



**WORKSHOP ON ENVIRONMENT STATISTICS IN
SUPPORT OF THE IMPLEMENTATION OF THE
FRAMEWORK FOR THE DEVELOPMENT OF
ENVIRONMENT STATISTICS (FDES 2013)**

LOME, TOGO
19-23 OCTOBER 2015

Final Report

**United Nations Statistics Division
in collaboration with the
Economic Community of West African States**

Background and objectives of the Workshop

1. The United Nations Statistics Division (UNSD), in collaboration with the Economic Community of West African States (ECOWAS), organized a Workshop on Environment Statistics in support of the implementation of the Framework for the Development of Environment Statistics (FDES 2013). The Workshop was held in Lomé, Togo from 19 to 23 October 2015, with hosting and on-ground support provided by the ECOWAS Commission, the National Institute of Statistics and Economic and Demographic Studies (INSEED), the Ministry of Environment and Forestry Resources of Togo, and the United Nations Development Programme (UNDP-Togo).
2. The background to organizing this Workshop on the implementation of the FDES 2013 was that the United Nations Statistical Commission, at its forty-fourth session in 2013, endorsed the revised FDES 2013 as the framework for strengthening environment statistics programmes in countries. The Commission also recognized the FDES 2013 as a useful tool in the context of sustainable development goals and the post-2015 development agenda.
3. The key objectives of the Workshop were to:
 - a) strengthen national capacities for the implementation of the FDES 2013;
 - b) provide statisticians from National Statistical Offices (NSOs) and experts from selected Ministries of Environment (or equivalent institutions) with detailed knowledge and understanding of contemporary approaches to environment statistics, thus allowing them to identify gaps and deficiencies in environmental data, and contribute to the production of regular, accurate and reliable environment statistics; and
 - c) discuss the further development and implementation of the regional programme on environment statistics for the ECOWAS member States.
4. The Workshop was attended by about 30 participants from NSOs and Ministries of Environment (or equivalent institutions) of the ECOWAS member States: Benin, Burkina Faso, Cabo Verde, Côte d'Ivoire, The Gambia, Ghana, Guinea, Guinea Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone and Togo. In the case of the host country, Togo, the NSO, as well as several national level ministries/departments, were represented. The following regional/international organizations and training institutions were represented at the Workshop: the African Development Bank (AfDB), the United Nations Economic Commission for Africa (UNECA), the United Nations Environment Programme (UNEP), the Observatoire Economique et Statistique d'Afrique Subsaharienne (Afristat), the United Nations Development Programme (UNDP-Togo) and the Ecole Nationale Supérieure de Statistique et d'Economie Appliquée (ENSEA). Two consultants assisting the ECOWAS Commission in the development and implementation of the regional programme on environment statistics also participated in the Workshop.

5. The list of participants is attached as Annex 1.

Opening session

6. In his opening speech, Mr. Kokou Yao N'Guissan, Director General of INSEED of Togo, welcomed all participants. He also thanked the ECOWAS Commission and UNSD for choosing Togo as the host country for this Workshop. He then highlighted the changing demands for environment statistics, which are increasing along with growing environmental challenges. He noted that the participants would have to think about solutions to solve these problems, and consider the transition to the Sustainable Development Goals (SDGs). He indicated that the Workshop would strengthen the environment statistics programmes in participating countries. Finally, Mr. N'Guissan concluded his speech by thanking the Government of Togo and the development partners.

7. Ms. Reena Shah, Chief of the Environment Statistics Section of UNSD thanked Mr. Mahamadou Yahaya of the ECOWAS Commission for their collaboration in organizing the Workshop. She expressed appreciation to the presence of the Minister of Development Planning, Mr. Kossi Assimaidou, and of the Minister of Environment and Forest Resources, Mr. Andre Johnson. Her appreciation also went to Mr. Kokou Yao N'Guissan, Director General of INSEED, Mr. Feysal Moumouni from the Ministry of Environment and Forest Resources of Togo and to Mrs. Khardiata Lo N'Diaye, the Resident Representative of UNDP and Resident Coordinator of the UN System in Togo. She pointed out that the Workshop is part of a series of similar workshops in different regions. She recognized this Workshop to be part of the long standing collaboration between UNSD and ECOWAS, particularly with regard to the development of the “Framework for Strengthening Capacity in the Development and Institutionalization of Environment Statistics in the Region”, and the ECOWAS Regional Set of Environmental Indicators. She briefly explained the history of the FDES 2013 and how it would help countries to cope with the increasing demand for environment statistics, particularly with the SDGs, whose indicators were about to be defined. She emphasized that strengthening of the National Statistical System (NSS) is a crucial component of environment statistics. She also noted her appreciation for the timing of the Workshop to coincide with the celebration of World Statistics Day on 20 October 2015.

8. Mr. Mahamadou Yahaya, Director of Research and Statistics of the ECOWAS Commission, welcomed the participants on behalf of the President of the ECOWAS Commission. He expressed the gratitude of the President of the ECOWAS Commission to the Government of Togo for hosting the Workshop. He then thanked UNSD and other partners (AfDB, Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, European Union) for their financial contribution. He explained the history of the ECOWAS Regional Set of Environmental Indicators, which was developed in cooperation with UNSD and the

ECOWAS Member States between 2008 and 2011. He emphasized that the implementation of this programme was slow due to the lack of resources. He expressed the hope that the Workshop could highlight the positive effects of collaboration. He then explained that as environmental challenges were becoming more important, the demand for actions followed the same path, and that in order to support decisions based on facts, statistics were necessary. He concluded by saying that the purpose of the Workshop was to provide detailed knowledge to the experts and encouraged them to actively participate in the discussions.

9. Ms. Khardiata Lo Ndiaye, Resident Representative of UNDP and Resident Coordinator of the UN System in Togo, began her address by thanking the Government of Togo for hosting the Workshop. She then welcomed the participants and organizers who came to Togo for the first time. She explained that environmental challenges affect most of the ECOWAS countries, demonstrating that the environment is a current issue. She then pointed out that the monitoring and evaluation of progress towards environmental sustainability is the weakest of the three pillars of sustainable development. She noted, however, that with the establishment of the SDGs and efforts on realizing fact-based decision making, the need for environmental statistics and indicators was increasing, which made the Workshop very timely. She thanked UNSD and the ECOWAS Commission for bringing together data producers and data users to discuss environment statistics, highlighting that increased collaboration would enhance the regular production of environment statistics, which would help Africa cope with increased environmental challenges. Finally, she expressed her best wishes for the success of the Workshop.

10. In his opening remarks, Mr. Andre Johnson, Minister of Environment and Forest Resources, welcomed the participants in Lomé, on behalf of the President, the Prime Minister and himself. He also thanked the ECOWAS Commission and UNSD for choosing Togo as the venue for the Workshop. He then explained that the topics to be discussed at this Workshop were fundamental inputs towards the country's transition to sustainable development. He pointed out that Togo's statistical law had a relatively short history and only came into force in 2011. He noted that the Workshop would strengthen the technical capacities of the participants, and help them to identify the weaknesses and gaps that the countries face and contribute to the production of regular, accurate and reliable environment statistics. Mr. Andre Johnson thanked the organizers and the technical and financial partners. He ended his address by wishing full success to the work and declared the Workshop open.

Election of the bureau and adoption of the agenda

11. The meeting unanimously agreed on the following bureau:

Chair: Prof. Jacques-André Ndione (Senegal)

Rapporteurs: Mr. Sedibinet Sidibe (Guinea) and Mr. Edrissa Ceesay (The Gambia).

The following agenda items were adopted:

- a. Session 1: Need for and use of environmental statistics and indicators;
- b. Session 2: National presentations on the state of environment statistics; other countries' experiences with the FDES;
- c. Session 3: Overview of environment statistics;
- d. Session 4: The FDES and the Basic/Core Sets of Environment Statistics (FDES Chapters 2 and 4);
- e. Session 5: The Environment Statistics Self-Assessment Tool (ESSAT);
- f. Session 6: FDES, Component 1: Environmental Conditions and Quality;
- g. Session 7: FDES, Component 2: Environmental Resources and their Use;
- h. Session 8: FDES, Component 3: Residuals;
- i. Session 9: FDES, Component 4: Extreme Events and Disasters;
- j. Session 10: FDES, Component 5: Human Settlements and Environmental Health;
- k. Session 11: FDES, Component 6: Environmental Protection, Management and Engagement;
- l. Session 12: Training needs and the implementation of the FDES 2013; and
- m. Session 13: Capacity building assessment for the implementation of the regional programme of environment statistics.

12. Mr. Christopher Ajaero (ECOWAS Commission) made a presentation on the objectives of the Workshop, outlining the importance of environment statistics in the ECOWAS region and how the implementation of the FDES 2013 in the ECOWAS member States could serve to strengthen environment statistics at the national level. He mentioned the “Framework for Strengthening Capacity in the Development and Institutionalization of Environment Statistics in the Region” that was adopted in the region. Finally, he outlined the main objectives and the expected outcomes of the Workshop.

13. The discussions were organized in both plenary and working group sessions. The agenda is attached as Annex 2.

14. The Workshop's discussions were based on presentations prepared by various participants. Working groups were also organized. Participants were divided into three groups. In the working groups, participants applied the Environment Statistics Self-Assessment Tool (ESSAT) to each FDES 2013 component. Participants presented their experience and feedback to plenary. The composition of the three groups is shown in Annex 3.

15. All documentation and presentations used in the Workshop are available and can be downloaded at: http://unstats.un.org/unsd/environment/unsd_TogoWorkshop.html

OUTCOME OF DELIBERATIONS

Session 1: Need for and use of environmental statistics and indicators

16. In this session, ten presentations were made on the following themes: National needs for statistics and environmental indicators (Togo); Regional needs, for which presentations were delivered by ECOWAS, UNECA, AFRISTAT, AfDB and UNEP; International requirements for environmental statistics and indicators (UNSD); ECOWAS environment statistics (ECOWAS consultant); International data sources for environment statistics (UNSD); Strengthening environment statistics for monitoring the Sustainable Development Goals (SDGs) (UNSD).

17. Mr. Essey Senah Koupogbe (Togo) made a presentation on the needs of environment statistics in Togo. He started his presentation by describing the biophysical characteristics of Togo, before making an evaluation of the state of environment statistics in the country. He mentioned the lack of a framework for consultation and the fragmentation of the production of statistics in Togo, which responds to the needs of projects rather than to the needs of the country. Finally, he described the challenges to be met.

18. Mr. Christopher Ajaero (ECOWAS Commission) presented on environmental statistics in ECOWAS region. He began his presentation by drawing a picture of environment statistics and their impacts on living conditions. Based on these impacts, he then showed that environmental statistics are at the heart of the global agenda and that these challenges cannot be overcome without reliable statistics. He described the environmental problems in West Africa, the ECOWAS environmental policies, the status of environment statistics in the ECOWAS region, and the “Framework for Strengthening Capacity in the Development and Institutionalization of Environment Statistics in the Region” on which the Regional Programme on Environment Statistics for the ECOWAS member States was based. Finally, he presented the objectives of the Programme.

19. Mr. Franck Cachia (AFRISTAT) made a presentation on environmental statistics in AFRISTAT. He began with a description of the institution, which was established in 1993. It originally focused on macroeconomic statistics, and then extended its activities to other areas of statistics, including those on the environment. AFRISTAT’s activities in the latter area focus on training in the field of environment statistics and climate change, reflecting on indicators for the objectives of sustainable development in Africa and training young statisticians in environment statistics.

20. Ms. Katalin Bokor (UNECA) presented on UNECA's activities on environment statistics. In particular, she provided details of the emerging demand for environmental statistics and indicators in Africa, and the challenges and work of UNECA in this regard.

21. Ms. Dorothy Ouissika (AfDB) presented on an overview of the environmental information use by AfDB, whose mission mainly focuses on reducing poverty in Africa. She presented the monitoring framework of environmental impacts used for the Bank's operations and the project execution. She illustrated her point by describing the Project of statistical strengthening for environment statistics implemented in Guinea. She also presented the results of the study on the current state of environmental statistics carried out under the Bank's Statistical Capacity Building Program involving 19 countries.

22. Ms. Sofie Bruun (UNEP) presented the UNEP Live portal, which provides environmental information on countries. She explained the portal's terms of use and presented its components, its importance, and many examples of environmental information for different countries. The portal currently contains reports from 43 countries, of which 13 are African.

23. Ms. Reena Shah (UNSD) made a presentation on international requirements for environmental statistics and indicators. Her presentation included main types of international requirements and how they relate to the SDGs, international reporting, international data collection, including the UNSD/UNEP Questionnaire on Environment Statistics, and UNSD data dissemination.

24. Ms. Fanta Kaba (ECOWAS Consultant) made a presentation on ECOWAS environment statistics. She presented a draft compilation of environment statistics, based on the ECOWAS Regional Set of Environmental Indicators, with data from international organizations. She explained that based on the lack of data in many countries, it was decided to: i) collect data from international sources; ii) submit these data for review and validation by countries; and iii) prepare the ECOWAS Environment Statistics Compendium. She noted that during the compilation of data from international organizations, they often did not have data on many of the ECOWAS indicators, but they had data for other related indicators which she included in the compilation.

25. Ms. Reena Shah (UNSD) made a presentation on international data sources for environment statistics. This presentation included information on and availability of data from international organizations and other institutions on, inter alia, greenhouse gas emissions, energy, environmentally-related diseases, total forest area, natural disasters, etc. She encouraged participants to review these data and to validate them with available data at the national level.

26. Ms. Reena Shah (UNSD) further made a presentation on strengthening environment statistics for monitoring the SDGs. Her presentation included information on how the FDES can help countries compile environmentally-related SDG indicators. For example, about half of the 169 targets of the SDGs require environment statistics to compile its indicators and enable regular monitoring of progress.

Discussion

27. The problems faced by various countries to compile the ECOWAS Regional Set of Environmental Indicators were the lack of knowledge about the availability of data, weak data collection systems for environment statistics, inadequate knowledge about the indicators due to high attrition rate, problems of data accessibility, etc. UNSD and the ECOWAS Commission have worked on some strategies to address some of these bottlenecks.

28. Remark was made on the need for collaboration across different organizations such as NSOs, Ministries of Environment and other national level line ministries as well as government bodies at state and municipal levels. It was also recognised that in order to produce comprehensive environment statistics, there was invariably much data scattered across government and the private sector to collect. As such, there was a need for regular communication between governmental ministries and institutions. Adding to the complication of the collection process was the need to regularly collect primary data from a ministry or department, and in other cases, aggregated secondary data from another ministry or department.

29. The need for countries to mainstream data collection for environment statistics in their National and Sectoral Strategies for the Development of Statistics is likely to attract national funding and ensures sustainable production as opined by some participants.

30. It was observed that monitoring, evaluating and measuring progress in the environmental field is relatively weak, especially when compared to the economy and society, the other two pillars of sustainable development.

31. The need for clear communication among international bodies, such as UNSD, the Food and Agriculture Organization of the United Nations (FAO), Afristat, AfDB, UNEP, and UNECA, was emphasized so as to avoid duplication in data collections.

32. As pertains to the collection of environment statistics by UNSD at the international level, the point was made that UNSD increasingly receives data directly from the NSO of a country, but that the NSO commonly works closely with the Ministry of Environment or equivalent institution. UNSD also noted that in terms of environmental statistics and indicators, it only

publishes data on its website which has been agreed upon between UNSD and a country through an extensive validation process. Estimations, projections or anything similar are not compiled.

Session 2: National presentations on the state of environment statistics; other countries' experiences with the FDES

33. In this session, three presentations were made on the experiences on the implementation of the FDES 2013 in selected countries. An additional presentation on other countries' experiences with the FDES was also delivered.

34. Mr. Paul Bombiri (Burkina Faso) presented the experience of his country in the implementation of the FDES 2013 and described the three main steps in this regard, which are evaluation, adoption and operationalization. He said that Burkina Faso is a Sahelian country whose main environmental concerns are the sustainable use of natural resources (water, forests, minerals, etc.), sustainable land management, pollution mitigation, adaptation to climate change, and the preservation and enhancement of biodiversity. He also pointed out the high demand for environment statistics and described the organization of the NSS to meet this demand.

35. Ms. Joséphine Ebay Gnamien (Côte d'Ivoire) made a presentation on the experiences of her country in environmental statistics. She explained that significant progress was recorded concerning environmental management in Côte d'Ivoire in spite of malfunctions and all significant events experienced by the country in recent years. She explained that the main environmental problems were the loss of vegetation cover, soil depletion, degradation of water quality and overexploitation of water resources, pollution and industrial disturbances, degradation of the urban environment, erosion, pollution of marine and lagoon waters, and the absence of a national information system and environmental monitoring. She then talked about the policies and institutions related to the environment, the production of environmental statistics and the perspectives in the field.

36. Mr. Philip Bankole (ECOWAS consultant) made a presentation on the experience of Nigeria with respect to the implementation of the FDES 2013, for which Nigeria was one of the pilot countries. Nigeria created two committees to implement the FDES 2013, a steering committee and a technical committee. He then described the two committees, including their purpose and composition. Finally, he explained the latest activities and the next steps towards the implementation.

37. Mr. David Rausis (UNSD) made a presentation on the use and application of the FDES 2013 at the national level by different countries. He gave details of the approach and steps taken by some countries (Qatar, Mauritius, Botswana, Ecuador, Philippines, Colombia, Vietnam and

Australia) in the adoption of the FDES 2013. He concluded by summarizing the key points of the experiences of these countries.

Discussion

38. Several ECOWAS countries have published their state of environment reports (SoE) with support from international organizations such as UNEP, The World Bank, UNSD, Afristat, etc. The statistics generated were based on the conceptual framework of Driving force, Pressure, State, Impact and Response model. It was noted that the SoEs of many ECOWAS countries faced two major challenges: the issue of sustainability in the absence of donor support and the poor quality of data for the 'State and Pressure indicators'. With the implementation of the FDES 2013, the challenges could be remedied through capacity building, technical and financial assistance.

39. Mr. Ibrahima Ba, the Director General of the NSO of Côte d'Ivoire, said that a policy of centralization and regular dissemination of statistics was designed and implemented since 2008 in collaboration with the Ministry of the Environment and Sustainable Development. There were a number of sectoral policies on the environment which specify data requirements of the indicators listed and compiled in a document since 1994 and reviewed in 2003 and 2010. The first work was made with the technical and financial support from UNSD and using their methodological publications, the FDES 1984 and the two publications on "Concepts and Methods of Environment Statistics", one focusing on human settlements statistics and the other on statistics of the natural environment. The project for the creation of an information system for environment statistics in the NSO was designed and data are collected, processed and published. However, the system has challenges and there is a need to improve it. Dr. Mamadou Cisse from the National Environment Agency of Côte d'Ivoire confirmed that the country published a Compendium of Environment Statistics (2011) and an Environment Statistics Yearbook (2010) and implemented two projects on environmental information systems.

Session 3: Overview of environment statistics

40. Mr. David Rausis (UNSD) made a presentation on the characteristics and challenges of environment statistics, which corresponded to chapter 1 of the FDES 2013. He described the objectives of environment statistics, their scope, main users, the relationship between environmental information, data, statistics and indicators, data sources, temporal and spatial considerations, and the institutional dimension of environment statistics.

41. Prof. Jacques-André Ndione (Senegal) made a presentation on the use of geographic information systems (GIS) and remote sensing for environment statistics. Before his presentation, he projected a documentary film on satellite images of a natural disaster. Then he

gave an explanation of the concepts of environmental statistics, satellite images and environmental information system. Concrete images accompanied these explanations.

Discussion

42. It was noted that environmental indicators were used by policy makers as they were considered to be precise and simple, and provided summary information. It was also mentioned that the development and use of specialized environmental surveys, as well as adding environmentally-related questions to existing censuses or surveys, were very important.

43. Comment was made on the need to consider the expensive costs associated with high-spatial and spectral resolution satellite data when using GIS to generate environment statistics. This was especially the case for ECOWAS countries. The difference between active rather than passive sensors should also be taken into consideration during times of disaster as the optical sensors cannot penetrate cloud cover. The use of regularly data collected on the ground to complement GIS was also mentioned. The possibility of digitizing Google earth images was also discussed, although several issues were raised against the idea. The potential use of GIS as a data source for land use and land cover analysis in liaison with a Ministry of Housing and Lands was also mentioned.

Session 4: The FDES and the Basic/Core Sets of Environment Statistics (FDES Chapters 2 and 4)

44. Ms. Reena Shah (UNSD) presented on the conceptual foundation and the structure of the FDES which corresponds to chapter 2 of the FDES. Her presentation included content on why a framework for environment statistics is needed, a description of the main concepts underlying the FDES, an overview of the overall structure of the FDES and its linkages to other frameworks and systems, as well as the revision and development process of the FDES.

45. Mr. David Rausis (UNSD) made a presentation on the theme: "From the Basic to the Core Set of Environment Statistics" which corresponded to chapter 4 of the FDES. He first explained why the Basic and Core Sets were developed. His presentation included information on the description of the three tiers of the Basic Set of Environment Statistics, and an explanation of the Core Set of Environment Statistics.

46. Mr. David Rausis (UNSD) briefly reviewed the Manual on the Basic Set of Environment Statistics, which would provide more guidance for the compilation of environment statistics. He first described it by explaining its development and structure, and then provided the date when the first methodology sheets were expected to be made available.

Session 5: The Environment Statistics Self-Assessment Tool (ESSAT)

47. Mr. David Rausis (UNSD) made a presentation on the Environment Statistics Self-Assessment Tool (ESSAT). During this presentation, the context of the development of the ESSAT, its purpose (helping countries to: develop their environment statistics programme; collect their own data on the environment; and assess the state of environment statistics and the needs for their development at national level, while being consistent with the scope of the FDES 2013), its use and its structure were elaborated upon. The two Parts, Part I focusing on the Institutional Dimension of Environment Statistics, and Part II focusing on the Statistics Level Assessment, were described in detail. The links between the Basic Set of the FDES 2013 and the ESSAT were also explained.

Session 6: FDES, Component 1: Environmental Conditions and Quality

48. Mr. David Rausis (UNSD) made a presentation on the Component 1 of the FDES 2013: Environmental Conditions and Quality. The presentation focused on the physical characteristics (atmosphere, climate and weather, hydrography, geology, geography, soil), ecosystems, biodiversity, forests and quality of air, water, soil pollution, noise etc., as well as their changes over time.

49. Mr. Kotchikpa Okoumassou (Togo) made a presentation on the soil cover, ecosystems and biodiversity of his country. He presented the different ecosystems and the biological diversity of Togo and described the soil cover and soil use. He then presented Togo's efforts in conservation, including policy and institutional options and law enforcement.

50. Participants took part in some of the celebrations of World Statistics Day on 20 October 2015 by attending the official venue where World Statistics day was being honoured and where several presentations on statistics, including environment and energy statistics, were delivered to a wide audience, including academia, policy makers, researches, donors and media. Participants also visited a coastal erosion protection project to experience some of the work being undertaken in the country to conserve the natural environment.

51. The participants were divided into three working groups to practice on the implementation of the ESSAT according to the various components. There were two French groups (groups 1 and 3) and a group of English speakers (group 2). The composition of the groups can be found in Annex 3.

52. Group work on Component 1 using the ESSAT and plenary presentation.

Discussion

53. Comments after the presentations unveiled that countries regarded the exercise of applying the ESSAT to the various components as useful since it would enable them to properly apply it in their countries. Some clarifications in the meaning of some terms used were sought after. These problems were solved by referring to the appropriate glossary of terms and definitions.

54. For most countries, almost all statistics in Component 1 were regarded as being of high priority for national data collection, and as being available within their country. Some of them were available, but similar instead of identical with the name of the FDES statistic. Some countries have however expressed that the following statistics, including UV radiation, soil degradation, nutrient content of soil, ecosystem's chemical and physical characteristics, forest biomass, local air quality, fresh water quality and marine water quality and noise, may not be available, because of one or more of the following reasons, such as resource constraints, methodological/technical difficulties in data collection, insufficient quality/outdated, inaccessibility, lack of institutional set-up/coordination and others. Some statistics on water and air quality may be available but very much outdated, as they were collected through ad-hoc surveys of projects.

Session 7: FDES, Component 2: Environmental Resources and their Use

55. Ms. Reena Shah made a presentation on Component 2: Environmental Resources and their Use. In particular, she described the links between the FDES 2013 and environmental-economic accounting, where terms and definitions have been made consistent as far as possible. The FDES 2013 contains statistics on the biophysical resources. Component 2 has six sub-components, namely mineral resources, energy resources, land, soil resources, biological resources and water resources.

56. Mr. Sédibinet Sidibe (Guinea) made a presentation on water in Guinea. He said that the water comes from rain collected in the national territory to supply 23 watersheds of 1,165 rivers basins that constitute the country's river system. He recalled that Guinea is called "the water tower of West Africa" because of its 14 watersheds shared with other countries in the region. He then provided information on surface water and groundwater resources, water storage by dams (hydro and hydro-agricultural), domestic, agricultural and industrial withdrawals, and the water quality following the various socio-economic activities that impact it. He concluded with explanations on environmental indicators, producers of statistics, statistical outputs and prospects.

57. Group work on Component 2 using the ESSAT and plenary presentation.

Discussion

58. For most countries, almost all statistics of Component 2 were regarded as being of high priority for national data collection, and as available within their country. However, some may be outdated or may not be collected because of low priority or lack of demand. Examples of such statistics are amount of pellets, hormones and colourants used in aquatic resources.

59. Some colleagues requested clarification on the definition of, “primary and secondary energy sources” and Ms. Reena Shah (UNSD) referred the participants to the definition available in the FDES 2013.

60. Some participants were not sure whether it was possible to classify final consumption of energy by the International Standard Industrial Classification of all Economic Activities (ISIC). It was argued that standard household surveys often assigned ISIC codes to industrial products consumed or traded.

61. In applying the ESSAT, some countries were able to begin to identify where data gaps exist (e.g., for some countries, statistics such as number of animals slaughtered and exports of livestock, were regarded as being unavailable).

Session 8: FDES, Component 3: Residuals

62. Mr. David Rausis (UNSD) presented on Component 3: Residuals, explaining that residuals are flows of solid materials, liquid and gas, and energy, which are rejected or issued by institutions and households through production, consumption and accumulation processes and can be released, discharged or emitted directly into the environment or be captured, collected, recycled or reused. He cited the different types of residuals and talked about their management before describing the groups of residuals covered by the FDES 2013. Finally, he further elaborated on air emissions that mainly consist of emissions of greenhouse gases and substances that deplete the ozone layer, waste generation and management, wastewater generation and management, and multilateral agreements on chemicals.

63. Mr. Edrissa Ceesay (The Gambia) discussed about climate change and greenhouse gases within the context of a broader statistics topics for climate change policy and data availability. He outlined some of the likely natural and human-made causes of climate change. He said that evidence-based climate change policies and strategies are needed to address and minimize the impact of climate change through mitigation and adaptation measures. He outlined and showed some of the environment statistics needed for climate change policies with emphasis on the availability of data on greenhouse gas emissions. Available statistics on climate change were used to prepare the Gambia's reporting obligations to the climate change, biodiversity and

desertification conventions, and more recently for preparing the document on Intended Nationally Determined Contribution (INDC) to mitigation efforts for the 21st COPs in Paris. A number of the statistics needed to achieve better climate change policies and better reporting on national communications are yet to be collected and updated.

64. Group work on Component 3 using the ESSAT and plenary presentation.

Discussion

65. Some participants said that with respect to the INDC, a common African position had been adopted. Others said that as African countries had their own environmental problems and were at different levels of development, it was difficult to see how a common position would work. However, the forthcoming Paris conference on climate change in late November 2015 would clarify the position.

66. Participants mentioned that many of the statistics of Component 3 were available as estimates. It was noted that statistics related to waste were of high importance.

67. Some participants requested further explanation from UNSD and ECOWAS so as to simplify their work. Because of limited resources, countries often do not have the basic data to complete international questionnaires.

Session 9: FDES 2013, Component 4: Extreme Events and Disasters

68. Ms. Reena Shah (UNSD) presented on Component 4: Extreme Events and Disasters. During the presentation she said that she was surprised that many countries did not have data on disasters at the national level, but that often data were available for these disasters at the international level. She also described both the natural and technological disasters. She noted that centres for seismic monitoring and research provide some data. Statistics on the frequency and impact of these phenomena exist and are very important for agencies that deal with these disasters. A new framework is implemented for disaster reduction, the Sendai Framework, and UNSD would reflect these developments in the Manual on the Basic Set of Environment Statistics.

69. Group work on Component 4 using the ESSAT and plenary presentation.

Discussion

70. As regards Sub-component 4.1, the participants did not have much discussion about it, and the statistics were defined as relevant, being of high priority for countries, and also available.

71. Some participants proposed to change a few terms. Ms. Reena Shah (UNSD) said that they could refer to the sources cited in the FDES 2013 for definitions of the statistics requested.

Session 10: FDES, Component 5: Human Settlements and Environmental Health

72. Mr. David Rausis (UNSD) made a presentation on Component 5: Human Settlements and Environmental Health. He mentioned that urban and rural populations were all concerned with environmental health, which depended on several factors including the population exposure to pollutants, waste, noise, toxic chemicals, hazardous radiation, and vectors that transmit diseases, as well as the access to health services and to decent housing. The data sources are, for example, administrative records and research results.

73. Mr. Charles K. Som and Mr. Kwame B. Fredua (Ghana) jointly made a presentation on environmental health in Ghana. They provided the definition of health and described briefly the biophysical characteristics of Ghana. They subsequently provided information on the political and institutional environmental framework in Ghana, environmental indicators and data (including the air quality index) and the importance of health for socio-economic development. They concluded by illustrating the challenges and actions undertaken within the framework of improvement of the status of environment statistics in general and the state of the environment in particular.

74. Group work on Component 5 using the ESSAT and plenary presentation.

Discussion

75. Regarding sub-component 5.1: Human settlements, it was observed that statistics were of high relevance and priority.

76. Clarity of definitions for terms such as, “slum” and “informal settlement” were requested by some participants. UNSD referred colleagues to the methodological guidance column in the Basic Set of Environment Statistics. It was agreed that no changes would be made now but later it may be revised.

77. Participants discussed the possibility of adapting the FDES 2013 to Africa, to better match the reality on the ground and facilitate the production of the ECOWAS indicators.

Session 11: FDES, Component 6: Environmental Protection, Management and Engagement

78. Mr. David Rausis (UNSD) made a presentation on Component 6: Environmental Protection, Management and Engagement, in which he provided information on environmental protection expenditure, statistics related to environmental governance, institutional strength, application of regulations and extreme events preparedness, as well as a wide variety of programmes and awareness campaigns, including environmental information and education, and private and public activities to reduce environmental impacts and improve the environmental quality.

79. Mr. Feysal Moumouni (Togo) presented on environment protection in Togo. He talked about the importance of financial resources in this area.

80. Group work on Component 6 using the ESSAT and plenary presentation.

Discussion

81. The information requested in Sub-components 6.1 and 6.2 were easily obtainable. The statistics in Sub-component 6.3, although important to the country, were not available. As for the statistics in Sub-component 6.4, the information was also difficult to obtain.

82. The discussion then focused on the lack of environment data in general in Africa. Ms. Sophie Bruun (UNEP) said that countries could use UNEP Live to facilitate data sharing.

Session 12: Training needs and the implementation of the FDES 2013

83. Mr. David Rausis (UNSD) made a presentation on the topic, where he presented on Putting the FDES to work: a Blueprint for Action, which is an action plan adopted by the Statistical Commission in 2013. His presentation outlined a strategy and the six fundamental pillars required to put the FDES into action.

84. Mr. Sika Lazare, research professor at ENSEA (Côte d'Ivoire) presented training modalities for statisticians at ENSEA. He talked about environment statistics courses already in place, and potential future trainings in environment statistics.

Discussion

85. Mr. Franck Cachia (Afristat) was pleased to see that there is an implementation strategy for the FDES 2013. He noted that there is also a similar strategy for agricultural statistics, led by FAO, ECA and AfDB. He proposed to UNSD to learn from what was already done in the field of agricultural statistics.

86. Ms. Dorothy Ouissika (AfDB) stated that her organization was involved in some activities for environment statistics. She proposed to establish a work programme to implement the FDES 2013.

87. A participant noted that many data gaps are currently filled by estimates from international organizations. He wondered if it would be possible for countries to produce these estimates themselves. Ms. Reena Shah (UNSD) encouraged countries to compare their data with those of international organizations to check these estimates.

88. Mr. Philip Bankole (ECOWAS Consultant) proposed that countries begin the work of comparison using the draft compendium prepared by Ms. Fanta Kaba (ECOWAS Consultant). He also asked whether organizations like AfDB could organize training workshops at national level.

89. Other participants noted that if countries wanted to produce more statistics, they would have to increase the resources available at the national level.

Session 13: Capacity building assessment for the implementation of the regional programme of environment statistics

90. The participants had a very active discussion on capacity building and implementation of the ECOWAS Regional Programme on Environment Statistics and the implementation of the FDES 2013 in their countries.

91. The following recommendations were adopted by the Workshop.

Recommendations

Member States

1. Member States to ensure that FDES activities are included into their National Strategies for the Development of Statistics (NSDS) to guarantee funding and hence sustainability of the FDES implementation at country level.
2. Member States to develop National Work Plans for the production of ECOWAS Core Environmental Indicators by end of March 2016.
3. Member States to establish a national working group on environment statistics by mid-December 2015. The Working Group should be composed of the ministry responsible for environment, National Statistics Office, technical and financial partners and stakeholders in environment issues.
4. Member States to embark on national advocacy and sensitization of stakeholders to promote data exchange and collaboration in the production of indicators.

5. Member States to complete the ESSAT Part I and II and submit to ECOWAS/UNSD by the end of May 2016.
6. Member States to provide data following the ECOWAS Core Environmental Indicators for the production of the ECOWAS Regional compendium by the end of August 2016.
7. Member States to ensure that key environmentally-related questions are included in ongoing statistical surveys and specialized environmental surveys are designed as appropriate.
8. Members States, which are pilot countries of UNEP's National Reporting System (UNEPLive), to consider UNEPLive as a tool to monitor environment statistics in order to facilitate data availability and information sharing.

ECOWAS/UNSD

1. The ECOWAS Commission, in collaboration with UNSD, and other partners like AfDB, ECA, AFRISTAT, UNEP and UNDP to support the coordination and harmonisation in the production of ECOWAS Core Environmental Indicators and the Sustainable Development Goal (SDGs) indicators.
2. The ECOWAS Commission to draft a generic Terms of Reference (TOR) for the national working group on environment statistics for Member States and send a letter to National Statistics Office about the formation of the national working group on environment statistics.
3. The ECOWAS Commission/UNSD, in collaboration with AfDB, ECA, AFRISTAT, UNEP and UNDP to produce a regional compendium containing concepts and definitions on environment statistics by end of 2016.
4. The ECOWAS Commission/UNSD, in partnership with AfDB, ECA, AFRISTAT, UNEP and UNDP to mobilise resources in order to organise a technical meeting on environment statistics in 2016.
5. The ECOWAS Commission/UNSD, in collaboration with development partners (AfDB, ECA, AFRISTAT, UNEP and UNDP) and Member States to develop more synergies with regional statistical training institutions, such as ENSEA, to develop training modules and build capacity in the region for environment statistics.

Closing Remarks

92. In his closing remarks, Mr. Mahamadou Yahaya (ECOWAS Commission) thanked the participants for coming to the Workshop. He then said that the production of statistics in the region was difficult, and that the recommendations of the participants would help to make it easier. To conclude he thanked the government of Togo.

93. Ms. Reena Shah (UNSD) thanked the participants for their active involvement in the Workshop. She also thanked Mr. Feysal Moumouni for his help, as well as Mr. Kokou Yao N'Guissan and the government of Togo. Finally she expressed her appreciation to the ECOWAS Commission for having co-organized the Workshop with UNSD.

94. Mr. Feyssal Moumouni (Togo), on behalf of his Minister and his Secretary General, thanked Ms. Reena Shah and Mr. Mahamadou Yahaya for their efforts to organize the Workshop. Finally he thanked the participants and declared the session closed.

Annex 1

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Annex 2

Final agenda

Monday, 19 October 2015

- 8:00-9:00** **Registration of participants**
- 9:00-10:00** **Opening of the workshop**
- National Statistical Office - Togo
 - United Nations Statistics Division (UNSD)
 - Economic Community of West African States (ECOWAS)
 - United Nations Development Programme (UNDP)
 - Ministry of Environment and Forestry Resources - Togo
- 10:00-10:30* *Coffee break*
- 10:30-10:45** **Objectives and organization of the workshop**
- Election of the bureau
 - Introduction of participants
 - Presentation and adoption of agenda
 - Presentation of the objectives (ECOWAS)
- 10:45-13:00** **Session 1: Need for and use of environmental statistics and indicators**
- Needs for environment statistics in Togo (Togo)
 - Regional needs
 - Environmental statistics in ECOWAS region (ECOWAS)
 - ECA's activities on environment statistics (UNECA)
 - Environmental statistics in AFRISTAT (AFRISTAT)
 - Overview of the environmental information use by the African Development Bank (AfDB)
 - United Nations Environment Programme (UNEP)
 - International requirements for environmental statistics and indicators (UNSD)
 - ECOWAS environment statistics (ECOWAS consultant)
 - International data sources for environment statistics (UNSD)
 - Strengthening environment statistics for monitoring the Sustainable Development Goals (SDGs) (UNSD)
- 13:00-14:00* *Lunch*
- 14:00-15:30** **Session 2: National presentations on the state of environment statistics; other countries' experiences with the FDES**
- Implementation of the FDES: The experience of Burkina Faso (Burkina Faso)
 - National experience on the implementation of the FDES in Nigeria (ECOWAS consultant)
 - Experiences of Côte d'Ivoire (Côte d'Ivoire)
 - The use and application of the FDES at the national level (UNSD)

- 15:30-17:30** **Session 3: Overview of environment statistics**
- FDES Chapter 1: Overview of environment statistics - characteristics and challenges (UNSD)
 - The use of GIS and remote sensing for environment statistics (Senegal)

Tuesday, 20 October 2015

- 8:30-9:30** **Session 4: The FDES and the Basic/Core Sets of Environment Statistics (FDES Chapters 2 and 4) (UNSD)**
- Chapter 2: Conceptual foundation and structure of the FDES (UNSD)
 - Chapter 4: From the Basic to the Core Set of Environment Statistics (UNSD)
 - Manual on the Basic Set of Environment Statistics (UNSD)

- 9:30-10:00** **Session 5: The Environment Statistics Self-Assessment Tool (ESSAT)**
- The ESSAT (UNSD)

10:00-10:30 *Coffee break*

- 10:30-13:00** **Session 6: FDES, Component 1: Environmental Conditions and Quality**
- Component 1 and its sub-components and statistical topics (UNSD)
 - Land cover, ecosystems and biodiversity (Togo)

13:00-14:00 *Lunch*

World Statistics Day events

- 14:00** **Depart from the venue to Hotel Onomo**
- 14:15** **Arrive at Hotel Onomo**
- 14:30-15:30** **Participation in the celebration of World Statistics Day**
- 15:30-17:30** **Visit to a coastal erosion protection project**

Wednesday, 21 October 2015

- 8:30-10:15 Group work on Component 1 using the ESSAT
- 10:15-10:45 Coffee break*
- 10:45-11:15 Presentation back to plenary
- 11:15-13:00 Session 7: FDES, Component 2: Environmental Resources and their Use
- Component 2 and its sub-components and statistical topics (UNSD)
 - Water in Guinea (Guinea)
- 13:00-14:00 Lunch*
- 14:00-15:30 Group work on Component 2 using the ESSAT
- 15:30-16:00 Presentation back to plenary
- 16:00-17:30 Session 8: FDES Component 3: Residuals
- Component 3 and its sub-components and statistical topics (UNSD)
 - Statistics for climate change policy and data availability (The Gambia)

Thursday, 22 October 2015

- 8:30-10:15 Group work on Component 3 using the ESSAT
- 10:15-10:45 Coffee break*
- 10:45-11:15 Presentation back to plenary
- 11:15-11:45 Session 9: FDES Component 4: Extreme Events and Disasters
- Component 4 and its sub-components and statistical topics (UNSD)
- 11:45-13:00 Group work on Component 4 using the ESSAT
- 13:00-14:00 Lunch*
- 14:00-14:30 Presentation back to plenary
- 14:30-15:30 Session 10: FDES Component 5: Human Settlements and Environmental Health
- Component 5 and its sub-components and statistical topics (UNSD)
 - Environmental health in Ghana (Ghana)
- 15:30-17:30 Group work on Component 5 using the ESSAT

Friday, 23 October 2015

- 8:30-9:00** Presentation back to plenary
- 9:00-10:00** Session 11: FDES Component 6: Environmental Protection, Management and Engagement
- Component 6 and its sub-components and statistical topics (UNSD)
 - Environment protection (Togo)
- 10:00-10:30** *Coffee break*
- 10:30-12:30** Group work on Component 6 using the ESSAT
- 12:30 -13:00** Presentation back to plenary
- 13:00-14:00** *Lunch*
- 14:00-15:00** Session 12: Training needs and the implementation of the FDES 2013
- Putting the FDES to work: a Blueprint for Action (UNSD)
 - Presentation of ENSEA (ENSEA)
- 15:00-16:00** Session 13: Capacity building assessment for the implementation of the regional programme of environment statistics
- Recommendations for the implementation of the FDES in ECOWAS member states (ECOWAS/UNSD/ECOWAS consultants)
- 16:00-16:30** Closing remarks
- ECOWAS
 - UNSD
 - Togo
- 16:30-17:00** Evaluation

Annex 3

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