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# envstats News and Notes

Environment Statistics Section
United Nations Statistics Division (UNSD)/DESA

FOCUS:

## Tanzania Embarks on the Compilation of Climate Change

**(Contributed by Ruth Minja, National Bureau of Statistics, Tanzania)**

IN THIS ISSUE



Climate change is one of the most important issues on the global political and economic agenda, yet there are no reliable data to measure and monitor its impacts on the society. Adverse impacts of climate change are affecting all countries, especially developing countries and Tanzania is not immune to it. Impacts of climate change are already felt in socio-economic subsystems in the country, particularly in the agriculture sector which employs more than a half of the country's labour force and has significant contribution to the Gross Domestic Product. Some of these impacts include:-frequently occurring floods and draughts which threaten food security; rise of sea level; coastal erosion; reduced productivity and dwindling of water resources.

In responding to impacts of climate change, Tanzania has been implementing a number of policies and programs, with the objective of mitigating climate change drivers, enhancing adaptive capacities of societies and also responding to the noble call of the international community to protect the planet. In addition, Tanzania through technical support from the German Agency for International Cooperation (GIZ) has started implementing a special program aimed at averting, minimizing and addressing loss and damages resulting from climate change impacts through comprehensive climate risk management. **For this reason, climate change statistics have become an indispensable component in formulation and monitoring of policies and programs for combating climate change and its impacts in Tanzania.**

As part of efforts to address data gaps on climate change, the National Bureau of Statistics (NBS), which is the coordinator for production, dissemination and use of official statistics in Tanzania, has produced the National Climate Change Statistics Report, 2018 (NCCSR, 2018) to enhance availability of climate change data. The publication of the NCCSR, 2018 is the first ever effort in Tanzania of pooling together climate change data scattered across a range of institutions into one analytical report to enhance accessibility and use of climate change statistics for evidence-based decision making. The report will provide data to feed into a number of national programs for addressing climate change, and also for monitoring of the regional and international programs such as:- Africa Development Agenda, 2063 and the UN Sustainable Development Goal, 2030 (SDGs) on areas related to climate change.

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**Methodology for Development of the NCCSR, 2018**

Compilation of climate change statistics is a challenging undertaking in many developing countries including Tanzania. Data to inform on climate change are scattered across different institutions. This hinders coordination and harmonization, as it results into existence of datasets which are incomparable; incompatible and incomplete with most of the data required not being produced. In addition, there is low awareness of the implications of the climate change in development process. In order to lessen these challenges during preparation of the NCCSR, 2018, the National Bureau of Statistics adopted an approach that is akin to the Generic Statistical Business Process Model (GSBPM), as highlighted below:-

**Coordination and Collaboration:** Production of the NCCSR, 2018 was a collaborative effort between the NBS and the National Technical Working Group (NTWG) for environment statistics. Members of the NTWG are national experts on environment and climate change related aspects from Ministries, Departments and Agencies (MDAs). The Government of the United Republic of Tanzania, GIZ and the United Nations Environment Program (UNEP) provided funds for preparation of the report and, GIZ and UNEP provided technical support.

**Training:** The process of compiling the NCCSR, 2018 was preceded by trainings to members of the NTWG. Trainings were important to build and enhance understanding of theoretical underpinnings of climate change aspects, as it is a relatively newer field compared to other fields of social and economic statistics.

**Data Gaps Assessment:** After the trainings, the Data Gaps Assessment and mapping of the climate change indicators with the national, regional and global development frameworks was conducted. The main objective of the Data Gap Assessment was to assess the national capacities in production of data related to climate change. Specific objectives were to identify type of climate change data produced and institutions producing such data, frequency of production, institutional capacities and challenges in data production.

The Framework for the Development of Environment Statistics (FDES 2013), the Intergovernmental Panel on Climate Change (IPCC) framework and the draft list of climate change statistics and indicators developed by the United Nations Statistics Division (UNSD) were used as reference documents for the development of the Tanzania's list of climate change indicators. Results of the Data Gaps Assessment were categorized into thematic stages of climate change process, namely: - drivers; evidence; impacts and vulnerability; and mitigation and adaptation.

**Data Collection, Processing and Report Writing:** Results of the Data Gaps Assessment informed development of customized data collection tools per institutions. Questionnaires were dispatched to various institutions through email. Collected data were sent to NBS for validation, analysis and report writing. The draft report has been shared with stakeholders for validation and comments before dissemination of the final results expected to be done in December 2019.

**Way forward**

It is obvious that, decisions about climate change are complex, costly and have long-term implications. It is therefore vital that such decisions are based on the best available evidence. For this reason, climate change statistics remain increasingly important in formulation of policies and programs for addressing climate change and its impacts. NBS will continue to champion efforts and a holistic approach in harnessing opportunities of data revolution to enhance availability of climate change data, access and use for evidence-based decision making.

**Contribution to global processes**

The NBS of Tanzania has participated actively in global work on climate change statistics and indicators. For example, Tanzania is a member of the UNSD-led Expert Group on Environment Statistics, where climate change statistics is regularly discussed and experts have contributed to the work of UNSD in the development of a draft global set of climate change statistics and indicators, as mandated by the 47th session of the Statistical Commission. Tanzania plans to participate in the UNSD pilot survey and global consultation in 2020 on the draft global set which will lead to the subsequent finalization of the global set and submission to the Statistical Commission for adoption. In addition, Tanzania participated in a Side Event on the margins of the 50th session of the Statistical Commission entitled "Outcomes of COP24 in Katowice - the Possible Implications for Climate Change Statistics" https://unstats.un.org/unsd/statcom/50th-session/side-events/20190307-1M-Outcomes-of-COP24-in-Katowice/ and delivered a presentation on Tanzania's experience in climate change statistics.

## UNSD's work on the development of the global set of climate change statistics and indicators

Based on the mandates that UNSD received from the Statistical Commission at the 47th session in 2016[1] to develop a global set of climate change statistics and indicators, and at the 49th session in 2018[2] to link to the processes of the United Nations Framework Convention on Climate Change (UNFCCC) to promote the policy and statistics interface, UNSD has continued to implement these and other related recommendations from the Commission.

UNSD has carried out a systematic review of climate change statistics and indicators from 130 countries with representative regional coverage, analysed more than 7,500 individual climate change statistics and indicators, and has identified a draft set of the most commonly repeated indicators thereby promoting a bottom-up approach to their selection. The final number of statistics and indicators will be decided after the pilot survey and global consultation to take place in 2020 but the set of indicators will be comprehensive and applicable to all countries. The Expert Group on Environment Statistics has been contributing to the work on the draft set through the review of iterative versions and discussions at Expert Group meetings. The draft set of climate change statistics and indicators has been organized according to the five areas of the Inter-governmental Panel on Climate Change framework (drivers, impacts, vulnerability, mitigation and adaptation). Many of the indicators are repeated across different countries and come from at least one national source from the 130 countries reviewed.

Given the request from the Statistical Commission in 2018 for UNSD and UNFCCC to strengthen the link between statistics and policy, the relevant articles of the Paris Agreement are mentioned for each indicator in the draft set thereby clearly demonstrating this linkage. In addition, international frameworks and agreements such as the Sustainable Development Goals, the Framework for the Development of Environment Statistics, the Paris Agreement, the Sendai Framework, as well as the Economic Commission for Europe set of climate change-related statistics and indicators, have been considered to promote consistency and harmonize the wording of the indicators to the extent possible. UNSD plans to undertake the pilot survey in 2020 with a selected group of countries and international/ regional organizations that have participated in this work through different processes such as the Expert Group, regional or national workshops. The global consultation on climate change statistics and indicators will take place in 2020 and will involve all countries.

In addition, as requested by the Statistical Commission in 2018, UNSD has been engaging closely with UNFCCC to develop the global set of climate change statistics and indicators and to strengthen the link between statistics and policy by, inter alia, Joint Side Events at the Statistical Commission meetings, UNFCCC's participation in the Expert Group on Environment Statistics, UNSD's participation in a Side Event at the High-Level Political Forum (https://sustainabledevelopment.un.org/hlpf) in 2019, and UNFCCC's participation in regional/sub-regional workshops on environment statistics and climate change statistics, such as for the Arab Region (https://unstats.un.org/unsd/envstats/meetings/2018-Arab%20Region/ArabRegion.cshtml) in 2018 and for the Caribbean Community region (https://unstats.un.org/unsd/envstats/meetings/2019-Caricom%20Region/CaricomRegion.cshtml) in 2019, both organized by UNSD.

## 51st session of the Statistical Commission (3-6 March 2020) - Secretary-General's Report on Environment Statistics and Background Report

The Secretary-Geneeal's report on environment statitstics provides a summary of activities carried out by UNSD during the biennium 2018–2019, including on: progress made on the increasingly widespread implementation of the Framework for the Development of Environment Statistics (FDES 2013); developments in methodological work (including the FDES toolkit and climate change statistics); the fifth and sixth meetings of the Expert Group on

[1] https://unstats.un.org/unsd/statcom/47th-session/documents/Report-on-the-47th-session-of-the-statistical-commission-E.pdf
[2] https://unstats.un.org/unsd/statcom/49th-session/documents/Report-on-the-49th-session-E.pdf

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Environment Statistics; training and capacity-building provided to regions, subregions and countries; and coordination. It also lays out the work plan for the biennium 2020–2021. Since the work programme includes global collection, compilation and dissemination of environment statistics and indicators, the report also provides a summary of the results of the international collections of environment statistics carried out by UNSD from 1999 to 2018, as well as conclusions with relevance to future work (especially in relation to the environmentally-related Sustainable Development Goals).

A background document to the Secretary-General's report contains more detailed information on the data collection and dissemination activities. It also contains an Inventory of Regular, International Primary Environmental Data Collection, Reporting and Dissemination from Countries undertaken by the United Nations, its specialized agencies, intergovernmental organizations and conventions (https://unstats.un.org/unsd/envstats/Inventory_datacollection_dissemination), as well as an inventory on capacity development activities in environment statistics carried out by UNSD and by other international and regional organizations.

These two documents will be posted on the UNSD website at https://unstats.un.org/unsd/statcom/51st-session/ when available.

## UNSD/United Nations Environment Programme Data Collection 2018

The UNSD/UNEP Questionnaire 2018 on Environment Statistics was sent out in September 2018 to 165 countries and territories, excluding OECD and European Union members (for which comparable data are collected as part of the OECD/Eurostat Joint Questionnaire on the State of the Environment). The Questionnaire (https://unstats.un.org/unsd/envstats/questionnaire) was sent to both National Statistical Offices and Ministries of Environment and asked for coordination within the country.

As of November 2019, 86 countries sent a response, where a response is any case where a country or area provides any numerical data in response to the UNSD/UNEP Questionnaire on Environment Statistics (typically via the Questionnaire itself). Invariably, in every collection cycle there is a small number of cases where countries or areas confirm receipt of the questionnaire, but thereafter do not provide any data. Such cases are not considered responses since UNSD is trying to measure country's and area's capability to provide data to the Questionnaire.

In order to comply with policy demand and to maintain relevance, some substantive changes were implemented for this ninth data collection round. In the waste section of the questionnaire, an Electronic Waste (e-waste) Generation and Collection table was added. This table includes two variables: total e-waste generated and total e-waste collected. Elsewhere in the Questionnaire, the variable, "municipal solid waste generated" at both the national and city levels has been added. For both individual variables, response rates were modest, but it is planned that these variables to be collected again in 2020 in line with addressing the demand of the Statistical Commission's forty-eighth session's mandate.

In the water section of the Questionnaire, further breakdowns of the International Standard Industrial Classification of All Economic Activities (ISIC) rev. 4 to meet Sustainable Development Goal (SDG) policy demand were made. Three of the tables in the questionnaire (Freshwater Abstraction and Use; Water Supply Industry (ISIC 36); and Wastewater Generation and Treatment) request data for some industries not previously requested via the questionnaire (e.g. Mining and quarrying (ISIC 05-09), Construction (ISIC 41-43), etc.).

All Questionnaire responses have been through a thorough data validation process. Selected water and waste statistics with relatively good quality and geographic coverage compiled from the Questionnaire, complemented by data from OECD and Eurostat, will be published by UNSD through the UNSD Environmental Indicators webpage (https://unstats.un.org/unsd/envstats/qindicators) and the Country Snapshots webpage (https://unstats.un.org/unsd/envstats/snapshots/). The complete data and footnotes received from each respondent country will be uploaded to the Country Files webpage (https://unstats.un.org/unsd/envstats/country_files). Also, selected water and waste statistics will be updated on UNData (http://data.un.org/). UNSD appreciates countries' continuing support on the improvement of timely and reliable global environment statistics.

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More details on the results of and plans for the UNSD/UNEP Questionnaire can be found in the Secretary-General's Report on Environment Statistics and Background Report which will be posted on the UNSD website at https://unstats.un.org/unsd/statcom/51st-session/ when available.

## Collaboration on water questionnaires by international agencies

Eurostat, OECD and UNSD have been collecting data on water from national statistical offices and/or ministries of environment in a harmonized manner starting with OECD work in 1979-80, and later in collaboration with Eurostat (1988), and UNSD (1999). With respect to geographical scope, the international organisations involved apply a layered approach: Eurostat deals with Member States of the European Union (EU) and the European Free Trade Association (EFTA) as well as the respective candidate countries and OECD works with all its Member States not contacted by Eurostat. Data treatment and validation for European countries is done "jointly" by Eurostat and the OECD according to an agreed process and timeline. UNSD sends the UNSD/UNEP Questionnaire to the rest of the world (approx. 165 countries).

In April 2018, the Food and Agriculture Organization of the United Nations (FAO) initiated a global data collection process through its Water and Agriculture Questionnaire 2018 to populate its AQUASTAT database and support the calculation of two water-related SDG indicators for which it is the custodian agency. This new data collection has some overlap with regular data collection carried out by the OECD together with Eurostat and UNSD/UNEP. There are some differences in terminology (e.g. abstraction vs. withdrawal, environmental flow requirements) that are being discussed and clarified among these four institutions.

The four concerned international institutions have held 14 teleconferences since August 2018 where agenda items have included cross-comparisons of individual countries' data sets; comparison of metadata and terminology used in questionnaires, bearing in mind how these may apply to multiple mandates such as that of the Statistical Commission, the Inter-Agency Expert Group on Sustainable Development Goals or otherwise; sharing of questionnaires' in-country focal points; written consultation with selected countries by multiple international agencies to clarify any discrepancies in data; possibility of the four institutions aligning dates for sending their respective questionnaires to countries; frequency of data collection; and regular information exchanges of the four institutions' meetings, workshops and capacity development activities. All agenda items discussed have been in the name of moving toward more harmonized data collections which minimize as much as possible both respondent burden put upon countries and any duplication of effort exerted while conducting the data collections by the international agencies. These meetings have prompted the four international institutions to more closely involve one another at their respective expert group meetings and capacity development workshops which has in turn meant that more unified messages are being communicated to all United Nations member states with respect to data collections on water.

## Updates on the Manual on the Basic Set of Environment Statistics of the FDES

Technical guidance on most of the 60 topics of the FDES 2013 has been elaborated in methodology sheets, either published (25 topics), or in the process of drafting or in peer-review (18 topics). This includes prioritised topics under the six components, predominantly from 'Environmental Conditions and Quality'; 'Environmental Resources and Their Use' and 'Residuals'. The methodology sheets include an introduction to the context, importance and state-of-art measurement and compilation methods for each topic, followed by existing statistical definitions, classifications, standards, frameworks and data references and examples. Correspondence to commonly produced indicators as well as applications in SEEA and the SDGs are also described. Methodology sheets on Soil characteristics, Ecosystems and biodiversity, Land cover and land use, Forests, Air quality, Minerals, Energy resources, Crops and livestock, Water, Waste, Human settlements, Environmental protection expenditures can be consulted online: https://unstats.un.org/unsd/envstats/fdes/manual_bses.cshtml. Topics related to Natural disasters, Greenhouse gases, Environmental health, Environmental information and awareness, Geological and geographical information, Marine water quality and Wastewater are expected to be completed in the coming months. Key topics which are still to be elaborated will cover 'Freshwater quality', 'Soil pollution', 'Noise', 'Release of chemical substance' and 'Technological disasters'.

## Workshop on Environment Statistics and Climate Change Statistics for the CARICOM Region (St. George's, Grenada, 4-8 November 2019)

UNSD organized a Workshop on Environment Statistics and Climate Change Statistics for the Caribbean Community (CARICOM) Region, in collaboration with the CARICOM Secretariat that took place in St. Georges, Grenada from 4 to 8 November 2019. The Workshop was hosted by the Central Statistical Office of Grenada. Several international, inter-governmental and regional organizations participated in the Workshop, including the Food and Agriculture Organization of the United Nations (FAO), the United Nations Framework Convention on Climate Change (UNFCCC), and the Regional Collaboration Centre of the United Nations Framework Convention on Climate Change (UNFCCC-RCC), the United Nations University (UNU), and the Economic Commission for Latin America and the Caribbean (ECLAC).

The Workshop offered technical knowledge to statisticians from the National Statistical Offices and experts in the Ministries of Environment (or equivalent institutions) in countries in the region that have already embarked on environment statistics and were ready to receive further and in-depth training on the latest methodologies in environment statistics. Building on previous collaborative regional work undertaken by UNSD and CARICOM in environment statistics, the Workshop aimed at providing detailed knowledge and understanding of the subject, thus allowing participants to identify gaps in environmental data, and contribute to the production of regular, accurate and reliable environment statistics that can allow developing environmental indicators and accounts relevant to policy making and SDGs monitoring.

The Workshop was part of UNSD's regular programme of technical cooperation to support the implementation of the Framework for the Development of Environment Statistics (FDES 2013) in Member States following the 44th session of the Statistical Commission's endorsement of the FDES 2013 as the framework for strengthening environment statistics programmes in countries. The workshop consisted of a series of experts' presentations, sharing of and discussion of lessons learned from country practices, and facilitated group discussions. UNSD presentations covered, inter alia, the conceptual foundation and the structure of the FDES 2013, strategic pillars and steps to implement the FDES 2013, and details of environment statistics particularly relevant for the region (i.e. waste, water, and climate change). FDES 2013 supporting materials, such as the Environment Statistics Self-Assessment Tool (ESSAT), were also presented and discussed. FAO, UNFCCC, UNFCCC-RCC, UNU and ECLAC also provided substantive technical contributions in their respective subject matters. Participants appreciated the guidance received towards the implementation of the FDES 2013 and the Environment Statistics Self-Assessment Tool (ESSAT) in their countries. Climate change statistics and indicators were also discussed given the mandate from the 47th session of the Statistical Commission that UNSD develop a global set of climate change statistics and indicators. In addition, the UNSD/UNEP Questionnaire on Environment Statistics and the environmentally-related SDG indicators were also addressed. Finally, the Workshop discussed and adopted a key set of recommendations on the way forward.

For more information please see: https://unstats.un.org/unsd/envstats/meetings/2019-Caricom%20Region/CaricomRegion.cshtml

## National Workshop on Environment Statistics and Climate Change Statistics (St. George's, Grenada, 12-14 November 2019) and Stakeholder consultations on developing the system of environment statistics in Grenada (St. George's, Grenada, 11 and 15 November 2019)

A three-day national workshop and two days of consultations on Environment Statistics and Climate Change Statistics were conducted in St. George's, Grenada from 11 to 15 November 2019 by UNSD and the Central Statistical Office (CSO) of Grenada. The workshop was organized by the CSO with support from the European Union and UNSD. The main goal of the national workshop was to increase visibility of environment statistics through the Framework for the Development of Environment Statistics (FDES 2013) and build technical capacity in this subject area in the country, by bringing the stakeholders together to assess work undertaken by Grenada in recent years and to provide hands-on training on priority topics such as climate change, hazardous events and disasters, water, waste, land, environmental health, biodiversity and forest statistics. These topics were discussed in the context of reporting obligations under the as a

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corresponding Multilateral Environmental Agreements (MEAs), the environmentally-related Sustainable Development Goals (SDGs) and national policies including 'Blue Growth' for which there is a strong need to develop marine/ocean statistics.

In addition, the workshop participants adopted a set of recommendations, including: setting up an Inter-agency Committee and a Technical Sub-committee on Environment and Climate Change Statistics; the Government of Grenada becoming a signatory to and ratify the various Multilateral Environmental Agreements (MEAs) that they have not signed on to or ratified as yet; development of a National Action Plan (NAP) for Environment Statistics; implementation of the Framework for the Development of Environment Statistics (FDES) and the Environment Statistics Self-Assessment Tool (ESSAT); and participation in the Global Consultation on Climate Change Statistics and Indicators.

The consultations (on 11 and 15 November) with the CSO of Grenada, line ministries and research institutions producing environment statistics were used to discuss the ongoing work, policy priorities and data needs, and to secure commitments for developing a system for environment statistics data collection using the FDES and the ESSAT, the completion of the compendium of environment statistics and development of the NAP.

For more information please see: https://unstats.un.org/unsd/envstats/meetings/2019-Grenada/Grenada.cshtml

## Development Account 10th Tranche Programme for Statistics and Data

Following the first national missions on environment statistics in The Gambia and Namibia that were held in February 2018, second missions which included a 3-day national workshop and 2 days of consultations, were conducted in The Gambia (5-9 August 2019) (https://unstats.un.org/unsd/envstats/meetings/2019-Gambia/Gambia.cshtml and in Namibia (2-6 December 2019). The 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 and Namibia are two of the pilot countries, addresses the need for environmental data and statistics for making evidence-based decisions and monitoring the Sustainable Development Goals (SDGs).

Based on the assessments of the existing capacities to produce environment statistics that were carried out in the two countries in 2018, the aim of the second missions was to enhance the coordination led by the national statistical offices as well as to further develop technical capacities of key partners engaged within the national statistical systems (NSS) with a stronger environmental component. The national workshops included introductory sessions on the Framework for the Development of Environment Statistics (FDES 2013), SDGs, Multilateral Environmental Agreements (MEAs) and climate change statistics as well as in-depth training sessions on selected priority topics, including land, water, waste, climate change, forests and biodiversity statistics. The training sessions started with an overview of the national situation (on data availability, national policy and international reporting requirements) followed by training modules led by UNSD which explained how the topics are addressed within the FDES and its implemention tools. Hands-on exercises were conducted on land, water and climate statistics. The ensuing discussions highlighted key challenges and opportunities which were consequently applied to draw a set of recommendations on strengthening environment statistics in each country.

In The Gambia, statistics on key topics from each of the six components of the FDES are available, but further efforts are needed to increase data production and data sharing capacities between the Gambia Bureau of Statistics (GBoS) and key partners. Statistics related to the impacts of climate change (e.g. droughts, shift of rainy seasons), forest management, water supply and drinking water quality, and waste management were defined as most critical to support national development policies. As a result of the meetings and the training sessions, several recommendations, commitments and conclusions were drawn which will lead to the gradual establishment of an interinstitutional partnership on environment statistics with firm commitment to collaborate for specific outputs, including first and second national compendiums on environment statistics, as well as further capacity building initiatives and projects.

In Namibia, given the availability of advanced environmental data and statistics (especially in key sectors such as biodiversity and ecosystems), as well as several multi-stakeholder platforms for sharing thematic data, the next step is to strengthen the coordination at the national level based on collaboration between the Namibia Statistics Agency (NSA) and the Ministry of Environment and Tourism (MET). Among the most pressing issues which need environment statistics are: access to natural resources, including game and land suitable for use, water resources; and impacts of droughts, especially in view of supplying humanitarian aid to those most affected. As a result of the consultations and workshop discussions, several recommendations were drawn which included the actions needed for the NSA in

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collaboration with the MET to ensure the coordination of producing official environment statistics in the country; to enhance capacities across the NSS; and also for UNSD to strengthen its training materials and improve future work in national missions. A meeting held with the United Nations Development Programme and World Food Programme in Namibia (environment and good-governance pillars) confirmed the importance of sustaining the UNSD-NSA initiative and expressed commitment to support the ongoing capacity building efforts for achieving the UN-mandated global goals in the country.

## Environment Statistics Compendia and Surveys

Following endorsement of the FDES 2013 by the United Nations Statistical Commission at its 44th session (2013) as the framework for strengthening environment statistics programmes in countries, many countries have compiled environment statistics compendia which apply the FDES 2013. There are 30 compendia and similar publications so far shared with UNSD which are available on UNSD's website at https://unstats.un.org/unsd/envstats/fdescompendia.cshtml in Arabic, English, French, Portuguese and Spanish.

UNSD has compiled over 90 specialized environment statistics surveys and censuses from countries which are available on the website (https://unstats.un.org/unsd/envstats/censuses/) and can be filtered by country, theme and year. Languages in which surveys are available include Arabic, English, French, Portuguese and Spanish.

UNSD welcomes further contributions of both country compendia that apply the FDES 2013, and surveys or censuses on environment statistics. They can be shared with the Environment Statistics Section (contact: envstats@un.org) where they may then be made available on UNSD's website.

# REGIONAL NEWS:

## UNECA works on the development of environment statistics in Burkina Faso and Ghana

**(Contributed by David Boko, African Centre for Statistics, United Nations Economic Commission for Africa)**

Over the past two years, ECA has worked closely with Burkina Faso and Ghana, through its capacity building programme centered on the Framework for the Development of Environment Statistics (FDES 2013) and aiming to develop Members States' capacity to produce and use environment statistics. The objectives of the technical assistance programme with both countries were (i) the conduct of the assessment of the state of environment statistics, (ii) the development of a compendium of environment statistics, and (iii) the design of a plan to further improve the production and use of environment statistics. The findings of objectives (i) supports and informs the subsequent objectives. Both countries have succeeded to complete the assessment exercise using the Environment Statistics Self-Assessment Tool (ESSAT) – and written the related reports – and produced a compendium of environment statistics. In spite of the results achieved, data available on some indicators rests to be updated while others statistics only cover part of the national territory. Efforts are underway in Burkina Faso to develop a comprehensive action plan for the improvement of environment statistics, and in Ghana a framework is being finalized to guide the development of the action plan or a similar document.

The involvement of data users, namely environment policy makers, has played a driving force role in the process in both countries. The full participation of all concerned data producers is key to make available relevant data on the environment. This aspect remains to be improved alongside other challenges such as securing adequate funding for the regular production of required data and the alignment of data production methods to the FDES standards. The involvement of development partners in Burkina Faso.

# ECLAC Activities in Latin America and the Caribbean

**(Contributed by the Statistics Division, Economic Commission for Latin America and the Caribbean)**

**Tenth meeting of the Statistical Conference of the Americas of ECLAC**

The meeting called for 'breaking statistical silences' and seeking more and better data to move towards sustainable development with equality. The Conference adopted two proposals related to next biennium's collaborative work to strengthen environment statistics: (i) one task force on use of administrative and geospatial data to better measure SDG 6, 11 and 12 (led by Mexico) and (ii) one on disaster risk reduction-related indicators production support (led by Paraguay and Peru).

**ECLAC support to Bolivia and Paraguay for SDG environment indicators production**

As part of the 10th Tranche UN Development Account (DA) project and the ECLAC-German Cooperation programme, ECLAC organized two technical assistance missions on environment indicators production: a specific one on energy and water indicators in Bolivia in May 2019 and one on use of administrative registers for environment and disaster-related SDG indicators in Paraguay in October 2019. In Paraguay, a two-day workshop specifically targeting the Ministry of Environment allowed an in-depth diagnosis of the administrative registers for SDG environment indicators, especially the ones related to water, wildlife and pollution. A one day workshop was also organized with the National Emergency System, focusing in particular on SDG indicator 1.5.1 related to human impact of disaster. A special meeting with the Minister of Planning and his team allowed for a better articulation of the indicators available in the National Statistical System and the ones needed to monitor the National Development Plan.

In the first semester of 2020, ECLAC support to Bolivia and Paraguay will go on remotely and with two in-person workshops to build new SDG environment indicators.

Additionally, in November 2019, ECLAC participated in a UNSD-organized Regional Workshop for Environment Statistics and Climate Change Statistics for the CARICOM Region. An ECLAC-led 12th Tranche UN Development Account project on climate change and disasters indicators will specifically target the English-speaking Caribbean Member States from 2020 through 2023.

**Urban mobility indicators and statistical tools study in five Latin American cities**

This semester, ECLAC launched an exploratory study on the statistical tools used by Latin American cities to measure urban mobility. Five cities are part of the first phase of the study: Bogota (Colombia), Mexico City (Mexico), Montevideo (Uruguay), Quito (Ecuador), and San Antonio (Chile). The immediate goal of the study, supported by the French Cooperation, is to analyze the urban mobility indicators needed for policy-making and the current statistical tools used, especially the origin-destination household surveys. The longer term goal is to provide the Statistical Conference of the Americas with a proposal of statistical recommendations to harmonize urban mobility-related surveys and data collection tools.

**Regional Network of Environment Statistics Webinars: SDG 7 indicators and Environment Indicators Systems**

Within the framework of the Regional Network of Environment Statistics, which now gathers more than 150 practitioners from all 20 Latin American countries, ECLAC went on with its series of webinars. The seventh webinar on Production of SDG 7 indicators related to access and renewable energy, which took place in June 2019, showcased experiences from Costa Rica, Paraguay and Uruguay. More than 40 officers from National Statistical Offices, Central Banks and Environment Ministries from Chile, Peru, Costa Rica, Panama, Uruguay, Paraguay, Ecuador, Bolivia, Dominican Republic, Colombia and Honduras attended the online event. In August 2019, the eighth webinar focused on Environment Indicators Systems with presentations from the Ministries of Environment from Chile, Ecuador and Mexico.

**ECLAC Regular Data Collection on Environment Statistics: CEPALSTAT and Statistical Yearbook 2019**

ECLAC's environment statistics team is carrying out the compilation and validation of environment statistics data series to update the CEPALSTAT database with the most recent data (http://estadisticas.cepal.org/cepalstat/WEB_CEPALSTAT/Portada.asp?idioma=i). It includes new environment series to better showcase the most relevant issues in the Latin American and Caribbean region, in particular those relating to the economic cost of disasters and protected marine areas.

## Regional Training Workshop on E-waste Statistics in Arab Region (Tunis, 16-18 December 2019)

**(Contributed by Wafa Aboul Hosn, Chief Economic Statistics, United Nations Economic and Social Commission for Western Asia)**

In the framework of the implementation of the objectives and expected results of the International Telecommunication Union (ITU) Arab Regional Initiative on "Environment and Climate Change and Emergency Telecommunications", the Arab Regional Office in cooperation with the United Nations University (UNU) and its specialized Sustainable Cycles (SCYCLE) Programme have signed a regional project on electronic waste (e-waste) monitoring in the Arab Region. This project is supported by UNESCWA and the UN Environment West Asia Office. The purpose of this project is to strengthen the capacity of two national statistical offices to assist them in the compilation of international comparable e-waste statistics. The initiative was introduced during the Workshop on Environment Statistics and Information for Sustainable Development in the Arab Region (UNSD UNESCWA UNEP and EEA) 11-16 NOVEMBER 2018 Beirut, Lebanon.

The Regional Training Workshop on E-waste Statistics in Arab Region will be organised by ITU-UNU in the context of the project from 16 to 18 December 2019 in Tunis in cooperation with UNESCWA. The purpose of the training workshop is to strengthen the capacity of Arab countries on e-waste collection, assist them in the compilation of international comparable e-waste statistics, learn about the methods of e-waste statistics, as well as to share experiences, knowledge and challenges, and to improve national coordination. The event targets specialists in the field of ICTs ministries and regulators, national statistical offices (NSOs), ministries of environments (MoEs), mobile network operators (MNOs), and other government agencies dealing with e-waste data (municipalities, ministries, and customs).

## UNECE NEWS

**(Contributed by Tiina Luige and Michael Nagy)**

### The Fifth Joint OECD/UNECE Seminar on SEEA Implementation will held on 13-14 February 2020 in Geneva (Switzerland)

The joint OECD/UNECE seminars provide a platform for exchange of knowledge and experience and support the coordination of capacity development in the region, in line with the work programme of the Committee of Experts on Environmental-Economic Accounting (UNCEEA).

The next seminar will be held on 13-14 February 2020 in Geneva and will discuss how SEEA can contribute to measuring the circular economy, provide practical examples on the implementation of statistics on environmental goods and services (EGSS) and provide information about the ongoing review of the SEEA Experimental Ecosystem Accounting, together with practical examples from the region. The seminar will also inform about recent and upcoming activities of international organisations related to SEEA, such as methodological development, capacity building activities and the development of global SEEA databases. The concept note and registration link can be found at http://www.unece.org/index.php?id=52557

### UNECE organised the Seventh Expert Forum for Producers and Users of Climate Change-related Statistics on 2-3 October 2019 in Geneva (Switzerland)

The main objective of the annual Expert Fora is to provide a platform for users and producers of climate change-related statistics to share experience in developing official statistics and capacity for climate change-related reporting. Seventy participants representing 32 countries and 15 international organisations as well as from academia and the private sector attended the meeting. Participants discussed, among other issues, challenges and possible solutions related to measuring climate change adaptation and the role of the statistical community in climate action. The presentations and the report of the meeting, including a list of recommendations, can be found at http://www.unece.org/index.php?id=50812.

### Conference of European Statistician's (CES) Recommendations on Measuring Hazardous Events and Disasters now available online

CES endorsed on 26 June 2019 the *Recommendations on Measuring Hazardous Events and Disasters* developed by a Task Force chaired by Italy. The document provides practical recommendations for National Statistical Offices and their National Statistical Systems who would like to engage stronger in this topic. The Recommendations complement the Disaster-related Statistics Framework (DRSF) which was developed by ESCAP.

A white cover version of the CES Recommendations is available for download at https://www.unece.org/stats/extreme.html

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**Developing capacity on SDG 6 indicators (clean water and sanitation) in Uzbekistan (Tashkent, 18-20 November 2019)**

A joint *UNDP/UNEP/UNECE Workshop on environmental indicators under Sustainable Development Goal (SDG) 6* was held in Tashkent from 18 to 20 November 2019. The workshop discussed methodologies and possible data sources for producing selected environment-related SDG 6 indicators with experts of the State Committee on Statistics, the State Committee on Ecology and Environmental Protection and other related governmental agencies. Experts from Austria, Belarus, UNEP, UNECE, UN-Habitat and GEMS/Water discussed with the national experts specific challenges and possible solutions. Workshop participants identified a range of possible action points to strengthen national capacity for developing these indicators and to align existing national indicators with the global ones.

**Environment-related SDG indicators training workshop in Kazakhstan (Nur-Sultan, 21-22 November 2019)**

From 21-22 November 2019 a joint UNEP/UNECE/UNDP Joint Workshop on environmental SDG indicators was held in Nur-Sultan (Kazakhstan).

National experts of the Committee on Statistics, the Ministry of Ecology, Geology and National Resources and other governmental agencies discussed technical issues related to the implementation of selected indicators measuring SDGs 6 (clean water and sanitation), 12 (sustainable consumption and production), 14 (life below water) and 15 (life on land). Technical advice was provided by experts from Belarus, UNEP, UNECE and GEMS/Water.

The workshop concluded with several recommended action points for the governmental agencies and for international organisations.

## Eastern Partnership countries call for integrated sustainability assessments

**(Contributed by Jana Tafi, Roberta Pignatelli, Andy Martin – European Environment Agency)**

Experts from across Europe have recommended that the political targets and related indicators of certain Sustainable Development Goals (SDGs) be amended to meet the realities of environmental challenges and respect the importance of integrated sustainability assessments. Challenges include, for example, the emerging political issues associated with the production and use of plastics and the effects of environmental pollution.

Experts also suggested that modern tools and technologies referring to the development of data and indicators be used, enabling environmental assessments to become more up-to-date.

These were the conclusions of the 2019 edition of the European Neighbourhood Instrument (ENI) East Summer School, which took place on 27-29 August 2019 in Copenhagen. The objective of the Summer School was to support experts directly involved in integrated environmental assessments in their transition towards more holistic sustainability assessments and help them gain a broader understanding of the related challenges and methodological developments.

During the Summer School, an integrated sustainability assessment was presented, revealing changes in the concept of national reporting on the state of the environment in Europe. Similarly, an innovative country example from the Flanders Environment Agency showed the need to link knowledge with action. An analysis of the system balance, with a future perspective and an emphasis on solutions, can be used to achieve the transition to sustainability.

During the event, interactive sessions and group exercises were held on stakeholder management and reporting of five SDGs: SDG 2: Zero hunger; SDG 7: Affordable and clean energy; SDG 12: Responsible consumption and production; SDG 14: Life below water; and SDG 15: Life on land.

This edition of the Summer School achieved a good mix of experience, views and backgrounds as it looked at different ways of approaching integrated sustainability assessments. The participation of experts from the European Environment Agency (EEA), the Environment Information and Observation Network (Eionet) and Eastern Partnership countries also enabled the co-creation and sharing of knowledge.

The Summer School programme was put together by experts from the EEA, the Flemish Institute for technological research (VITO), the Netherlands Environmental Assessment Agency (PBL), the Flanders Environment Agency

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(VMM) and the University of Rome 'La Sapienza' (Department of Statistics). The Summer School is one of the activities of the EEAcademy; a knowledge and learning hub for the EEA, Eionet and EU institutional partners. Summer Schools are also organised for the ENI East countries: Armenia, Azerbaijan, Belarus, Georgia, Moldova and Ukraine. The EEA manages the EU-funded ENI SEIS II East project[3] to support the environmental reporting process. The ENI is the financial arm of the European Neighbourhood Policy, the EU's foreign policy towards its neighbours to the East and to the South. The ENI's founding principles include cooperation, peace and security, mutual accountability and a shared commitment to the universal values of democracy, the rule of law and respect for human rights.

The main role of the EEA and its Eionet is to support environmental policy in Europe via a comprehensive range of integrated environmental and thematic assessments. These include five-yearly reports on the state and outlook of Europe's environment (SOER 2020 — the sixth edition in this report series — was published at the beginning of December 2019), which provide relevant, reliable and comparable knowledge to support European environmental governance and inform the European public. The reports have informed policy implementation by monitoring progress towards established targets, and identified opportunities for EU policy to contribute to achieving long-term objectives, notably the 2050 vision of 'living well, within the limits of our planet', as set out in the EU's Seventh Environment Action Programme. In addition, the EEA produces thematic and sectoral assessments, analyses of the effectiveness of policy measures, forward-looking studies and studies on the impacts of change on Europe's environment and resources.

## RECENT EUROSTAT ACTIVITIES

**(Contributed by Arturo de la Fuente, Eurostat)**

An overview of Eurostat activities on environmental statistics, environmental accounts and sustainable development indicators can be found at: http://ec.europa.eu/eurostat/web/environment/overview. The following is a summary of recent developments. The Eurostat website provides also information on several other areas including on agriculture, energy, transport, social and economic issues.

**Sustainable Development Goals (SDGs) and other policy monitoring frameworks**

Eurostat has a dedicated website for SDG indicators. The monitoring report on progress towards the SDGs in the EU context, edition 2019 was published in June 2019. Eurostat follows the work of the Inter-agency and Expert Group on SDG indicators (IAEG-SDGs) as an observer and contributes to the work of the expert group on "Geo-spatial Information". Eurostat already started the update of the indicator list for the 2020 edition of the report. Eurostat maintains the European Commission monitoring framework for the circular economy in this dedicated website and the resource efficiency scoreboard in this dedicated website. A website about climate change related statistics is also available.

**European environmental accounts**

A new European Strategy for environmental accounts was established, covering the period 2019-2023. It was endorsed by the European Statistical System Committee in its February 2019 meeting. The strategy was published. The European Court of Auditors published a special report on European environmental economic accounts in October 2019 (special report NO 16/2019).

Eurostat revamped its website dedicated section on environment, making it more visual and intuitive. In Eurostat's public database, the results of the data collections launched in 2019 are already available for:

- air emission accounts (2017 data)
- economy-wide material flow accounts (2017 data)
- physical energy flow accounts (2016 data)
- environmental taxes (data for 2017)

[3] https://eni-seis.eionet.europa.eu/east

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The results of the 2019 data collection on environmental goods and services sector accounts (data for 2017) and environmental protection expenditure (data for 2017) will be published in spring 2020.

All these data collections are annual and mandatory for EU Member States. Eurostat publishes the data in the Eurostat online database, as well as in articles (see Statistics Explained pages) and other material. Eurostat also publishes air emission footprints and two datasets with material footprints (aggregate and detailed).

Eurostat co-ordinates an experimental project on an Integrated system of National Capital and ecosystem services Accounting (INCA) in collaboration with other EU partners (DG ENV, JRC, RTD and the EEA). The final report on the first phase of the project (on feasibility and design) is available here. The second phase (on implementation) is advancing and scheduled to end in 2020. Latest INCA results have been published by the JRC on ecosystem services accounts including pilot accounts for crop and timber, global climate regulation and flood control and by the EEA on ecosystem extent and experimental condition and water accounts. Eurostat publishes all available INCA output in the methodology section under 'Ecosystem accounts'.

Eurostat also facilitates training courses on environmental accounts and statistics, SDGs and ecosystem accounting. Material from past courses is available here.

**Waste statistics**

Eurostat publishes several waste statistics products, as follows:

- Statistics on waste generation and treatment. Data are collected every second year, last one in 2018 (data for 2016). Reporting is mandatory under Regulation (EC) No 2150/2002 on waste statistics. There is a voluntary extension ('plug-in') about food waste.
- Statistics on selected waste streams, as follows: packaging waste (paper and cardboard, plastic, wooden, metallic, glass and other packaging); waste electrical and electronic equipment (WEEE); batteries and accumulators; end-of-life vehicles; transboundary shipments. Data are collected very year (data for 2017 are available, and data for 2018 for WEEE and batteries). These are based on Member States reporting obligations to the European Commission.
- Trade in recyclable raw materials. This is derived from external trade statistics, which are mandatory. Annual data are published.
- Municipal waste. Data are collected very year, currently data for 2017 are available. This is a voluntary data collection, co-ordinated with OECD.

## ESCAP NEWS

**(Contributed by ESCAP Statistics Division, ESCAP Pacific Office and SIAP)**

**Global Dialogue on Ocean Accounting and First Annual Meeting of the Global Ocean Accounts Partnership (Sydney, Australia, 12-15 November 2019)**

These events, co-hosted by the University of New South Wales (UNSW) and ESCAP with support from the World Bank Blue Economy Program, brought together 100 participants from 26 countries, including representatives from 18 governments, to share experiences and lessons learned about ocean accounting and discuss options and opportunities for mainstreaming ocean accounting into relevant policy and governance processes.

The necessity for collaborative efforts to ensure that the values and benefits of oceans are recognized and accounted for, in all relevant policies and decision-making about social and economic development, was emphasized. Five ESCAP pilots (China, Malyasia, Samoa, Thailand and Viet Nam) and two non-ESCAP pilots (Canada, Southern NSW) presented results of their work and issues for consideration. The link between ocean accounts and ocean economy was discussed. The participants agreed on a workplan for finalizing the Global Ocean Accounts Partnership Technical Guidance on Ocean Accounting, including detailed discussion of issues regarding data, classification and methods. A public zero-draft will be released in December 2019.

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The second Annual Meeting of the Global Ocean Accounts Partnership will be hosted by Fishiery and Oceans Canada and Statistics Canada in Ottawa in October 2020.

**Technical assistance on FDES/SEEA implementation (June-November 2019)**

- Training Programme on Environment Statistics and the System of Environmental-Economic Accounting for SDGs, Chiba, Japan, 2-6 September 2019;
- Second national workshops on ocean accounts, Beihai, China, 24-26 September 2019; Apia, Samoa, 6-8 October 2019; Hanoi, Viet Nam, 9-11 October 2019; Bangkok, Thailand, 15 October 2019; and, Kuala Lumpur, Malaysia, 16-18 October 2019;
- Workshop on the Sustainable Development Goal indicators on water-use efficiency and water stress for the countries of Central Asia, Almaty, Kazakhstan, 8-10 October 2019;
- Technical assistance mission on water accounts, Apia, Samoa, 8 October 2019, and follow-up support provided remotely;
- Technical assistance mission on water, solid waste, air emissions accounts, Ulaanbaatar, Mongolia, 7-11 October 2019;
- Technical assistance mission on land accounts for Vanuatu and Fiji, 28 October – 8 November 2019

**Other Environment Statistics-related activities (June-November 2019)**

- UNECE Expert Forum for producers and users of climate change-related statistics, 3-4 October 2019, Palais des Nations, Geneva, Switzerland
- Eighth Plenary Meeting of UN-GGIM-AP, Canberra, Australia, 3-5 November 2019;
- ESRI Ocean and Atmospheric GIS Forum, Redlands, California, 5-7 November 2019;
- The Regional Inception Workshop on Integrating Statistical Geospatial Data for Land Accounts and Statistics in Central Asia, Tashkent, Uzbekistan, 14-15 November 2019;
- Global Dialogue on Ocean Accounting and First Annual Meeting of the Global Ocean Accounts Partnership, Sydney, Australia, 12-15 November 2019

**Upcoming activities (December 2019-June 2020)**

- Technical assistance mission on water accounts with the focus on tourism sector, Male, Maldives, 25 November - 6 December 2019;
- Monitoring and Achieving Disaster-related SDG Targets: Pilot Training on Disaster-related Statistics, Jakarta, Indonesia, 3-5 December 2019;
- Regional Training Workshop on the Production of SEEA-Energy Accounts and Use of Energy Information for Policy, Almaty, Kazakhstan, 17-20 December 2019;
- Regional expert workshop on solid waste accounts, 2020 (TBC)

# COUNTRY NEWS

## Environment statistics in Burkina Faso

**(Contributed by Jean-Claude Kabore, DGESS/MEEVCC, Burkina Faso)**

Burkina Faso, like most countries in the world, faces environmental problems such as loss of biodiversity, pollution, deforestation, global warming, natural disasters, etc. Statistics are a tool that supports decision-making, for better designing and monitoring environmental policies and strategies, in that the development and monitoring of these policies and strategies are best when based on environmental statistics. Therefore, it becomes necessary to ensure better quality statistical production in order to guarantee the effectiveness of the different environmental policy actions.

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At the institutional level, statistical production in Burkina Faso is governed by Act No. 012-2007/AN of 31 May 2007 on the organization and regulation of statistical activities, which defines the National Statistical System (NSS). The NSS is composed of the National Institute for Statistics and Demography (INSD), the Directorate General for Studies and Sectorial Statistics (DGESS) of the different ministries and other statistical organizations. The DGESS of the Ministry of the Environment, Green Economy and Climate Change (DGESS/MEEVCC) is part of the NSS through the Special Commission on "Rural and Environmental Statistics". It is responsible for producing, compiling and disseminating environmental statistics in accordance with its remit.

The first publication containing environmental statistics was produced by INSD in 1996 in Burkina's long-series yearbook, notably the chapter 1 entitled "Climatology". The Ministry in charge of the environment made a first compilation entirely devoted to environment statistics in 2010 with the "Yearbook of Environment Statistics 2009" based on the model DPSIR (Driving force-Pressure-State-Impact- Response). It was from 2014 that the DGESS/MEEVCC began to pilot the Framework for the Development of Environment Statistics (FDES 2013) with the 2012 and 2013 Environment Statistics Yearbooks. This exercise is annual and has to improve the production and availability of environment statistics.

The FDES is still in the implementation phase: the yearbook of environment statistics covers only partially the six components of the Framework. The definitions of concepts presented in the directory allow readers to easily understand the variety of the compiled statistics. According to the report of the 2019 user satisfaction survey about official statistics, produced by INSD, 50 per cent of users had favorable opinion on the clarity of the definitions and methodologies underpinning of the statistical outputs; 21.4 per cent of users were unfavorable.

The statistical yearbooks provide the DGESS / MEEVCC, also in charge of the monitoring and evaluation of the Ministry's policies, with data to inform the effect and impact indicators designed to assess the effectiveness of policy actions in favor of the environment. Environment statistics are also used in the Sectoral Dialogue Frameworks (CSDs), which are forums for inter-ministerial meetings on the monitoring and evaluation of the country's National Economic and Social Development Plan (PNDES, 2016-2020), which the master national development plan, but also constitutes the reference for policies involving the Ministry in charge of the environment.

In addition to the yearbooks, the Ministry produced three environmental dashboards (in 2009, 2011 and 2014) in collaboration with INSD and four State of the Environment Reports in Burkina (REEB). The environmental dashboard presents, in the form of graphs and maps, key statistics and indicators describing the major trends in environmental phenomena. The statistics used for the development of the dashboard are sourced from the yearbooks. As a four-year document that describes and analyzes the state of the environment, the REEB relies heavily on the available environmental statistics. Other activities were also conducted, not only to meet the national need in terms of data, but also to have information for the preparation of country reports (National Communications, Conventions, etc.). These operations include the national forest inventories (1983, 2012), the development of the pilot environmental accounts (2006-2008), the greenhouse gas inventories (2007, 2019), the household survey on consumption of wood energy (2017), etc.

For most of these operations, they are financed through projects and programs funded by technical and financial partners such as the Swedish, Luxemburg and Austrian Cooperations, the European Union, the UNDP, etc. Currently DGESS/ MEEVCC receives funding from the Luxembourg Cooperation through a Support Programme to Forest Resources Management (AGREF) in view of the preparation of environmental activity accounts. For this purpose, several operations are being carried out. These are the surveys of the environmental protection and natural resources management expenditure of public administrations, non-governmental organizations (NGOs) and associations, businesses and also the survey on the production of environmental goods and services.

With the development of environment statistics at heart, the DGESS/MEEVCC has requested and received since 2018 technical assistance from the United Nations Economic Commission for Africa (ECA). This assistance helped organize a national workshop that brought together all producers of environment statistics. Other workshops were also organized to provide participatory information on the Environment Statistics Self-Assessment Tool (ESSAT). Out of this exercise, an assessment report on the state of the environment statistics was produced and validated through a workshop with all stakeholders, namely the producers of the environment statistics.

The evaluation report highlighted at the institutional level a lack of a meeting platform for producers and users of environment statistics, an insufficient production and a low dissemination of environment statistics, the absence of electronic archiving system, and a lack of sustainable resources to produce environment statistics. As a consequence, and

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a lack of sustainable resources to produce environment statistics. As a consequence, and with the technical support of ECA who also brought in two experts, DGESS/MEEVCC has organized a workshop in September 2019 that initiated the development of an action plan for the development of environment statistics in the country. This workshop defined strategic axes and actions on the Plan. The strategic axes of the plan concern (i) the improvement and consolidation of the legal, institutional and organizational framework of environment statistics; (ii) improving the production, coverage, archiving and dissemination of environmental statistics; and (iii) strengthening the governance of the environment statistics sector. This work started is expected to result, by the end of November, into the national strategy for the development of environment statistics with a three-year implementation plan. These documents will be submitted for validation to all producers of environment statistics during a workshop scheduled for December 2019.

## Harmonized Environment Statistics Data Collection through Water Accounts Technical Working Group in Botswana

**(Contributed by Kakanyo Fani Dintwa & Kwashirai Chigodora, Statistics Botswana)**

The Water Accounts Technical Working Group (TWG) is one of thematic working groups set up for the establishment and update of environmental accounts in Botswana. The TWG was set up as a result of the Government of Botswana's commitment to Environmental Economic Account (EEA) and with support from the World Bank's Wealth Accounting and Valuation of Ecosystem Services (WAVES) programme.

The Water Accounts TWG is chaired by the Ministry of Land Management, Water and Sanitation Services (MLWS)'s Deputy Permanent Secretary responsible for Water and Sanitation and coordinated by the Department of Water and Sanitation, and its membership includes representation of Statistics Botswana's Environment Statistics Unit and the National Accounts Unit, among other organizations. The steering committee also includes higher level representation of Statistic Botswana. The TWGs have produced technical reports, with the Water Accounts TWG having produced 5 reports and policy briefs.

The Water Accounts TWG meets quarterly under the leadership of the Department of Water and Sanitation. The group has enabled Botswana to establish and update five (5) SEEA styled water accounts reports covering the years 2010/11 to 2016/17 the water accounts since 2016. The Water Accounts TWG has also facilitated the production of water statistics publications by Statistics Botswana, through collaborative and coordinated data requests and audits. The TWG membership includes data providers (Water Utilities Corporation and Department of Water and Sanitation), who pledged to provide data. They audit the data before submission to Statistics Botswana for database, analysis and the publication of reports.

The Technical Working Group comprises of multiple national level ministries and agencies collecting and documenting data on water-related statistics. The national water statistics data received by the Focal Point from relevant providers, is validated and disseminated from one source for different uses including meeting both national and international data demands (e.g. UNSD/United Nations Environment Programme Questionnaire). Such a practice presents one method by which countries could work towards achieving a uniform and well-coordinated response to international data collections.

Some of the challenges faced by the Government of Botswana in the effort to expand the accounts include, among others:

- Lack of funds to expand Natural Capital Accounting (NCA) work in Botswana.
    - Expanding the scope to include Tourism, Land and Ecosystem Accounts.
    - Expansion of Water Accounts to include full monetary accounts, ground water stocks and soil moisture experimental accounts.
- Data Scarcity- e.g. Groundwater data, Waste water baseline,
- Data management platform, and
- Institutionalization of accounts in various departments.

One other important method by which countries could facilitate continuous and smooth data flows and sharing is through strengthening the National Statistical System (NSS). Within the NSS in Botswana, Statistics Botswana has the responsibility of coordinating, monitoring and harmonizing data production for statistical development. In line with its mandate, SB is currently implementing the National Strategy for the Development of Statistics (NSDS) in partnership with other sectors. The NSDS is meant to harmonize and integrate statistical activities into the National Statistical System (NSS). It is through the implementation of the NSDS that SB' participation in almost all statistical-related projects within the NSS is visible.

## Environment Statistics in Ghana

**(Contributed by Bernice S. Ofosu-Baadu, Ghana Statistical Service and Kwame B. Fredua, Environmental Protection Agency)**

Environmental issues are cross-cutting in nature and thus, require a multi-faceted approach to effectively address them. According to the Ghana State of Environment 2016 Report[4], some of the major environmental issues that confront the country include; climate change, waste and sanitation, air pollution, land degradation, biodiversity loss, coastal erosion, water pollution, deforestation, among others. This makes it even more crucial for availability of the relevant data and statistics to monitor the state of progress in addressing these issues. There has been an increase in demand for environment statistical information after the country's first State of Environment (SoE) Report which was published in 2004 and the World Bank Country Environmental Analysis (CEA, 2006)[5] which called for strong environmental governance across various sectors to address environmental degradation.

The production of environment statistics in Ghana in the past has been uncoordinated and fragmented in its approach. In order to resolve this, the Framework for the Development of Environment Statistics (FDES 2013) has been adopted as a standard to develop Ghana's environment statistics. In addition, the country has also compiled Physical Supply-Use Tables (PSUT) for energy based on the System of Environmental Economic Accounting (SEEA 2012) to better inform policy and decision-making.

With respect to environment statistics, the Ghana Statistical Service (GSS) and the Environmental Protection Agency (EPA) jointly assessed the state of environment statistics in the country using the Environment Statistics Self-Assessment Tool (ESSAT). Among others, the assessment noted that eighty-eight (88) out of one hundred (100) core statistics (Tier I) of the FDES were available and twelve 12 unavailable. Ten (10) of the unavailable core statistics were found in Component 3 (Residuals) of the FDES. Tier 2 and 3 statistics were not assessed. A Compendium of Environment Statistics, 2019 is being compiled using the available data on the core set of statistics. The compendium will be the first publication on environment statistics to be published in the country. This is a major milestone which will contribute to environmental sustainability which is at the centre of the SDGs. It will also help policy makers to understand the interlinkages within and between environment and economy; promote policy coherence and integration of the SDGs; and support monitoring of SDG indicators. Additionally, it will enhance understanding on the effectiveness of the various environmental interventions initiated by the Government and its development partners to ensure sustainable development.

So far, Ghana has received technical and financial support for the development of environment statistics from the United Nations Economic Commission for Africa (UNECA), the United Nations Statistics Division (UNSD), the Gaborone Declaration for the Sustainability of Africa (GDSA) and the World Bank for the compilation of the development of environment statistics, implementation of the System of Environmental-Economic Accounting Central Framework (SEEA-CF), i.e. Physical Supply-Use Tables (PSUT) for Energy, and Asset Accounts for the Minerals Resources. These processes have also built the capacity of the GSS, EPA and other stakeholders in Natural Capital Accounting (NCA), SEEA-Energy and the development of environment statistics.

The Statistical Service Law, 2019 (Act 1003) establishes the Ghana Statistical Service, and vests in the Government Statistician the responsibility to conduct national surveys including censuses, and organization of a coordinated scheme of economic and social statistics relating to the country. The Law also vests in the GSS the responsibility for the collection, compilation, analysis, publication and dissemination of official statistics in Ghana for general and administrative purposes. The National Strategy for the Development of Statistics (NSDS 2018-2022) recognizes the importance of environment statistics and has detailed planned activities for implementation. These activities among others include harmonization and securing information systems on the environment, collection of data on environmental quality indicators; and the establishment of a database of environment statistics. The Agriculture and Environment Statistics (AES) Section has a responsibility to collect, compile, process, analyze, and disseminate reliable and timely statistics covering the environment (water, energy, minerals, waste, etc.) and agriculture according to international standards to feed into the overall output of the GSS to support policy formulation, decision-making, monitoring and

[4] EPA (2017). Ghana State of the Environment 2016 Report. Environmental Protection Agency, Ministry of Environment, Science, Technology and Innovation, Accra. 410 pages. Access: http://www.epa.gov.gh/epa/publications/state-environment-report

[5] http://siteresources.worldbank.org/INTRANETENVIRONMENT/3635842-1175696087492/21919456/Ghana_CEA.pdf

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evaluation towards the sustainable development of the country. The AES Section of GSS envisions to become a reliable compiler of environment statistics to monitor progress on environment-related SDG indicators, and to meet the associated need for statistical capacity building with excellence to inform policy and decision-making in the country.

In Ghana's experience, one of the major keys to success so far has been building of strong institutional collaborations and partnerships. The GSS collaborated with the Environmental Protection Agency (EPA) which is the lead institution in environment issues throughout the various processes.

## Environmental Statistics and Accounts in Hungary

**(Contributed by Pal Boday, Hungarian Central Statistical Office)**

In Hungary several institutions are responsible for providing and collecting data on environment and preparing environmental statistics. The Hungarian Central Statistical Office (HCSO), beyond data production, has a role to assemble and to systematize these information.

Data is published across multiple platforms, databases, data sheets, and different publications. There are two main summary publications of the HCSO related to environment. The Environmental Report of Hungary's latest issue (http://www.ksh.hu/docs/hun/xftp/idoszaki/pdf/kornyhelyzetkep18.pdf), fourth in the row, published in August 2019. It presents the state of the environment through statistics on water, air, land and wildlife, analyzes the sources and management of waste, and provides environmentally relevant information on the production and use of energy. This latest publication devoted a separate chapter on climate change indicators for the first time. The publication mainly contains environmental information based on the data of the HCSO, but in many cases it also uses other domestic and international data, which it presents with diagrams and maps. The Indicators of Sustainable Development for Hungary is published every two years since 2007. The most current issue (http://www.ksh.hu/docs/hun/xftp/idoszaki/fenntartfejl/fenntartfejl18.pdf) was published in August 2019. The publication is structured around the four resources identified by the National Framework Strategy on Sustainable Development. These are human, social, natural and economic resources. The natural resources part contains 41 environment related indicators and several contextual data.

Considering international requirements, the State of the Environment Report (SoER) is compiled by the government body responsible for the environmental protection. The report deals with environmental topics such as climate change, diversity of nature, waste management, environmental pollution in connection with health and quality of life, environmental management issues, environmental challenges for Hungary and Europe. The preparations for the 2020 report began in 2019. This new issue will cover sustainability prospects among the previously mentioned topics. On sustainability the National Council on Sustainable Development prepares a monitoring report on the National Framework Strategy on Sustainable Development on a biennial basis, it has a chapter – out of four - on natural resources, the latest issue will be published early 2020.

In the HCSO current developments focus on improving the environmental accounts introduced in recent years and compiling new modules. Work is taking place on the introduction of ecosystem services accounts, one of the bases of which is the Ecosystem Base Map, published this November, which is primarily intended to showcase the spatial distribution of domestic ecosystems.

HCSO places particular emphasis on the widest possible use of administrative data, and environmental statistics are no exception. In the field of waste and energy management, several data sets are being examined and their statistical use is being examined.

Improvements are also influenced by different policy needs. New statistical indicators and methods for planning, implementation and monitoring are needed for EU post 2020 budget planning and the new EU Commission's Green Deal.

## Environmental Statistics and SDGs in Italy

**(Contributed by Angela Ferruzza, Istat )**

During recent years the Italian National Institute of Statistics (Istat) has focused on the development of indicators for measuring the Sustainable Development Goals (SDGs) considering with special attention the environmental goals.

Istat disseminated the second SDGs Report in 2019. It is a further extension of the panorama of already released indicators (in five other occasions every six months since December 2016), together with the analysis of trends and of their interlinkages, giving a statistical framework for monitoring the progress towards sustainable development defined globally.

In this sixth release Istat produced an updated set of 123 UN-IAEG-SDGs indicators and, for these, 303 statistical measures (of which 273 were different), all available on the website www.istat.it,

https://www.istat.it/en/well-being-and-sustainability/sustainable-development-goals/istat-indicators-for-sustainable-development
https://www.istat.it/it/files//2019/08/SDGs-2019_inglese.pdf

The SDGs has been an opportunity to develop synergistic action in the National Statistical System with the Environmental Agency or with Energy agency to produce more environmental statistics useful for monitoring the SDGs. It is a process that needs other increasing efforts but that also offer interesting opportunities to promote the production of environmental statistics.

The key principle of the SDGs - continuing with economic and social development ensuring meeting the needs of the present generation without compromising those of the future ones - is no doubt a challenge for countries and national statistical systems, but it can be transformed into a relevant opportunity, both for European and national policies, and for quality statistical information. The complexity of the SDGs is one of the characteristic elements, together with the further incontrovertible element, that these refer to very concrete issues that concern each of us.

The domains that constitute the "pillars" of SDGs - social, environmental, economic and institutional - have to be understood, in fact, considering three catalyst principles: universality, integration, participation.

Universality refers to the need to consider objectives with a perspective that goes from global to national and to local (regional and/or urban).

The integration of domains - social, environmental, economic, institutional - and their interactions highlight synergies or, vice versa, trade-offs that can be generated between objectives. It is therefore a matter of considering the interconnections between human and natural systems, the interactions between environmental, social and economic issues and institutional issues. In an integrated global perspective, for example, sustainability must be considered together with climate change and its effects also in terms of hazardous events and disasters: the interconnections and interactions between people, planet, peace, prosperity, participation are evident.

Objectives, targets, indicators, even if organized in single components, are interdependent, integrated and indivisible in order to consider in a balanced way the economic, social, environmental and institutional dimensions of sustainable development. There are, therefore, many ties between the 17 Goals and the 169 Targets, which reinforce them or may enter into conflict. Navigating the complexity, analyzing the interconnections between the indicators and making the correlations explicit (positive or negative) can be a key factor for strengthening, which guides the statistical analysis.

On this occasion, special attention is dedicated also to environmental Goals (2, 6, 7, 11, 13, 14, 15) and in particular to the analysis of interlinkages between objectives, sub-objectives and indicators, considering climate change or urban sustainability, in order to give an account of the intrinsic complexity of sustainable development.

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*(Continued on page 20)*

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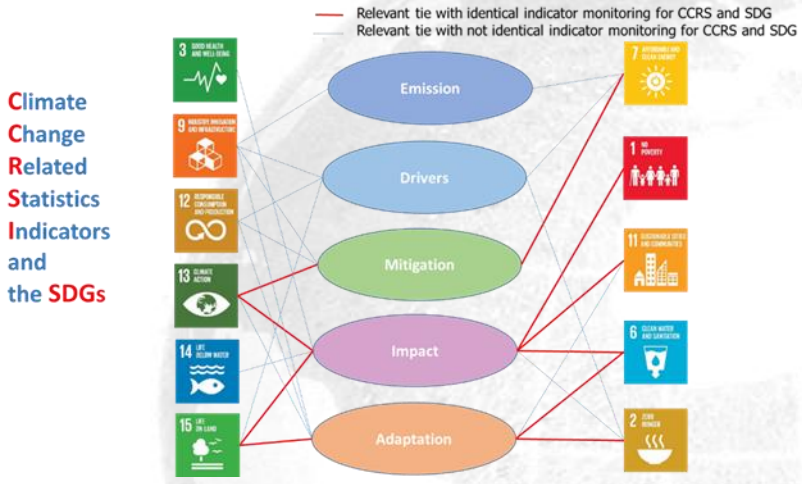



In the development of environmental indicators the Framework for the Development of Environment Statistics (FDES 2013) has also been very important. Istat actively participates in the Expert Group on Environment Statistics (EGES).

In current activities Istat has been also involved in cooperation projects related to SDGs and/or to environmental statistics. In particular, the experience in the CARICOM region has put in evidence the importance of the FDES and of framework like SDGs and Climate Change in developing environmental statistics. The Statistical Institute of Jamaica and the General Bureau of Statistics of Suriname based their environmental statistics considering the FDES in an efficient way.

Another experience is related to the cooperation project that Istat has in Vietnam related to environmental statistics and Climate change: in this case Istat is promoting the use of the FDES as the reference framework together with the SDGs, Climate Change, and Hazardous events and Disaster frameworks.

# FDES in the Philippines

**(Contributed by Rosalinda P. Bautista, Vivian R. Ilarina, Virginia M. Bathan, Polaris C. Bautista, Faith Lea B. Cabrera, PEENRA Project Staff, Environment and Natural Resources Accounts Division, Philippine Statistics Authority)**

## PSA holds Dissemination Forum for the Compendium of Philippine Environment Statistics

Recognizing the importance of environment statistics in monitoring the Sustainable Development Goals (SDGs), the Philippine Statistics Authority (PSA) is committed to compile environment statistics through Compendium of Philippine Environment Statistics (CPES) emphasizing its link to the SDGs- and the efforts as contribution of the PSA in tracking progress towards SDGs and national agenda for relevant and reliable information to support policy decision. The PSA, as mandated under the Republic Act 10625, is the agency tasked to generate environment and natural resources statistics. In the Philippines, environment statistics and accounts are critical in achieving the country's vision of ensuring ecological integrity and clean and healthy environment (Philippine Developoment Plan 2017-2022). Environment statistics bring together data from various subject areas and sources, covering issues and aspects of environment that are relevant for policy analysis and decision making.

The CPES, biennially released by the PSA, is a compilation of information on environment and natural resources, following the Framework for the Development of Environment Statistics (FDES) as approved by the United Nations Statistical Commission in 2013. In November 2018, data collection efforts were undertaken for the compilation of CPES with coverage from 2008 to 2017. Also, a validation workshop was held last 04 to 05 April 2019 to finalize the preliminary statistical tables. Last 27 November 2019, a dissemination forum was conducted to present the results and highlights of the CPES to data source agencies and stakeholders. The dissemination aims to raise appreciation and to strengthen data support for the next compilation/updating.

### *Compendium of Philippine Environment Statistics (CPES)*

The CPES publication focuses on the FDES 2013 core set of environment statistics, which is organized into a structure of six components, namely 1) environment conditions and quality; 2) environment resources and their use; 3) residuals; 4) extreme events and disasters; 5) human settlements and environmental health ; and 6) environmental protection, management and engagement. The CPES covers 2008-2017 with 79 core statistics and 49 tier 2 statistics from the six components.

*Summary of environment statistics compiled in CPES : 2008-2017, based on FDES 2013*

| Component | Number of Statistics | | |
|---|---|---|---|
| | **Total** | Tier 1 (Core) | Tier 2 |
| Environmental Conditions and Quality | **40** | 23 | 17 |
| Environmental Resources and Their Use | **47** | 28 | 19 |
| Residuals | **17** | 15 | 2 |
| Extreme Events and Disasters | **12** | 4 | 8 |
| Human Settlements and Environmental Health | **9** | 6 | 3 |
| Environmental Protection, Management and Engagement | **3** | 3 | 0 |
| Total | | | |

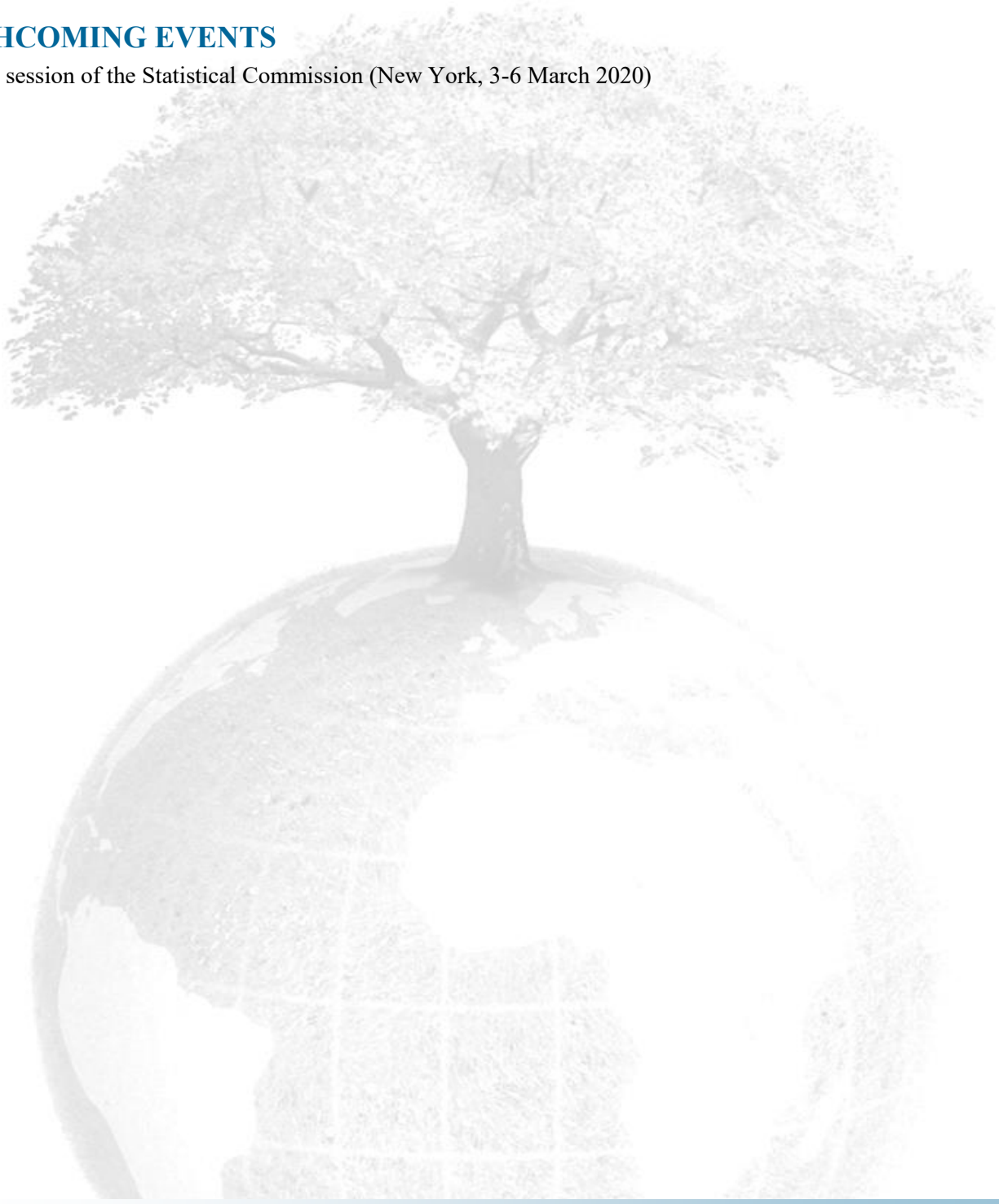
The statistical tables were uploaded via web in 13 December 2019.
http://www.psa.gov.ph/content/psa-releases-compendium-philippine-environment-statistics-cpes-covering-period-2008-2017

### *Subnational Pilot Compilation of Environment Statistics*

Currently, in order to have compilation of environmental statistics at the subnational level, for 2019 the PSA piloted two compilations as outcomes of capacity building in the regions. The subnational pilot compilations aim to compile data on environment statistics adopting the FDES 2013. Covering the latest available data relevant for monitoring and assessing SDG indicators, the results of the compilation will be presented to the Regional Statistics Committee for review before the release of the publication.

## FORTHCOMING EVENTS

Fifty-first session of the Statistical Commission (New York, 3-6 March 2020)



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