



UNITED NATIONS



Economic Commission for Latin America and the Caribbean  
Subregional Headquarters for the Caribbean

---

National Workshop on the Construction of  
Environmental Statistics and Indicators  
19 – 21 September 2011  
Kingstown

LIMITED  
LC/CAR/L.335  
17 October 2011  
ORIGINAL: ENGLISH

## **REPORT OF NATIONAL WORKSHOP ON THE CONSTRUCTION OF ENVIRONMENTAL STATISTICS AND INDICATORS**

---

This report has been reproduced without formal editing.



## CONTENTS

A. INTRODUCTION.....	1
B. ATTENDANCE AT THE WORKSHOP .....	2
1. Place and date .....	2
2. Participation .....	2
C. SUMMARY OF HIGHLIGHTS AND KEY OUTCOMES OF THE WORKSHOP .....	2
1. Opening .....	2
2. Main Achievements .....	3
D. SUMMARY OF EVALUATION.....	6
1. Substantive content and usefulness of the workshop .....	6
2. Usefulness and impact of training.....	7
3. Organization of the training workshop on the development of applications for data dissemination .	8
4. Follow-up activities and areas for future work .....	100
E. CONCLUSIONS.....	100
F. FOLLOW-UP ACTIONS .....	10
ANNEX I: FINAL PROGRAMME.....	114
ANNEX II: LIST OF PARTICIPANTS .....	144
ANNEX III: METHODOLOGICAL SHEET WITH DESCRIPTORS.....	16
ANNEX IV: EVALUATION QUESTIONNAIRE .....	218
ANNEX V: RESPONSES TO QUANTITATIVE ITEMS .....	221



## **A. INTRODUCTION**

1. Since 2008, the Economic Commission for Latin America and the Caribbean (ECLAC) Subregional Headquarters for the Caribbean has been implementing the Development Account-funded project ‘Strengthening the capacity of National Statistical Offices (NSOs) in the Caribbean Small Island Developing States to fulfil the Millennium Development Goals (MDGs) and other Internationally Agreed Development Goals (IADGs)’. The project sought to strengthen institutional capabilities for generating and compiling reliable social, economic and environmental statistics and indicators, through a series of national and regional capacity-building workshops.

2. The regional workshop on the ‘Construction of Environmental Statistics and Indicators’ held in Port-of-Spain, on 6-10 December 2010, was a key output of that project. Based on the success of that regional workshop, a request to implement a similar workshop at the national level was received from the Government of Saint Vincent and the Grenadines through the Ministry of Health, Wellness and the Environment. In response to that request, ECLAC Subregional Headquarters for the Caribbean, together with the United Nations Statistics Division (UNSD), assisted in designing and delivering the substantive aspects of the workshop (see programme attached at annex I). The workshop was earmarked as another key outcome of the Development Account-funded project.

### **1. Workshop objectives**

#### **(a) Objectives**

3. To develop and strengthen the national capacity of statisticians, technical officers and policymakers in the production, processing, systematization and dissemination of environmental indicators in Saint Vincent and the Grenadines consistent with Millennium Development Goal 7 and related environmental indicators.

4. The specific objectives were:

- (a) To share and put into practice basic concepts of environmental statistics and indicators
- (b) To assist Saint Vincent and the Grenadines in fulfilling the data requirements for Goal 7 indicators
- (c) To develop a set of relevant and common environmental indicators based on the core set of environmental indicators for the Caribbean Community (CARICOM) subregion
- (d) To present a methodology for the description, calculation, and dissemination of environmental indicators, incorporating statistical and inter-institutional aspects according to international and regional recommendations and best practices

#### **(b) Outputs**

5. The training workshop aimed to achieve four main outputs which included: the construction of a set of core national environmental indicators along with their methodological sheets; an enhanced capacity to design and implement various data collection activities to measure and monitor indicators related to the Millennium Development Goals and Internationally Agreed Development Goals, using standard formats for improved comparability; an enhanced understanding of the importance of information on the Millennium Development Goals and Internationally Agreed Development Goals, as well as of evidence-based policies; and a road map outlining action points and the way forward.

## **B. ATTENDANCE AT THE WORKSHOP**

### **1. Place and date**

6. The National Workshop on the Construction of Environmental Statistics and Indicators was held on 19 – 21 September 2011 in Kingstown.

### **2. Participation**

7. The workshop targeted technical staff and practitioners working in government ministries/departments and agencies that produced, processed, compiled, published and/or used national statistics and environmental indicators. In attendance were 24 participants representing a wide cross-section of ministries and departments, statutory bodies, and departments/agencies charged with the responsibility for the preparation of Millennium Development Goal 7 and/or environmental national reports. Of the total participants, 11 (45.8%) were male and 13 (54.2%) were female. The full list of participants is attached at annex II.

## **C. SUMMARY OF HIGHLIGHTS AND KEY OUTCOMES OF THE WORKSHOP**

### **1. Opening**

8. The workshop was preceded by a short opening ceremony, which featured addresses from the Permanent Secretary, Ministry of Health, Wellness and the Environment, Shirla Francis, the Chief, Environment Statistics Division, UNSD, Reena Shah and the Associate Environmental Affairs Officer, ECLAC Subregional Office for the Caribbean, Nia Cherrett.

9. In the feature address, the Permanent Secretary underscored the importance of statistics and noted in particular its role in development. Within that context, she recognized the value of including environment statistics as part of the statistical programme of the Central Statistical Office, which had traditionally focused primarily on social and economic statistics. She noted the timeliness of the workshop and commended the efforts that led to its realization and referred to it as the “dawn of a new era in statistics”. She stated that the training presented an invaluable opportunity both for capacity development and for initiating collaboration among the various agencies and departments.

10. The representative of UNSD highlighted the strides made within the region over the years, through efforts aimed at placing greater focus on the production of environment statistics. She noted that UNSD welcomed the opportunity to provide technical support to the country. She remarked that while environment statistics was still a new and evolving area with some challenges, it should not be a deterrent for investing in or focusing on that aspect of statistics. She pointed to the value and potential impact of strengthening environmental statistics on the upcoming Rio+20 summit as well as national and sustainable development fields.

11. The representative of ECLAC described how the use of indicators had become an established means, within the environmental and sustainable development global policy architecture, to track trends and monitor progress towards the achievement of goals such as the Millennium Development Goals. She emphasized that, in light of the global move to secure renewed political commitment for sustainable development at Rio+20 in 2012, the development of capacity in the construction and use of environmental indicators and statistics had never been so critical. She thanked the Government of Saint Vincent and the Grenadines who had requested the convening of the workshop and assisted ECLAC in designing the content and approach of the activity.

## 2. Main achievements

12. The workshop was composed of two main activities, presentations and working group sessions. The presentations provided a theoretical overview of the environment and statistics/indicators, along with updates and additional information on international data sources and relevant environmental conventions. The working group sessions provided the opportunity for participants to put that theory into practice. Exercises were set which allowed participants to critically analyze methodologies and data collection processes for indicators along with developing and constructing new indicators. The workshop closed with a discussion identifying key action points for ‘The Way Forward’ to motivate participants to use that activity as a catalyst to raise the profile of environmental statistics in Saint Vincent and the Grenadines. The main achievements of those activities follow.

### (a) Presentations

13. The need for, and uses of, national environment statistics - The Superintendent of Rivers, Beaches and Recreation Sites from the National Parks, Rivers and Beaches Authority of Saint Vincent and the Grenadines delivered the initial presentation which set the context for the workshop. Following an outline of the link between statistics and environmental science, the presentation offered a comprehensive overview of the importance of data, its attributes and the challenges of collecting data within the context of the environment. An example was provided of the use of data to measure the change and predict impacts of coastal inundation. In doing so, the range of data required for such an exercise was highlighted, along with the variations in the level of analysis and application, the accuracy of results and display, the application for decision-making and the mainstreaming of that data into policies and national programmes.

14. Basic concepts in environment and statistics – Two representatives from ECLAC Subregional Headquarters for the Caribbean delivered a joint presentation, which provided a theoretical overview of environmental and statistical concepts. The presentation included defining the environment, outlining key threats to the integrity of the environment, the need for environmental protection, as well as the challenges in measuring environmental components and phenomenon. In addition, there were detailed definitions for statistics and indicators, an outline of their characteristics, uses and importance, along with their role in policy formulation. The presentation closed with an explanation on meta-data and guidelines for the construction of indicators.

15. Recent developments in environment statistics – The representative of UNSD delivered a presentation on the revision of the United Nations Framework for the Development of Environment Statistics (FDES) and the development of the core set of environment statistics. She explained the main concepts and the overall structure of FDES. FDES set out the scope of environment statistics by relating the components of the environment to information categories based on the recognition that environmental problems were the result of human activities and natural events reflecting a sequence of action, impact, and reaction. The “statistical topics” of FDES represented those aspects of environmental concerns that could be subjected to statistical description and analysis. Many national statistical offices had used FDES for developing and organizing environmental and related socio-economic information. She presented the main conclusions of the expert group meetings on the revision of FDES and described the current efforts being undertaken towards the revision and the development of the core set of environment statistics. She noted that both the revised FDES and the core set would be submitted to the forty-third Session of the United Nations Statistical Commission in 2012 for adoption.

16. International data sources for environment statistics – The representative of UNSD made a presentation on data that she had compiled for Saint Vincent and the Grenadines for several environmental indicators (including Millennium Development Goal 7) from various international organizations to illustrate the multiplicity and variety of data sources residing outside the country. She selected particular indicators

among the various environmental themes and described the process of obtaining the data through the internet, which participants found to be very useful as they were not familiar with several of the data sources.

17. UNSD/United Nations Environment Programme (UNEP) Questionnaire on Environment Statistics – The representative of UNSD delivered a detailed presentation on the UNSD/UNEP Questionnaire on Environment Statistics in the areas of water and waste statistics. In the area of water statistics, the tables in the questionnaire covered renewable freshwater resources, freshwater abstraction, distribution and use, and wastewater treatment. In the area of waste statistics, the generation of waste, the generation and treatment of hazardous waste, and the generation, collection, treatment, and composition of municipal waste were covered. For both those areas, she also described the environmental impacts, the main definitions and classifications, the data sources, as well as the most common problems encountered by countries in completing the questionnaire. She also described the various methods through which UNSD disseminated environment statistics on their website, namely, the UNSD Environmental Indicators, country files, country snapshots, and environment statistics in UNData.

18. Background to the list of environmental indicators – The representative of the Statistical Office in the Ministry of Finance and Economic Planning of Saint Vincent and the Grenadines presented the 46 indicators that were selected for discussion at the workshop. Those were presented under the nine thematic areas of tourism, environmental health, natural disasters, land use and agriculture, coastal and marine resources, biodiversity, forests, waste and water. A summary of the main elements of each indicator was provided.

19. Status reporting on United Nations conventions – The representative of the Environment Department of the Ministry of Health, Wellness and the Environment of Saint Vincent and the Grenadines presented the most recent reports submitted by Saint Vincent and the Grenadines to the United Nations Convention on Biodiversity (CBD) (2010) and the Convention to Combat Desertification (UNCCD) (2010). In each case, she described the objectives and targets of the convention and their importance to Saint Vincent and the Grenadines; the progress and achievements made by Saint Vincent and the Grenadines with the indicators and reporting requirements; gaps and challenges encountered with the indicators and reporting requirements; and an outline of the priority areas that needed addressing to enhance the quality of the indicators and reports submitted by Saint Vincent and the Grenadines to the CBD and UNCCD secretariats.

**(b) Working group sessions**

20. The first session focused on the methodologies and data collection for the selected indicators. The participants were divided into six groups organized around the following themes: (a) tourism and natural disasters; (b) environmental health; (c) land use and agriculture, and forests; (d) coastal and marine resources, and biodiversity; (e) waste; and (f) water. The groups were asked to focus on the indicators selected under each theme and critically analyze the metadata underlying the indicators.

21. In exploring the metadata underlying the indicators, participants were able to determine if the indicators were measurable and readily available. Their comments were constructive which demonstrated their interest of and involvement in the whole process.

22. The aim of the second working group session was to provide practical experience with the construction of indicators. Each group (the same as those in working session one) was assigned the task of developing a methodological sheet for a new indicator (see annex III). They were asked to select an indicator which had been identified through the first working group session or one from the reporting requirements of UNCCD or CBD. Throughout the process of developing the indicators, the groups engaged in analytical discussions based on the proposed outline and presented the indicator development process they constructed and the completed methodological sheet to the plenary. The indicators constructed were original and pertinent to the needs of Saint Vincent and the Grenadines, thus reflecting the commitment and capacity of the participants to contribute to the development of new environmental indicators for the country.



**(c) The way forward**

23. The participants agreed on the following activities as the way forward:

- Establish a formal sub-committee, to be led jointly by the National Statistical Office and the Environmental Unit, comprising representatives of line ministries and departments. The main responsibility would be to coordinate the collection of environmental statistics. The Environmental Unit would be responsible for organizing and facilitating the meetings of the subcommittee.
- Develop terms of reference and a work plan for the subcommittee for the collection of environmental statistics, including:
  - Creating a contact list of focal points within ministries, departments and agencies to be included in the Committee. Those focal points would act as the contact point for information on data and indicators.
  - Indicating to each ministry/department the indicators under their responsibility. The environmental indicators identified and explored at the workshop were to be used as a starting point for data collection and future reporting. In the future, additional environmental statistics and indicators would be identified for inclusion in national reporting systems, a process to be led by the National Statistical Office.
  - Assisting with the review and finalization of the 2011 national compendium of environmental statistics published by the National Statistical Office.
  - Committing to the regular compilation and dissemination of environmental statistics and indicators via the national compendium or other agreed media, for example, newsletter, and brochure. Lobby for Cabinet to issue a mandate to ministries requiring them to submit data on a quarterly basis.
  - Sourcing funds from multilateral agencies, such as the United Nations Development Programme or UNEP, regional organizations, international environmental non-government organizations/conventions and other development partners to support national programmes and activities in environmental statistics.
  - Identifying and participating in further capacity-building workshops on environmental statistics implemented by United Nations agencies, regional organizations, universities and international NGOs.
  - Ensuring timely submission (10 October 2011) of data for CARICOM core set of regional environmental statistics and indicators to the Statistical Office for onward transmission to the CARICOM Secretariat.
  - Establishing formal protocols for data management and sharing within each agency.

24. During the closing ceremony, certificates of participation were awarded to participants who had successfully completed the workshop. Participants also received CD-ROMS containing all PowerPoint presentations delivered during the workshop, along with other relevant documentation circulated or referenced during the workshop.

## D. SUMMARY OF EVALUATION

25. The following section provides a summary of a detailed analysis conducted on responses submitted by participants at the conclusion of the workshop (annex IV). Responses were received from 22 of the 24 participants, thus yielding a response rate of 91.2%.

26. The composition of the respondents of the evaluation by gender and type of department/ministry/agency is displayed in table 1.

Table 1

**Composition of participants by gender and type of department/ agency**

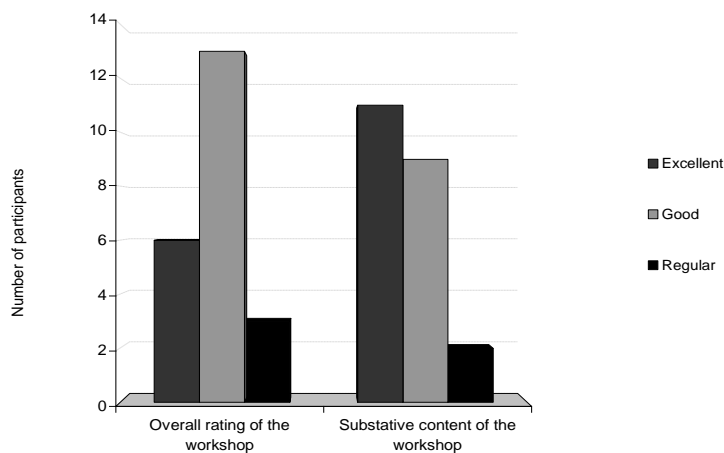
		<i>Type of department/agency</i>					<i>Total</i>
		<i>National Ministry</i>	<i>Independent Consultant</i>	<i>Statutory Body</i>	<i>Other</i>	<i>Local/ Municipal Institution</i>	
Gender	Male	6	0	2	1	1	<b>10</b>
	Female	10	1	1	0	0	<b>12</b>
<b>Total</b>		<b>16</b>	<b>1</b>	<b>3</b>	<b>1</b>	<b>1</b>	<b>22</b>

### 1. Substantive content and usefulness of the workshop

27. Participants' feedback on the substantive content of the workshop and their overall rating of the workshop was positive, with all 22 participants rating those aspects of the training as either "excellent", "good" or "regular". The modal rating for the substantive content of the workshop was "excellent" while the modal rating for the overall rating of the workshop was "good".

Figure 1

**Participants' feedback on content and overall quality of the workshop**



28. Participants were also required to indicate, through a dichotomous question, the extent to which the workshop lived up to their initial expectations. Of the 22 participants, 17 (77.3%) responded positively to that item. Four (18.2%) gave a "not sure/no response" rating while one individual (4.5%) indicated that the workshop did not live up to their expectations.

## 2. Usefulness and impact of training

29. The section focused on assessing the value added through the national training workshop. Initial impact of the training was assessed with respect to the relevance of the training to the needs of the participants and the usefulness of the methodologies of the training in improving capacity to construct environmental indicators. It also assessed the usefulness of the workshop for engaging in discussions and exchanging experiences with representatives of other institutions. A combination of open-ended and rating scale questions were used for that component of the evaluation. Each of the closed-ended questions was scored along a continuum from “very useful” to “not useful at all”.

30. Feedback on the relevance of the training for the work of their institutions was positive. Of the 22 respondents, 10 (45.5%) stated that the training was “very relevant”, 9 (40.9%) rated it as “relevant”, and 3 (13.6%) felt that it was “somewhat relevant”. Similar views were expressed on the usefulness of the training for strengthening capacity to construct environmental indicators. As enhancing the capacity to design and implement various data collection activities was one of the key objectives of the workshop, that item had significant value in assessing the actual achievement of that goal. Figure 2 showed the distribution of the ratings for that area.

31. As a follow-up to the relevance of the training for the work carried out in the institutions, participants were asked to identify areas for improvement in terms of issues that could have been analyzed in greater depth and/or issues that were not so important for the workshop. The following suggestions for improvement were proposed:

- “The need to include energy statistics”
- “The inclusion of a practical session to measure indicators using raw data”
- “A greater in-depth analysis on tourism impact on the environment “
- “Development of indicators that are more relevant to my ministry”
- “The use of the localized MDGs in the practical sessions”
- “Direct implication of the impact of environmental statistics on policy and actual projects and programmes and making this affect environmental management positively”
- “More group working using a situational example to develop an indicator”
- “Assessment of data in relation to comparable data sets regionally and internationally”

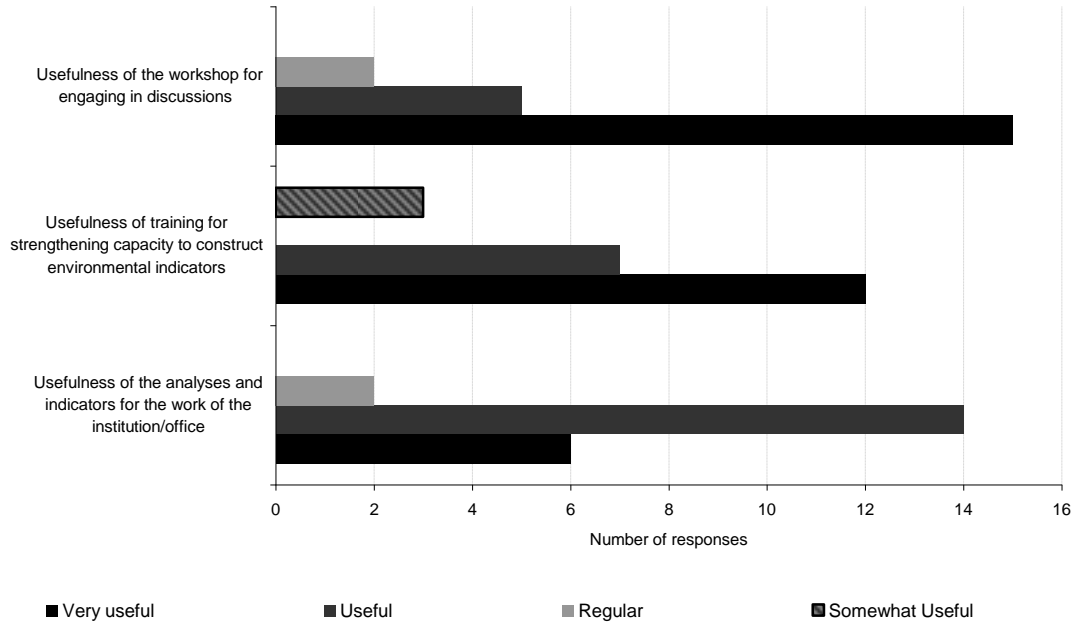
32. The evaluation also assessed the usefulness of the methodologies presented at the workshop. The vast majority (63.6%) of the 22 respondents indicated that the methodologies presented were “useful” while the remaining 8 respondents selected “very useful” (27.3%), and “regular” (9.1%). Participants were then asked to indicate the specific components of the methodologies that they would consider incorporating into the work of their institutions. Those included:

- “Soil conservation, hydrology, coastal erosion and river erosion”
- “As the data needed is under a different category, I would structure my reports to reflect the data required by the UN and by extension CARICOM”
- “The need to fill existing data gaps”
- “Incorporate a more detailed analysis of tourism related data pertaining to the environment”
- “The methodology for developing indicators”
- “Identifying more indicators”
- “The land use area was most important and I would consider collecting data on an annual basis to allow for determining the change in land use”
- “Ongoing monitoring and coordination as regards collection of environmental statistics on protected areas”

33. In terms of the usefulness of the workshop as a forum for networking, engaging in discussions and exchanging experiences with representatives of other institutions, most participants (68.2%) rated that aspect as “very useful” followed by “useful” (22.7%) and “regular” (9.1%). The distribution was also shown in figure 2.

Figure 2

**Participants’ views of the relevance and usefulness of the training and methodologies presented at the workshop**



### 3. Organization of the training workshop on the construction of core environmental statistics and indicators

34. A 6-point scale was used to evaluate several aspects related to the organization of the workshop. Each of the three aspects was scored along a continuum ranging from 1 to 6, with 1 representing “excellent” and 6 indicating “no response/ not sure”. The components assessed were the quality of the documents and materials provided, the duration of the sessions and time allowed for debate/questions, and the quality of the infrastructure. For all aspects, respondents provided ratings of “excellent”, “good” or “regular”; the modal score for each being “good”. One participant rated the quality of the infrastructure as “poor”. Figure 3 shows the distribution of those ratings.

35. To gain further insight into those ratings, the questionnaire asked participants to describe what worked well and what could be improved with respect to the organization of the workshop. The following comments were made:

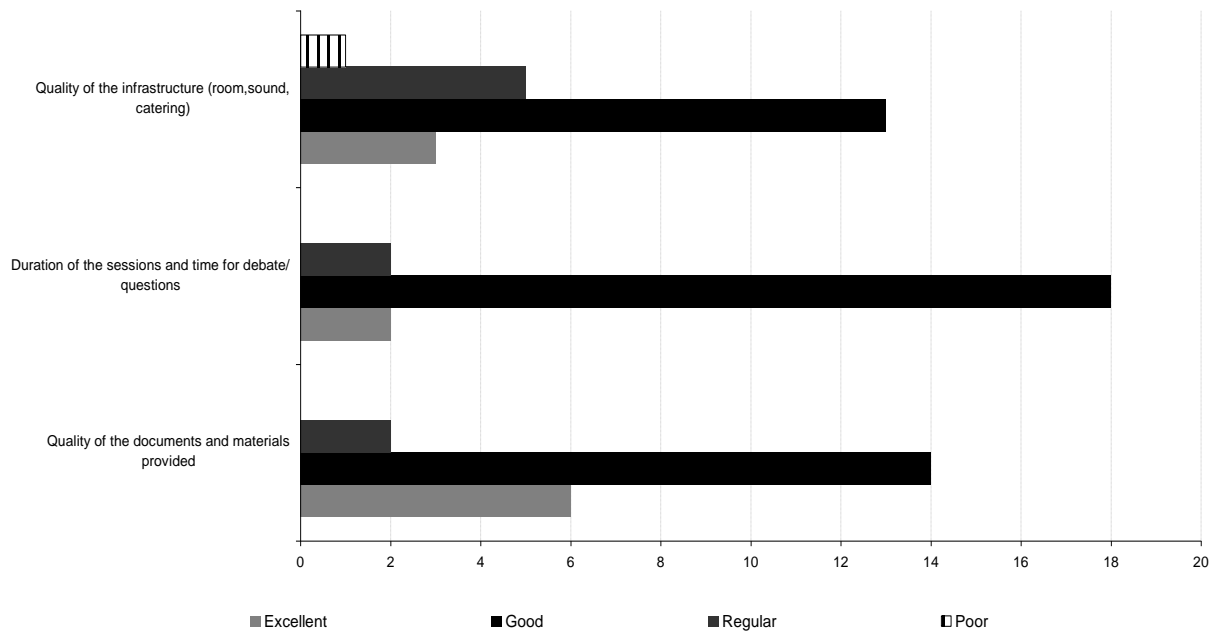
#### What worked well

- “The group discussions, participation and presentations were very useful. New focal points were established and that was one of the main objectives”
- “Everything worked well for me, I learned a lot”
- “Material flow was well organized and presentations were very informative”
- “Adequate amounts of time given to complete the tasks”
- “Facilitators were knowledgeable and easy to work with – commendable effort”

- “The quality of documents and materials provided were good. They contain a lot of useful information that is relevant to my department”
- “The workshop was very timely as it addressed existing data problems”
- “Looking at the way forward was an important exercise”

Figure 3

### Participants' views of the organization of the workshop



### What could be improved

- “Definition of water-related terms could have been clearer”
- “Maybe a live run through of the data entry process could be done”
- “Venue should be out of town to keep everyone in the entire workshop”
- “May have been useful to have printed handouts of key material used in the workshop”
- “Not convinced that recommendations from workshop will be incorporated into individual/organizational work plans/priorities”
- “Conference room had a large column blocking clear view of the presenters and display screen”
- “Wash room facility needed upgrading”
- “The workshop should have commenced at 9:00am instead of 8:30am. I believe that participants could have used the time between 8:30 and 9:00 to deal with the work on their desk in their offices”
- “Some sessions require a bit more time allotted to them to achieve a better output in presentations”
- “The catering service should not be used again”
- “Prior circulation of information such as proposed national indicators before workshop would have been useful as there was often a lot to assimilate over a short period of time”
- “Sound projection could have been improved in the room and the internet signal was missing during the final exercise”

#### **4. Follow-up activities and areas for future work**

36. The final component of the evaluation included a question on ways in which ECLAC could, in the future, support Saint Vincent and the Grenadines in the area of environmental statistics and indicators. In response, participants articulated their interest in the following areas:

- “Data collection”
- “Regular meetings to update information regarding environmental issues”
- “Tourism related statistics”
- “Energy statistics”
- “Some collaboration to facilitate human resource development through training”
- “Analysis and presentation of environmental statistics”

#### **E. CONCLUSIONS**

37. From their responses to the evaluation, it was clear that participants valued the training and the methodologies presented to them throughout the workshop. There was also evidence that the participants recognized the utility of the methodologies for constructing environmental indicators and statistics for use within their offices to enhance their work. There was general positive feedback on the organizational aspects of the workshop and also expressions of interest for the conduct of further training and follow-up to the workshop in the near future (annex V presented a break down of the responses of the participants to the quantitative questions).

#### **F. FOLLOW-UP ACTIONS**

38. As a follow-up activity, ECLAC would conduct a post-training evaluation six months after the workshop to assess the transfer of knowledge and actual impact of the training in improving the collection of environmental statistics and constructing indicators. The evaluation would be conducted through an electronic survey via the Vovici Survey Platform in March 2012.

Annex I**FINAL PROGRAMME*****MONDAY, 19 SEPTEMBER 2011***

0800 – 0830 hrs	Registration of Participants
0830 – 0900 hrs	Opening Ceremony <ul style="list-style-type: none"> <li><input type="checkbox"/> Opening Ceremony - Chair</li> <li><input type="checkbox"/> Welcome remarks by ECLAC/ UNSD</li> <li><input type="checkbox"/> Statement and Formal Opening of Workshop <ul style="list-style-type: none"> <li>▪ Mrs. Shirla Francis, <i>Permanent Secretary, Ministry of Health, Wellness and the Environment</i></li> </ul> </li> </ul>
0900 – 1000 hrs	Introduction of workshop <ul style="list-style-type: none"> <li><input type="checkbox"/> Overview of Workshop <ul style="list-style-type: none"> <li>▪ Ms. Nia Cherrett, <i>Associate Environmental Affairs Officer, Sustainable Development Unit, ECLAC Subregional Headquarters for the Caribbean</i></li> </ul> </li> <li><input type="checkbox"/> The Need For, and Uses of, National Environment Statistics <ul style="list-style-type: none"> <li>▪ Mr. Hayden Billingsy, <i>Superintendent of Rivers, Beaches &amp; Recreation Sites, National Parks, Rivers, Rivers &amp; Beaches Authority</i></li> </ul> </li> <li><input type="checkbox"/> Introduction of Workshop Participants and Expectations <ul style="list-style-type: none"> <li>▪ Mr. Edmund Jackson, <i>Director, Environmental Management Department, Ministry of Health, Wellness and the Environment</i></li> </ul> </li> </ul>
1000 – 1015 hrs	<b><i>Coffee Break</i></b>
1015 – 1045 hrs	Basic Environment Concepts and Statistics <ul style="list-style-type: none"> <li><input type="checkbox"/> <i>ECLAC Subregional Headquarters for the Caribbean</i></li> </ul>
1045 – 1115 hrs	Recent Development in International Environment Statistics <ul style="list-style-type: none"> <li><input type="checkbox"/> <i>United Nations Statistics Division</i></li> </ul>
1115 – 1200	International Data Sources for Environment Statistics <ul style="list-style-type: none"> <li><input type="checkbox"/> <i>United Nations Statistics Division</i></li> </ul>
1200 – 1300 hrs	<b><i>Lunch</i></b>
1300 – 1400	UNSD/UNEP Questionnaire on Environmental Statistics <ul style="list-style-type: none"> <li><input type="checkbox"/> <i>United Nations Statistics Division</i></li> </ul>

- 1400 – 1430 hrs      Background to the List of Environmental Indicators to be discussed during the Workshop  
 *Ms. Laverne Williams, Statistical Office, Ministry of Finance and Economic Planning*
- 1430 – 1500 hrs      Introduction to group sessions  
 *UNSD/ECLAC*
- 1500 – 1515 hrs      ***Coffee Break***
- 1515 – 1615 hrs      Working Group Session on Methodologies and Data Collection for Selected Indicators  
 *UNSD/ECLAC*
- 1615 – 1630 hrs      Open Discussion

***TUESDAY, 20 SEPTEMBER 2011***

- 0830 – 1000 hrs      Continuation of Working Group Session on Methodologies and Data Collection for Selected Indicators  
*UNSD/ECLAC*
- 1000 – 1015 hrs      ***Coffee Break***
- 1015 – 1215 hrs      Continuation of Working Group Session on Methodologies and Data Collection for Selected Indicators  
 *UNSD/ECLAC*
- 1215 – 1315 hrs      ***Lunch***
- 1315 – 1630 hrs      Continuation of Working Group Session on Methodologies and Data Collection for Selected Indicators  
 *UNSD/ECLAC*



**WEDNESDAY, 21 SEPTEMBER 2011**

- 0830 – 1000 hrs      Status reporting on United Nations Conventions
- Fourth National Biodiversity Report of Saint Vincent and the Grenadines
  - Fourth Report of Saint Vincent and the Grenadines to the United Nations Convention to Combat Desertification
- Ms. Yasa Belmar, Environmental Analyst, Ministry of Health, Wellness and the Environment*
- 1000 – 1015 hrs      **Coffee Break**
- 1015 – 1215 hrs      Working Group Session 2 on the Development of New Indicators
- *UNSD/ECLAC*
- 1215 – 1315 hrs      **Lunch**
- 1315 – 1515 hrs      Continuation of Working Group Session 2 on the Development of New Indicators
- *UNSD/ECLAC*
- 1515 – 1530 hrs      **Coffee Break**
- 1530 – 1630 hrs      The Way Forward
- *Mr. Edmund Jackson, Ministry of Health, Wellness and the Environment and Ms. Laverne Williams, the Statistical Office of Saint Vincent & the Grenadines*
- 1630 – 1700 hrs      Closing Remarks

Annex II**LIST OF PARTICIPANTS**

Andrew Wilson, Director, National Parks, Rivers and Beaches Authority. Email: [nationalparks@vincysurf.com](mailto:nationalparks@vincysurf.com)

Anthony Patterson, Environmental Health and Safety Officer, Human Resources and Administration, VINLEC. Email: [apatterson@vinlec.com](mailto:apatterson@vinlec.com)

Bernard John, Administrative Cadet, Ministry of Tourism and Industry. Email: [tourism@vincysurf.com](mailto:tourism@vincysurf.com); [bernardjohn24@gmail.com](mailto:bernardjohn24@gmail.com)

Cephus Toney, Survey Statistician, Ministry of Agriculture. Email: [office.agriculture@mail.gov.vc](mailto:office.agriculture@mail.gov.vc); [c1st2004@yahoo.com](mailto:c1st2004@yahoo.com)

David Burgin, Meteorological Officer, Airports Department, E.T. Joshua Airport. Email: [svgmet@gmail.com](mailto:svgmet@gmail.com)

Desmond Shallow, Physical Planning Technician, Physical Planning Unit, Ministry of Housing and Informal Settlements. Email: [ppuhilp@yahoo.com](mailto:ppuhilp@yahoo.com); [dezshall@hotmail.com](mailto:dezshall@hotmail.com)

Edmund Jackson, Director, Environmental Management Department, Ministry of Health and the Environment. Email: [edmund\\_jackson2000@yahoo.com](mailto:edmund_jackson2000@yahoo.com)

Hayden Billingsy, Superintendent of Rivers, Beaches and Recreation Sites, National Parks, Rivers and Beaches Authority. Email: [nationalparks@vincysurf.com](mailto:nationalparks@vincysurf.com); [haydensvg2003@yahoo.com](mailto:haydensvg2003@yahoo.com)

Houlida Peters, National Emergency Management Organisation. Email: [nemosvg@gmail.com](mailto:nemosvg@gmail.com); [houlida21@gmail.com](mailto:houlida21@gmail.com)

Jamal Byron, Administrative Cadet, Social Statistics Department, Census Office, Central Planning Division, Ministry of Finance. Email: [scheama@hotmail.com](mailto:scheama@hotmail.com)

Juliana Francis, Senior Engineering Assistant, Engineering Division, Ministry of Transport and Works. Email: [julianafrancis@rocketmail.com](mailto:julianafrancis@rocketmail.com)

Kathleen Trumpet, Forestry Department. Email: [forestrysvg93@yahoo.com](mailto:forestrysvg93@yahoo.com);

Kavern Ferril, Landfill Supervisor, Solid Waste Unit, Central Water and Sewage Authority. Email: [kferril@cwsasvg.com](mailto:kferril@cwsasvg.com)

Kent Minors, Planning Technician, Physical Planning Unit, Ministry of Housing and Informal Settlements. Email: [ppuhilp@yahoo.com](mailto:ppuhilp@yahoo.com); [kentminors@hotmail.com](mailto:kentminors@hotmail.com)

Lavorne Williams, Senior Statistician, Statistical Office, Central Planning Division, Ministry of Finance and Economic Planning. Email: [lwilliams@gov.vc](mailto:lwilliams@gov.vc)

Lucine Edwards, Fisheries Officer/Conservation, Fisheries Division. Email: [fishdiv@vincysurf.com](mailto:fishdiv@vincysurf.com)

Maxine Glasgow-Cottle, Statistical Officer, Health Information Unit, Ministry of Health, Wellness and the Environment. Email: [maxmaximum@hotmail.com](mailto:maxmaximum@hotmail.com)

Roxanne Williams, National Emergency Management Organisation. Email: [nemosvg@gmail.com](mailto:nemosvg@gmail.com)

Noretta John, Environmentalist. Cane Garden. Email: [norettasvg@gmail.com](mailto:norettasvg@gmail.com)

Sandra Grant, Statistical Officer, Central Statistical Office. Email: [sgrant@gov.vc](mailto:sgrant@gov.vc)

Shane Slater, University of Cape Town, MPhil Environment Management.

Shimeque Smith, Statistical Officer, Central Statistical Office. Email: [ssmith@gov.vc](mailto:ssmith@gov.vc)

Tasheka Haynes, Project Coordinator, Environmental Management. Email: [toshvincy@gmail.com](mailto:toshvincy@gmail.com)

Yasa Belmar, Environmental Resource Analyst, Environmental Management Department, Ministry of Health and the Environment. Email: [yasa.belmar@gmail.com](mailto:yasa.belmar@gmail.com)

### **Secretariat**

#### **United Nations Statistics Divison**

Reena Shah, Chief, Environment Statistics Section. Email: [shahr@un.org](mailto:shahr@un.org)

#### **ECLAC subregional headquarters for the Caribbean**

Nia Cherrett, Associate Environmental Affairs Officer, Sustainable Development Unit. Email: [nia.cherrett@eclac.org](mailto:nia.cherrett@eclac.org)

Sinovia Moonie, Population Affairs Officer, Social Development Unit. Email: [sinovia.moonie@eclac.org](mailto:sinovia.moonie@eclac.org)

Annex III**Methodological Sheet with field descriptions**

National Training Workshop on the Construction of Environmental Statistics and Indicators  
Kingstown, Saint Vincent and the Grenadines

19 – 21 September 2011

<b>1. INDICATOR</b>	
<b>Name of Indicator</b>	Select a clear, concise and user-friendly name e.g. "Energy intensity of production" that explains exactly what the Indicator shows.
<b>Brief description of Indicator</b>	Provide a brief description of what the Indicator shows, especially when the Indicator has a highly scientific or technical name. Use clear, simple language that informs the user about the Indicator in question.
<b>Relevance or pertinence of the Indicator</b>	Specify the importance of the proposed Indicator in evaluating the environment or sustainability. Essentially, try to connect the Indicator with the challenges and issues of sustainability in the specific area to be covered. This implies defining the variable or variables that make up the Indicator, linking them to environmental or sustainable development issues that the user can understand.
<b>Unit of measurement</b>	Indicate the unit of measure to be used to quantify the indicator e.g. EC\$, m <sup>3</sup>
<b>Placement of indicator in thematic group</b>	Classify the indicator according to one of the 9 thematic groups used for the core list of indicators.
<b>2. POLICY RELEVANCE</b>	
<b>Purpose</b>	Provide details of the rationale for developing this indicator. State the reason for constructing the indicator
<b>Relevance to sustainable development/ unsustainable development</b>	State the relevance of this indicator in the context of sustainable or unsustainable development.
<b>International conventions and agreements</b>	Identify any international conventions or agreements to which this indicator is linked.
<b>International Targets / recommended standards</b>	Specify if there are policies, goals, quality norms or base lines relevant to the Indicator, with respect to which progress through time or in different areas may be assessed.
<b>Linkages to other indicators</b>	Identify any other indicators, either from the nationally agreed core set or other regionally or internationally agreed development indicators. Indicate the relationship existing with reports or requests for information from regional or global initiatives such as the CARICOM Core Set of Regional Environmental Statistics and Indicators, the Environmental Indicators and Statistics Database (ECLAC), the Latin American and Caribbean Initiative for Sustainable Development (ILAC) (United Nations Environment Programme), MDG Goal 7.
<b>3. METHODOLOGICAL DESCRIPTION</b>	
<b>Underlying definitions and concepts</b>	Provide definitions of concepts and terms related to this indicator.  Define in detail each of the variables that conform to the Indicator. One common practice is to adopt the definition used by the institution

	producing the data, for example, "The concept of fragmentation of the ecosystem of the Institute of Biodiversity Conservation of the Ministry X has been used."
<b>Measurement methods</b>	Specify the operations and procedures for the variables that are required to obtain the value of the Indicator at each point of capture (territorial, historical, and so on). The unit of measurement in which the Indicator is expressed must be clearly stipulated.
<b>Limitations of the indicator</b>	Clarify what dimensions and dynamics cannot be captured or visualised by the Indicator.
<b>Status of methodology</b>	State whether the proposed methodology is/ has been used by other organizations or agencies; specify any deviations or if this methodology has been adapted to suit national or regional needs and requirements.
<b>Alternative definitions/ indicators</b>	State any alternative definitions or indicators if those exist.
<b>4. ASSESSMENT OF DATA</b>	
<b>Data needed to compile the indicator</b>	State the type of data or base variables required to construct the indicator. Details of the method by which the basic data are captured or generated. In general, these include surveys, censuses, administrative records, monitoring stations and so on.
<b>National and international data availability and sources</b>	Refer to the availability of data in terms of the ease or difficulty of systematic access to the data, beyond that which is formally produced. For example, this may mean, "Easily available in hard copy or electronic format," or "Restricted availability to public institutions," or "Primary data available in Household Surveys, but requires subsequent processing to generate the required information," or "Restricted information."  Stipulate the data source for each of the variables in detail: indicate not only the institution but also the department and office, and/or the publication where the data are available (if appropriate) and the name and contact information for the person in charge.
<b>Data references</b>	Give details of the databases, compendium or other sources (hardcopy or electronic) of data. If data was retrieved from a website, provide the appropriate url or link of this site.
<b>5. AGENCIES IN THE DEVELOPMENT OF THE INDICATOR</b>	
<b>Lead agency</b>	Identify the agency with primary responsibility for the development of the indicator.
<b>Other contributing organizations</b>	Identify any other agency/ agencies that play a role (consultative or other) in the process of developing this indicator.
<b>6. REFERENCES</b>	
<b>Readings</b>	Include a reading list of books, journals, and articles etc that were consulted during the preparation of the indicator.
<b>Internet site</b>	Include a list of websites that were used to source information or download articles.

**Notes:**

- The shaded fields represent those fields that are contained in the Methodological Sheets prepared by the Commission of Sustainable Development for indicators of sustainable development

Source: United Nations (2007). Indicators of Sustainable Development: Guidelines and Methodologies.

Annex IV**WORKSHOP EVALUATION**

**NATIONAL WORKSHOP ON THE CONSTRUCTION OF ENVIRONMENTAL  
STATISTICS AND INDICATORS**

*Kingstown, Saint Vincent and the Grenadines*

*19 – 21 September, 2011*

**WORKSHOP EVALUATION**

In an effort to assess the effectiveness and impact of this workshop, kindly complete the following evaluation form. Your responses will be invaluable in providing feedback on the overall training received, identifying areas of weakness and help improve the organization of future workshops.

<b>IDENTIFICATION</b>			
<b>Sex</b>			
<input type="checkbox"/> Male	<input type="checkbox"/> Female		
<b>Institution(s) you represent:</b> _____			
<b>Title/Position:</b> _____			
<b>Type of organization you represent:</b>			
<input type="checkbox"/> National ministry	<input type="checkbox"/>	<input type="checkbox"/> Subregional institution	<input type="checkbox"/>
<input type="checkbox"/> Other national institution	<input type="checkbox"/>	<input type="checkbox"/> International organization	<input type="checkbox"/>
<input type="checkbox"/> Academic institution / university	<input type="checkbox"/>	<input type="checkbox"/> NGO	<input type="checkbox"/>
<input type="checkbox"/> Private sector	<input type="checkbox"/>	<input type="checkbox"/> Civil society	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/> Other: _____	<input type="checkbox"/>
	<input type="checkbox"/>		<input type="checkbox"/>
			<input type="checkbox"/>

**Substantive content and usefulness of workshop**

1. What is your overall rating of the workshop?

1. Excellent      2. Good       3. Regular       4. Poor       5. Very poor       6. Not sure / no response

2. How would you rate the substantive content of the workshop?

1. Excellent      2. Good       3. Regular       4. Poor       5. Very poor       6. Not sure / no response

3. Did the workshop live up to your initial expectations?

1. Yes       2. No       3. Not sure / no response

**4. How relevant was the training for the work of your institution?**

1. Very Relevant       2. Relevant       3. Somewhat relevant       4. Not relevant       5. Not sure/no response

**5. How would you improve this workshop in terms of the subjects addressed (for example, issues you would have liked to address or analyze in greater depth or subjects which were not so important)?**

**6. How useful did you find the methodologies presented at the workshop for your work?**

1. Very useful       2. Useful       3. Regular       4. Not very useful       5. Not useful at all       6. Not sure /no response

**7. Based on the above, what specific aspects or components would you consider incorporating in the work of your institution?**

**8. Did you find the training useful for strengthening your capacity to construct environmental indicators?**

1. Very useful       2. Useful       3. Somewhat useful       4. Not useful       5. Not sure/no response

**9. How useful did you find the workshop for engaging in discussions and exchanging experiences with representatives of other institutions?**

1. Very useful       2. Useful       3. Regular       4. Not very useful       5. Not useful at all       6. Not sure /no response

**Organization of the training workshop on the construction of core environmental statistics and indicators**

<b>10. How would you rate the organization of the workshop? If you choose “poor” or “very poor” please explain your response so that we can take your opinion into account.</b>						
<b>Quality of documents and materials provided</b>	1. Excellent <input type="checkbox"/>	2. Good <input type="checkbox"/>	3. Regular <input type="checkbox"/>	4. Poor <input type="checkbox"/>	5. Very poor <input type="checkbox"/>	6. Not sure/No response <input type="checkbox"/>
<b>Duration of the sessions and time for debate/questions</b>	1. Excellent <input type="checkbox"/>	2. Good <input type="checkbox"/>	3. Regular <input type="checkbox"/>	4. Poor <input type="checkbox"/>	5. Very poor <input type="checkbox"/>	6. Not sure/No response <input type="checkbox"/>
<b>Quality of the infrastructure (room, sound, catering)</b>	1. Excellent <input type="checkbox"/>	2. Good <input type="checkbox"/>	3. Regular <input type="checkbox"/>	4. Poor <input type="checkbox"/>	5. Very poor <input type="checkbox"/>	6. Not sure/No response <input type="checkbox"/>
<b>11. Based on the ratings selected above, please indicate what worked well and what could be improved.</b>						
<b>12. Do you have any other comments or suggestions on the organizational aspects of the workshop?</b>						
<b>13. What additional technical cooperation activities in the field of statistics would you suggest that ECLAC undertake in the future?</b>						



Annex V**RESPONSES TO QUANTITATIVE ITEMS**

Table A.1  
**Sex of Participants**

	<i>Frequency</i>	<i>Percent</i>	<i>Valid Percent</i>	<i>Cumulative Percent</i>
Male	10	45.5	45.5	45.5
Female	12	54.5	54.5	100.0
Total	22	100.0	100.0	

Table A.2  
**Type of organization being represented**

	<i>Frequency</i>	<i>Percent</i>	<i>Valid Percent</i>	<i>Cumulative Percent</i>
National Ministry	16	72.7	72.7	72.7
Independent Consultant	1	4.5	4.5	77.3
Statutory Body	3	13.6	13.6	90.9
Local/ Municipal Institution	1	4.5	4.5	95.5
Other	1	4.5	4.5	100.0
Total	22	100.0	100.0	

Table A.3  
**Overall Rating of the workshop**

	<i>Frequency</i>	<i>Percent</i>	<i>Valid Percent</i>	<i>Cumulative Percent</i>
Excellent	6	27.3	27.3	27.3
Good	13	59.1	59.1	86.4
Regular	3	13.6	13.6	100.0
Total	22	100.0	100.0	

Table A.4  
**Rating of substantive content of the workshop**

	<i>Frequency</i>	<i>Percent</i>	<i>Valid Percent</i>	<i>Cumulative Percent</i>
Excellent	11	50.0	50.0	50.0
Good	9	40.9	40.9	90.9
Regular	2	9.1	9.1	100.0
Total	22	100.0	100.0	

Table A.5  
**Did workshop live up to initial expectations**

	<i>Frequency</i>	<i>Percent</i>	<i>Valid Percent</i>	<i>Cumulative Percent</i>
Yes	17	77.3	77.3	77.3
No	1	4.5	4.5	81.8
Not sure/ no response	4	18.2	18.2	100.0
Total	22	100.0	100.0	

Table A.6  
**Relevance of the training to the work of your institution**

	<i>Frequency</i>	<i>Percent</i>	<i>Valid Percent</i>	<i>Cumulative Percent</i>
Very relevant	10	45.5	45.5	45.5
Relevant	9	40.9	40.9	86.4
Somewhat relevant	3	13.6	13.6	100.0
Total	22	100.0	100.0	

Table A.7  
**Usefulness of the software tools for participants' work**

	<i>Frequency</i>	<i>Percent</i>	<i>Valid Percent</i>	<i>Cumulative Percent</i>
Very useful	6	27.3	27.3	27.3
Useful	14	63.6	63.6	90.9
Regular	2	9.1	9.1	100.0
Total	22	100.0	100.0	

Table A.8  
**Usefulness of the training for strengthening capacity to construct environmental indicators**

	<i>Frequency</i>	<i>Percent</i>	<i>Valid Percent</i>	<i>Cumulative Percent</i>
Very useful	12	54.5	54.5	54.5
Useful	7	31.8	31.8	86.4
Somewhat useful	3	13.6	13.6	100.0
Total	22	100.0	100.0	

Table A.9

**Usefulness of the workshop for engaging in discussions and exchanging experiences**

	<i>Frequency</i>	<i>Percent</i>	<i>Valid Percent</i>	<i>Cumulative Percent</i>
Very Useful	15	68.2	68.2	68.2
Useful	5	22.7	22.7	90.9
Regular	2	9.1	9.1	100.0
Total	22	100.0	100.0	

Table A.10

**Quality of the documents and materials provided**

	<i>Frequency</i>	<i>Percent</i>	<i>Valid Percent</i>	<i>Cumulative Percent</i>
Excellent	6	27.3	27.3	27.3
Good	14	63.6	63.6	90.9
Regular	2	9.1	9.1	100.0
Total	22	100.0	100.0	

Table A.11

**Duration of the sessions and time for debate and questions**

	<i>Frequency</i>	<i>Percent</i>	<i>Valid Percent</i>	<i>Cumulative Percent</i>
Excellent	2	9.1	9.1	9.1
Good	18	81.8	81.8	90.9
Regular	2	9.1	9.1	100.0
Total	22	100.0	100.0	

Table A.12

**Quality of the infrastructure (sound, equipment, catering)**

	<i>Frequency</i>	<i>Percent</i>	<i>Valid Percent</i>	<i>Cumulative Percent</i>
Excellent	3	13.6	13.6	13.6
Good	13	59.1	59.1	72.7
Regular	5	22.7	22.7	95.5
Poor	1	4.5	4.5	100.0
Total	22	100.0	100.0	