
**NATIONAL TECHNICAL TRAINING WORKSHOP ON ENVIRONMENT
STATISTICS**

**SENEGAMBIA BEACH HOTEL
KOLOLI, THE GAMBIA
6TH to 8TH AUGUST 2019**

FINAL WORKSHOP REPORT

**The Gambia Bureau of Statistics
in collaboration with
United Nations Statistics Division**

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1. Background Information

The Gambia Bureau of Statistics (GBoS) in collaboration with the United Nations Statistics Division (UNSD) organized a National Technical Training Workshop on Environment Statistics. The Workshop was held in Kololi, The Gambia from 6th to 8th August 2019. A co-chairing arrangement which emphasised inter-institutional collaboration saw the first day of the Workshop chaired by Mr. Masanneh Landing Ceesay of GBoS; the 2nd day by Mr. Omar Cham of the Ministry of Fisheries and Water Resources; and the 3rd day by Mr. Omar Ceesay of the National Environment Agency.

Following the first national mission of UNSD on environment statistics to The Gambia, held from 5th to 9th February 2018, this second mission was again conducted by UNSD. Both missions were conducted under the Programme on Statistics and Data of the 10th Tranche of the United Nations Development Account (DA 10th Tranche). The environmental pillar of the DA 10th Tranche, of which The Gambia is a pilot country, addresses the need for environmental data and statistics for making evidence-based decisions and monitoring the Sustainable Development Goals (SDGs).

The Workshop was attended by participants from various institutions including The Gambia Bureau of Statistics (GBoS), The National Environment Agency (NEA), Ministry of Fisheries and Water Resources, Ministry of Environment, Climate Change and Natural Resources (MECCNAR), Department of Lands and Surveys, Kanifing Municipal Council (KMC), the Department of Parks and Wildlife Management (DPWM), the Department of Forestry (DoF), Ministry of Trade, Industry, Regional Integration and Employment, Gambian Tourism Board (GTB), National Disaster Management Agency (NDMA), National Agricultural Research Institute (NARI), University of The Gambia (UTG), Green-up Gambia, Ecosystem-based Adaptation (EbA) Project and UNSD. A List of Participants is in Annex I of this report.

2. Key objectives of the Workshop

Key objectives of the workshop were to enhance the technical capacities of key partners to take part in the development of the National Statistics System with a strong environmental component to ensure timely reporting for the relevant SDGs and Multilateral Environmental Agreements including climate change. The workshop was attended by 30 participants. It included introductory sessions on the Framework for the Development of Environment

Statistics (FDES), SDGs and climate change statistics as well in-depth training sessions on selected priority topics, including land, water, waste, climate change, forests and biodiversity statistics. As a result of these meetings and the training sessions, several recommendations and conclusions were drawn which will lead to the gradual establishment of an interinstitutional partnership on environment statistics with firm commitment of institutions to collaborate for specific outputs: including first and second national compendia on environment statistics for The Gambia, as well as further capacity building initiatives and projects.

3. Opening session

In his opening address, Mr. Nyakassi Sanyang, Statistician General, GBoS, welcomed all participants. Points emphasised included that all stakeholders need to be committed to a broader system of environment statistics which can contribute to policy formulation that integrates environment, economy and society, and that environment cannot afford to be neglected. He encouraged all to interact and gain knowledge, and offered thanks to UNSD.

Dr. Dawda Badgie, Deputy Executive Director, National Environment Agency, welcomed and thanked participants for attending the workshop. He emphasised the importance of structuring and organising environment statistics, and to incorporate anthropogenic activities' interaction with the environment. The highest possible quality of environment statistics shall be of great value to enhancing informed decision-making, and enable The Gambia to monitor and best manage its environment.

In his welcoming remarks, Mr. Emil Ivanov, Statistician, UNSD, thanked the participants for attending the Workshop and for contributions made by colleagues so far. He wished for the workshop to be a success in strengthening environment statistics in The Gambia.

4. Adoption of the agenda

The following agenda items were adopted:

Session 1: Introduction to environment statistics

Session 2: Environment statistics in The Gambia

Technical Training 1: priority topics on Environmental Conditions (FDES component 1).
Land cover; ecosystems and biodiversity

Session 3: Sustainable Development Goals and environment statistics

Technical training 2: priority topics on Environmental Resources (FDES Component 2) and Residuals (FDES Component 3). Water; forests; waste

Session 4: Climate change and disasters statistics

Technical training 3: climate change indicators (cross-cutting FDES theme, SDG 13)

Session 5: Revision of National Compendium

Session 6: Way forward

A full and more detailed agenda is provided in Annex II of this report.

5. Sessions and technical trainings

5.1 Session 1: Introduction to environment statistics

Mr. Emil Ivanov and Mr. Marcus Newbury of UNSD both presented on an Overview of FDES and implementation tools: Basic Set, Methodology Sheets, ESSAT; data collection methods; geospatial information systems (GIS) and earth observation; compilation of statistics; quality control and validation of environment statistics.

Ensuing comments, questions and discussion raised issues such as forestry or biodiversity assessments including descriptive data that often lacks connection to GIS data. Lack of software licenses for various GIS software packages is also a known impediment to GIS analysis in The Gambia. The value of high quality GIS-referenced data was mentioned for the issue of street naming and lands allocation. It was further observed that the need for inter-institutional collaboration for GIS purposes will be imperative to the realization of an Environment Statistics Compendium in The Gambia (Compendium).

Concern was expressed regarding situations where institutions may not be disclosing their data or information. Suggestion was made to use some kind of working group or committee whereby multiple institutions could hold conversation regarding their data. Suggestion was made that the Agriculture and Natural Resources Working Group, having its secretariat at National Environment Agency could serve as such a forum.

5.2 Session 2: Environment Statistics in The Gambia

Mr. Masanneh Landing Ceesay of Gambia Bureau of Statistics presented overviews of the environment statistics assessment in The Gambia and of a draft Environment Statistics

Compendium of The Gambia. Mr. Omar Ceesay of the National Environment Agency (NEA) presented on the Agricultural and Natural Resources Working Group (ANRWG). Among other things, he detailed the ANRWG's background, composition, reporting, challenges and achievements.

Discussion among plenary following the two presentations mentioned methods about how GBoS can be most efficient in collecting data from ministries, agencies, department and other stakeholders. Acknowledgement was made of the substantial volume of work already undertaken by GBoS, and the national consultant of University of The Gambia working in close collaboration with other stakeholders for the collection of environment statistics which are now within the draft of the Compendium.

One benefit mentioned of compiling a compendium was that rather than having statistics on environment spread across many institutions in varying formats (such as Excel, Word, PDF, etc.), a compendium would have all data in one uniform format. An additional benefit mentioned is that a first compendium in 2019 shall serve as a terrific starting point for future compendia (e.g. a 2nd compendium in 2021) to identify data gaps, demand for various statistics, and allow for progression toward improved quality in future compendia.

Following discussion on validation of the Compendium, colleagues representing NEA mentioned that the ANRWG may be able to serve as a forum for validation of environment statistics via conversation among key stakeholders. It was also mentioned that, it would be important for NEA and GBoS to sign an MOU on the implementation of environmental data/statistics.

Emphasis was stressed that when a compendium be finalized, it would be branded as a collective effort by The Gambia, and not necessarily exclusively tied to GBoS. Recognition that a compendium is a collective effort by many stakeholders is important.

5.3 Technical training 1: Priority topics on Environmental Conditions (FDES component 1): land cover, ecosystems and biodiversity

Mr. Lamin Jawneh of the NEA presented on his office's work on Geographic Information Systems (GIS), and Mr. Emil Ivanov of UNSD introduced an exercise on land cover

estimation techniques. Participants completed the exercise which demonstrated how to convert land cover maps into statistics.

Mr. Basirou Manneh of the Department of Parks and Wildlife Management (DPWM) presented on his office's work including involvement with international Conventions, and how best DPWM could contribute statistics to the Compendium. Mr. Emil Ivanov of UNSD gave examples of ecosystems and biodiversity statistics.

Participants discussed best methods for GBoS and DPWM to collaborate for provision of statistics. This included GBoS drawing attention to multiple persons within DPWM to ensure a well-coordinated provision of statistics rather than GBoS simply liaising with an individual person only from within a given institution such as DPWM.

5.4 Session 3: Sustainable Development Goals and environment statistics

Mr. Marcus Newbury of UNSD presented on environment statistics for monitoring the Sustainable Development Goals (SDGs) and gave examples of environment statistics from international data sources. Mr. Abubacarr Kujabi of NEA presented on Coastal Adaptation to Climate in The Gambia. During the discussion, he also gave a brief remark on the processes of The Gambia's State of the Environment Report, 2019.

Plenary discussed that the Compendium of Environment Statistics should be mindful of content within The Gambia's State of the Environment Report. The next State of the Environment Report is scheduled to be made public in 2029.

5.5 Technical training 2: Priority topics on Environmental Resources and Residuals (FDES components 2 and 3): water, forests, waste

Ms. Sainabou Jagne of the Department of Water Resources presented on water statistics including wastewater statistics. Mr. Alieu Barry of the Department of Forestry presented on his office's mandate, policy, objectives, challenges and so on. Mr. Dodou Jallow of the Kanifing Municipal Council presented on his office's involvement with waste and possible relations to waste statistics. Mr. Marcus Newbury of UNSD presented on both waste and water statistics, and participants took part in exercises on both topics. For water statistics, participants applied the Environment Statistics Self-Assessment Tool (ESSAT), Part II. Mr.

Emil Ivanov presented on forest statistics and highlighted existing references and sources and data production processes.

Discussion in plenary discussed issues of salinity and salt intrusion, seasonal effects on salinity, and their impact on agriculture. The presence of boreholes throughout the country, especially boreholes dug in unsafe conditions (e.g. boreholes being dug next to dumpsites), and the challenge monitoring the location and number of them was highlighted as a challenge in natural resource management.

Following group exercises focusing on water statistics, colleagues reported back to plenary that the ESSAT, part II was very engaging. It facilitated for discussion among institutions on where the source for various environment statistics lies within government in The Gambia. Participants commented that the ESSAT, part II is useful, and has potential to be considered for practical use in The Gambia, perhaps even as part of data validation processes at the ANRWG. With respect to component two of the Basic Set of Environment Statistics, and therein, specifically land cover and land use, comment was made that GBoS and the National Agricultural Research Institute (NARI) both have an interest in using GIS data for land cover. Trialling the ESSAT in this workshop setting showed that it may also be an applicable tool to help these stakeholders better understand who is using GIS and for what specific purposes.

Those colleagues who worked on component six of the ESSAT, part II observed that the NEA or the DPWM may be the sources of data for various international conventions. Impediments to compiling statistics in this component included inaccessibility to data sources, and inadequate institutional set-ups.

Some comment was made that the ESSAT, part II was a significant investment in time. Merging various rows into larger blocks was one suggested method to help alleviate the time burden of applying this tool.

Ministry of Fisheries and Water Resources colleagues agreed to identify focal point persons, Ms. Sainabou Jagne and Mr. Omar Cham for hydrological and meteorological statistics respectively, with whom GBoS may liaise for requesting statistics for compendia and international data collections such as the UNSD/UN Environment Programme Questionnaire on Environment Statistics (water section) in future.

On forestry, conversation focused on the extent to which timber as a resource for income for people was so important, and that this heightened the need to manage forests well. Regrettably, housing estate expansion have depleted some community forests in the past. Mr. Alieu Barry agreed to support the work of GBoS in compiling the Compendium by being able to provide statistics as required.

Regarding waste statistics, the presentation provided by Mr. Dodou Jallow included some data which could be of use to both the Compendium and the UNSD/UN Environment Programme Questionnaire on Environment Statistics (waste section). Other issues discussed regarding waste included fly tipping from donkey carts, significant variations in mass of trucks carrying waste when weighed on weigh bridges, inappropriate disposal of waste (e.g. from hospitals), scavenging from dumpsites, etc.

5.6 Session 4: Climate change and disasters statistics

Mr. Emil Ivanov of UNSD presented on climate change statistics and the FDES. Mr. Amadou Sanneh of the National Disaster Management Agency (NDMA) presented on statistics of disasters for The Gambia, 2016-2019.

Mr. Amadou Sanneh of the NDMA provided data on disasters to GBoS during this meeting, so precedent is set for NDMA and GBoS to collaborate again in future compendia.

5.7 Technical training 3: Priority topics on climate change indicators (cross-cutting FDES theme, SDG 13)s

Mr. Abubacarr Kujabi of NEA presented on coastal adaptation to climate change in The Gambia. His presentation offered comment on coastal erosion, values at risk, and coastal adaptation measures undertaken. Mr. Emil Ivanov introduced participants to the UNSD Pilot Survey on Climate Change-related Statistics and Indicators.

Regarding climate change statistics, colleagues took part in the UNSD Pilot Survey on Climate Change-related Statistics and Indicators. Feedback on the pilot provided to plenary mentioned that for some statistics and indicators, it is necessary to provide technical guidance and metadata (from international sources) since national institutions, like GBoS do not have a formal basis to define and delimit areas like slums or coastal zones. It was also noted that for

many statistics it is absolutely necessary for institutions to work in collaboration. Comment was also made that data or statistics may be available but not necessarily in the precise format that the pilot specifies (e.g. an alternative unit of measurement, or an alternative geographical aggregation). It was remarked that in such cases, provision of data with clear explanations as footnotes attached to the data was preferred in such a circumstance.

Questions were asked regarding two different methods of adapting to coastal erosion which were either to take sand from a sand bar far out to sea, and dump it on a coastline, or to put barricades of rocks on coastlines. Recently, The Gambia has used both of these approaches.

5.8 Session 5: Revision of National Compendium

Following a short note on the importance of improved institutional collaboration and data-sharing, a tour de table of each colleague's reflection on the workshop and prospective contribution to work moving forward, especially the Compendium took place. There was a very strong commitment from several stakeholders to collaborate closely with GBoS by providing statistics for the Compendium.

5.9 Session 6: Way forward

The recommendations below were shared among plenary. They are a reflection of what was said and are an attempt to summarise what various colleagues and institutions now intend to do in order to advance work on environment statistics in The Gambia.

Evaluation forms were distributed, kindly filled in by participants, and returned to UNSD. The content of these forms rests with UNSD and will help UNSD better prepare for future capacity development work.

6. Recommendations from the Workshop

The following recommendations were agreed upon by the plenary:

1. Gambia Bureau of Statistics (GBoS) to make public The Gambia's 1st National Compendium on Environment Statistics (hereafter, Compendium) by end of September 2019. A draft of the Compendium to be shared with the UN Statistics Division (UNSD) for UNSD to offer thorough review.
2. Agriculture and Natural Resources Working Group (Secretariat: NEA) to include an agenda item on validation of environment statistics at every quarterly meeting. This could be on a cyclical basis by theme.

E.g. Q1 every year: water quality statistics;

Q2 every year: land use statistics;

Q3 every year: solid waste statistics;

Q4 every year: disaster statistics;

or as so ever may be desired by stakeholders in The Gambia.

3. National Disaster Management Agency to be participant to The Gambia's 1st National Compendium on Environment Statistics by providing data, and in future compendia thereafter.
4. Kanifing Municipal Council to provide solid waste data to GBoS with the provision that firstly GBoS can offer a template for the data. If time permits it, these data can be an input into The Gambia's 1st National Compendium on Environment Statistics.
5. GBoS to write a letter to Dept of Parks and Wildlife with a CC to the Permanent Secretary (PS). The PS can intervene to support the cause of data provision.
6. Mr. Alieu Barry, Department of Forestry can provide forestry data to GBoS or NEA per request.
7. The Gambia to be participant to the UN Statistics Division's climate change pilot and global consultation in (2019). The Gambia's Climate Change Secretariat's involvement may be advisable.
8. The Gambia to provide a response to the UNSD/UN Environment Programme Questionnaire on Environment Statistics (waste and water sections) by end of September 2019.
9. UNSD and GBoS to maintain good rapport as opportunity may arise via The Gambia's participation at the UN Statistical Commission held annually in March in New York, USA.
10. The University of The Gambia, who were the key drafter and compiler of the National Action Plan on Environment Statistics, to be invited to the ANR Working Group and future dialogues on environment statistics and related work as relevant.
11. GBoS to make a first draft of a summary of this workshop following which UNSD shall work in close collaboration to work toward finalization of this summary. The summary shall be shared among all stakeholders present and made publicly available on UNSD and GBoS websites.
12. All effort within The Gambia to be made toward compiling a 2nd Compendium in 2021. Thereafter regularization of a Compendium publication to ideally be achieved.

Annex I: List of Participants

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Annex II: Final Agenda; National Technical Training Workshop on Environment Statistics

Location: Senegambia Beach Hotel, The Gambia

Tuesday 6 August 2019

- 08:00-09:00 Registration of participants
- 09:00-09:30 Opening of the workshop
- Gambia Bureau of Statistics (Bureau of Statistics)
 - National Environment Agency (National Environment Agency)
 - Ministry of Environment (Ministry of Environment)
 - United Nations Statistics Division (UNSD)
- 09:30-10:15 Objectives and organization of the workshop
- Introduction of participants (30 min)
 - Presentation and adoption of agenda (UNSD, 5 min)
 - Overview of the DA10 and activities in Gambia (UNSD, 10 min)
- 10:15-10:30 *Coffee break*
- 10:30-12:00 **Session 1: Introduction to environment statistics**
- Overview of FDES and implementation tools: Basic Set, Methodology sheets, ESSAT (UNSD, 20 min)
 - Data collection methods (UNSD, 10 min)
 - GIS and Earth observation (UNSD, 10 min)
 - Compilation of statistics (UNSD, 10 min)
 - Quality control and validation of Environment Statistics (UNSD, 10 min)
 - Discussion (30 min)
- 12:00-13:30 **Session 2: Environment statistics in The Gambia**
- Overview of Environment statistics assessment in The Gambia (Bureau of Statistics, 15 min)
 - Overview of draft on Environment statistics compendium of The Gambia (Bureau of Statistics, 15 min)
 - Agricultural and Natural Resources Committee (National Environment Agency (NEA), 15 min)
 - Discussion on compendium data validation with the relevant institutions (30 min)
- 13:30-14:30 *Lunch*
- Technical training 1: priority topics on Environmental Conditions (FDES Component 1):*
- 14:30-16:00 *Land cover*
- Introduction to topic (National Environment Agency, GIS Unit, 15 min)
 - Introduction to exercise (UNSD, 15 min)
 - Group work (30 min)
- 15:30-15:45 *Coffee break*
- Discussion (15 min)

Wednesday 7 August 2019

08:30-09:15 *Ecosystems and Biodiversity*

- Introduction to topic (Ministry of Environment, Parks and Wildlife, 15 min)
- Examples of statistics (UNSD, 15 min)
- Discussion (15 min)

09:15-10:30 Session 3: Sustainable Development Goals and environment statistics

- Environment statistics for monitoring the Sustainable Development Goals (SDGs) (UNSD, 15 min)
- Examples of Environment and SDG statistics from global sources (UNSD, 15 min)
- Examples from The Gambia: State of Environment Report (15 min)
- Discussion (30 min)

10:30-10:45 *Coffee break*

Technical training 2: priority topics on Environmental Resources (FDES Component 2) and Residuals (FDES Component 3)

10:45-12:30 *Water statistics, including wastewater (FDES Component 2, SDG 6)*

- Introduction to topic (Department of Water Resources, 15 min)
- Introduction to exercise (UNSD, 30 min)
- Group work (45 min)
- Discussion (15 min)

12:30-13:30 *Forest statistics (FDES Component 2, SDG 15)*

- Introduction to topic (Department of Forestry, 20 min)
- Examples of statistics (UNSD, 20 min)
- Discussion (20 min)

13:30-14:30 *Lunch*

14:30-16:00 *Waste statistics (FDES Component 3)*

- Introduction to topic (KMC, 15 min)
- Introduction to exercise (UNSD, 15 min)
- Group work (30 min)

15:30-15:45 *Coffee break*

- Discussion (15 min)

Thursday 8 August 2019

- 08:30-09:30 **Session 4: Climate change and disasters statistics**
- Climate change statistics and the FDES (UNSD, 20 min)
 - Statistics on disasters (FDES Component 4) (UNSD or Disaster Management Agency, 20 min)
 - Discussion (20 min)
- 09:30-11:15 ***Technical training 3: on climate change indicators (cross-cutting FDES theme, SDG 13):***
- Introduction to topic: Coastal Adaptation to Climate Change in The Gambia (National Environment Agency, 15 min)
 - Introduction to exercise (UNSD, 15 min)
 - Group work (1 hour) testing indicators
 - Discussion (15 min)
- 11:15-11:30 ***Coffee break***
- 11:30-13:30 **Session 5: Revision of National compendium**
- Review of datasets and topics for national compendium (UNSD and participants, 1 hour)
 - Workplan for completing the draft national compendium (UNSD and participants, 1 hour)
- 13:30-14:30 ***Lunch***
- 14:30-16:00 **Session 6: Way forward**
- ESSAT report
 - National Action Plan
 - Inter-agency group on environment statistics
- 15:30-15:45 ***Coffee break***
- Evaluation
 - Conclusion