be explored in order to improve responses.
- The regularisation of data collection should be pursued
- Countries produce Environment reports and compendiums
- The Ministry of Health Annual Report is a data source on diseases.

5. Work Plan in Environmental Statistics for 2014/2015

The 2014/2015 work programme will continue to strengthen capacity in Member States Statistics in collaboration with the CARICOM Secretariat Technical Action Services Unit (TASU) and with funding support from the 10th EDF in the first instance. Technical assistance visits and attachment programmes are being developed to assist countries to fill data gaps. Countries are being asked to indicate where they can provide capacity support in the form of training and technical assistance as well as whether support is needed in Environment Statistics under the attachment programme.

The following activities are included in the Environment Statistics Work Plan for 2014 - 2015:

- (i) Review of the indicators compiled to ensure compatibility with the new FDES;
- (ii) Review and revise the CARICOM Environment Metadata document;
- (iii) Continue data collection, validation and dissemination;
- (iv) Collaborate with international and regional organisations to strengthen these areas of Environment Statistics;
- (v) Support the production of environment compendia in countries; and
- (vi) Conduct of Technical Assistance/Exchange visits under the attachment being developed subject to the availability of funds.

ACTION TO BE TAKEN

The **Meeting** is **invited** to:

- (i) **consider** the submission of data by Member countries and recommendations to improve data collection.
- (ii) **urge** countries to produce environmental compendia;
- (iii) **support** the 2014/2015 work plan in Environment Statistics

INDICATORS FOR THE CARICOM PROGRAMME - CORE, THE MILLENNIUM DEVELOPMENT GOALS (MDGs) AND THE CARIBBEAN SPECIFIC INDICATORS FOR THE MILLENNIUM DEVELOPMENT GOALS (CSMDGs)

TOPIC/THEME	NUMBER/NAME OF TABLE
Population and Households	PH1(a): Number of Households by Type of Dwelling PH2(a): Number of Households by Type of Tenure PH2(b): Proportion of households with own dwelling (CSMDG) 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: Number of Households by Size of Household MDG 7.10 Proportion of urban population living in slums
Tourism	TO1(a): Tourists, Cruise Ship Arrivals and Tourist nights spent by year TO1(b): Tourist Intensity Ratio and Tourist Penetration Ratio TO2: Number of Hotels Classified by Size, Beds and Rooms by Year TO3: Visitor Expenditure and Number Employed in Tourism TO4: Tourist Arrivals by Country of Origin TO5: Tourist Arrivals by Type of Accommodation
Environmental Health	EH1: Number of Reported Cases and Incidence of Environmentally Related Diseases EH2: Number of Households by Type of Water Supply EH3: Number of Households by Type of Sanitation Facilities MDG 7.8: Proportion of population using an improved drinking water source MDG 7.9: Proportion of population using an improved sanitation facility
Natural Disaster	ND1(a): Natural Disasters by Year ND1(b): Incidence of natural disasters; (CSMDG) ND1(c): Economic losses resulting from natural disasters; (CSMDG) ND1(d): Social dislocation resulting from natural disasters; (CSMDG)

TOPIC/THEME	NUMBER/NAME OF TABLE
Energy and Minerals	EM1(a): Energy Consumption by Type and Year EM1(b): Energy use (kg oil equivalent) per \$1 GDP (PPP); (CSMDG) EM2(a): Number of Households by Type of Fuel Used for Cooking EM2(b): Proportion of Households using solid fuels by type of tenure. EM3: Number of Households by Type of Fuel Used for Lighting EM4: Mineral Production by Type EM5: Mineral Reserves by Type
Land Use and Agriculture	LA1: Land Use LA2: Use of Fertilizers by Type and Year LA3: Use of Pesticides by Type and Year
Coastal and Marine Resources	MR1: Total and Protected Marine Area MR2(a): Fish Landings by Type MR2(b): Fish Landings by Boat Days MR3: Number of families and Population of coastal area MR4: Percentage of coral reefs destroyed by human activity and by natural disasters; (CSMDG)
Biodiversity	MDG 7.4: Proportion of fish stocks within safe biological limits MDG 7.6 Proportion of terrestrial and marine areas protected MDG 7.7 Proportion of species threatened with extinction
Forest	FOR1: Protected Forest Area as a percentage of Total Land Area MDG 7.1 Proportion of land area covered by forest
Air	AIR1: Emissions of Sulfur Dioxide (SO ₂) AIR2: Emissions of Nitrogen Oxides (NO _x) AIR3: Emissions of Non-Methane Volatile Organic Compounds (NM-VOCs) AIR4: Emissions of Carbon Dioxide (CO ₂) AIR5: Emissions of Methane (CH ₄)

TOPIC/THEME	NUMBER/NAME OF TABLE
	AIR6: Emissions of Nitrous Oxide (N ₂ O) AIR7: Emissions of Lead (Pb) and Consumption of Leaded Petrol MDG 7.2: CO ₂ emissions, total, per capita and per \$1 GDP (PPP) (MDG, CSMDG) MDG 7.3: Consumption of ozone-depleting substances (MDG)
Waste <i>(collected by the UNSD)</i>	WA1: Generation of Waste by Source WA2: Generation and Recycling of Selected Waste Materials WA3: Management of Municipal Waste WA4: Composition of Municipal Waste WA5: Management of Municipal Waste City Data WA6: Waste Treatment and Disposal Facilities MDG 7.5 Proportion of total water resources used
Water <i>(collected by the UNSD)</i>	WT1: Renewable Fresh Water Resources WT2: Freshwater Abstraction WT3: Freshwater Available for Use WT4: Total Water Use WT5: Water Supply Industry (ISIC 36) WT6: Wastewater Treatment Facilities WT7: Population Connected to Wastewater Treatment