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envstats News and Notes

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

FOCUS:

The Increased Demand for and Relevancy of Waste Statistics

IN THIS ISSUE

With the unanimous adoption of the Sustainable Development Goal (SDG) Agenda by 193 UN member states in 2015[1], there is more attention and interest from UN member states and policy makers than ever before in environment protection, prevention of environmental degradation and the risks posed by climate change. Waste statistics are of growing interest as they are important for the monitoring of the SDGs, sustainable consumption and production, the green economy, and various other policy frameworks. Despite their importance, waste statistics are not readily available in many countries, primarily due to, inter alia, the lack of harmonized definitions, measurement methods, classifications, and knowing what is actually measurable. This article attempts to provide information on some of the work being undertaken in the field of waste statistics by the United Nations Statistics Division (UNSD), UN agencies and UN member states, and to heighten the reader's awareness of the high degree of relevance and currency of this topic.

If one is to focus on waste statistics and their relevance to the SDG Agenda, three of the 17 goals contain indicators and targets which refer directly to waste:

- Goal 6: Ensure availability and sustainable management of water and sanitation for all
- Goal 11: Make cities and human settlements inclusive, safe, resilient and sustainable
- Goal 12: Ensure sustainable consumption and production patterns

Monitoring of Goal 6's targets will require data on the safe treatment of wastewater. For Goal 11, data on generation, collection and discharge of solid and urban waste will be necessary, as will data on food waste, hazardous waste generated and hazardous waste treated for Goal 12.

With the SDG Agenda now in full swing and with an unprecedented requirement for data concerning waste, it seems very timely to investigate some of the data collections, research and other work taking place concerning waste statistics and informing policy decision making.

Several SDG targets and indicators can have their data sourced from the UNSD/UNEP Questionnaire on Environment Statistics. Having entered its eighth round in 2016, the Questionnaire follows the request and mandate of the United Nations Statistical Commission (UNSC) and its Working Group on International Programmes and Coordination. First administered in 1999, the Questionnaire was repeated in 2001, 2004, 2006, 2008, 2010, 2013 and 2016 and has helped build established time series. From 2006 and onwards, the Questionnaire has collected data purely on the themes of Waste and Water.

[1] http://www.un.org/sustainabledevelopment/blog/2015/09/historic-new-sustainable-development-agenda-unanimously-adopted-by-193-un-members/ .

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SDG indicator 6.3.1 (Proportion of wastewater safely treated) has source data which can be obtained from the Questionnaire's water section. Variables such as "Total wastewater generated", and "Wastewater treated in urban, other and independent wastewater treatment plants" can be used in combination to give a proportional indicator for this goal.

For indicator 11.6.1 (Proportion of urban solid waste regularly collected and with adequate final discharge out of total urban solid waste generated, by cities), the waste section of the Questionnaire can be referred to for data. The variable, "Total amount of municipal waste collected" will be invaluable, as will amount thereof going to Recycling, Composting and other management methods (treatment, disposal or otherwise).

For indicator 12.4.2 (Hazardous waste generated per capita and proportion of hazardous waste treated, by type of treatment), variables in the Questionnaire, "Hazardous waste generated during the year", and "Hazardous waste treated or disposed of during the year" can serve as data sources. Indicator 12.5.1 (National recycling rate, tons of material recycled) can also source data from the Questionnaire's variables, "Municipal waste managed in the country" and that "Amount going to recycling".

The terminology and definitions applied to the UNSD/UNEP Questionnaire on Environment Statistics are harmonized with those of the Joint OECD/Eurostat Questionnaire on the State of the Environment. As such, the two questionnaires combined collect data from all 193 UN member states, some of which is disseminated on the UNSD Environmental Indicators webpage. In the interests of improving data volume and quality, UNSD and UNEP are grateful to member states for their efforts to submit responses to the UNSD/UNEP Questionnaire on Environment Statistics by 31 January 2017. Data will be validated by UNSD which in many cases will call for direct communication between UNSD and member state colleagues for clarifications.

UNSD also provides methodological guidance with respect to waste statistics. The flagship product of the Environment Statistics Section of UNSD, the Framework for the Development of Environment Statistics (FDES 2013) contains a component on Residuals, and therein, statistics on the generation and management of waste and wastewater. As a supporting tool to the FDES 2013, the Manual on the Basic Set of Environment Statistics will contain a methodology sheet with detailed guidance on waste statistics.

Despite great efforts on the part of UNSD, the Organization of Economic Co-operation and Development (OECD), the Statistical Office of the European Union (Eurostat), the United Nations Economic Commission for Europe (UNECE) and the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal (Basel Convention) to improve the quality and availability of internationally comparable waste statistics, there is a need for further international work to focus on (i) developing an agreed precise definition of waste; (ii) based on this definition developing a framework to show the "full picture" of what waste covers; (iii) identifying those parts of the framework that can be surveyed or covered by administrative data and giving standardized methods to produce these statistics; and (iv) providing standardized methods to estimate other important (not necessary all) parts of the "full picture".

As a step towards improving the situation of waste statistics, the UNECE Joint Task Force on Environmental Statistics and Indicators (JTF) recommended in its 10th session (May 2015) to establish an international process to develop a framework for waste statistics, which should be based on cooperation of experts from key international organizations and member states. Following this recommendation and further endeavours, in October 2016, the Bureau of the Conference of European Statisticians approved the proposal for work on waste statistics. The Secretariat, together with Canada, Mexico, Eurostat, OECD, UNSD and other interested parties will prepare terms of reference for a Task Force on Waste Statistics to be submitted to the February 2017 Bureau meeting.

Research undertaken by the United Nations University (UNU) in the field of e-waste is revealing the importance of this somewhat previously neglected and perhaps unanticipated issue. Information on pilot studies on e-waste whereby UNU, OECD and UNECE have collaborated with one another is shared in this newsletter in an article entitled, "E-waste Statistics Project on Improving the Knowledge Base to Solve the E-waste Problem". Eurostat's well established waste collections include an annual collection on waste on electrical and electronic equipment (WEEE) also provides good data on the topic of e-waste available on the Eurostat database. Following these efforts, UNSD is currently preparing a pilot questionnaire devoted specifically to the topic of e-waste. It is envisaged that this pilot shall be sent to selected UN member states soon.

The severity of the impact of plastics waste in Jamaica and the very apparent need for good solid waste management practices is detailed in an article below, "Plastic Pollution – The multi-million dollar problem." Efforts being made in Sweden to avoid landfill of waste and to instead move toward recycling, reuse and reduction of waste are also detailed in this newsletter in an article entitled "Statistics in the garbage bin – much is avoidable".

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With so much effort being made at the international and national levels, and with an increased demand for waste statistics following their presence in the SDG Agenda, it is an exciting time to be involved in improving the monitoring of waste to better inform policy decisions. UNSD hopes that this and other articles can draw the reader's attention to the significance of the waste issue more broadly as well as provide an awareness of the many aspects within the field of waste for which analysis, improved monitoring and informed policy and decision making is so important.

UNSD NEWS:

UNSD Data Collection

The UNSD/UNEP Questionnaire 2016 on Environment Statistics will be the eighth round of UNSD's biennial environment statistics data collection mandated by the Statistical Commission. The UNSD/UNEP Questionnaire is sent to more than 170 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).

An announcement letter was sent from UNSD to the heads of the National Statistical Offices and Ministries of Environment in the countries in October 2016 encouraging them to nominate a single national focal point for the 2016 Questionnaire. The pre-filled UNSD/UNEP Questionnaire 2016 on Environment Statistics (http://unstats.un.org/unsd/environment/questionnaire2016.html) was sent out in November 2016 to both National Statistical Offices and Ministries of Environment (or equivalent institution) and asked for coordination within the country. The deadline for submitting the completed Questionnaire was 31 January 2017.

Following from the prior rounds, the 2016 Questionnaire consists of two sections: waste and water. Each section of the Questionnaire will include a list of relevant definitions and comprehensive guidance to assist respondents with filling the tables. After validation of the responses, the results from the UNSD/UNEP Questionnaires will be disseminated on the UNSD website through the UNSD Environmental Indicators tables and maps (http://unstats.un.org/unsd/environment/qindicators.htm) and in Country Snapshots (http://unstats.un.org/unsd/environment/Questionnaires/country_snapshots.htm), as well as on UNData (http://data.un.org).

The UNSD/UNEP Questionnaire on Environment Statistics serves as a very good and accurate source of official data submitted directly by United Nations Member States to UNSD that can be useful to a variety of different uses and users. The internationally comparable data obtained from this exercise will be extremely important for compiling several of the SDG indicators related to water and waste, including:

Water

6.3.1 Proportion of wastewater safely treated

6.4.1 Change in water-use efficiency over time

6.4.2 Level of water stress: freshwater withdrawal as a proportion of available water resources

Waste

11.6.1 Proportion of urban solid waste regularly collected and with adequate final discharge out of total urban solid waste generated, by cities

12.4.2 Hazardous waste generated per capita and proportion of hazardous waste treated, by type of treatment

12.5.1 National recycling rate, tons of material recycled

UNSD appreciates countries' continuing support on the improvement of reliable global environment statistics. If you have any questions or comments, please send them to: envstats@un.org.

UNSD Data Dissemination

UNSD publishes global environment statistics through two main web-based products: the **UNSD Environmental Indicators** and **Country Snapshots**. UNSD's online dissemination of environmental indicators covers a wide range of environmental themes and data sources which makes use of the increasing availability of internationally comparable environmental data compiled by a variety of international organizations. The objective of UNSD's expanded dissemination of environmental indicators is to provide a global hub for statistics on the environment.

The complete result from the 2013 round of data collection was disseminated on the UNSD website after validation of the responses was completed. The themes were selected after an extensive review of the availability of environment statistics with global scope and comparability. Currently, there are 91 downloadable indicator tables organized within the 10 themes. Indicator tables and charts as well as links to other international sources, are available at: http://unstats.un.org/unsd/environment/qindicators.htm.

Country Snapshots, which include many of the indicators from the UNSD Environmental Indicators list, in addition to other economic and demographic background information, are currently in the process of being updated. The latest Country Snapshots can be found at: http://unstats.un.org/unsd/environment/Questionnaires/country_snapshots.htm.

The Manual on the Basic Set of Environment Statistics

In order to help the member states to produce environment statistics, a Manual on the Basic Set of Environment Statistics is underway. The Manual on the Basic Set of Environment Statistics is currently being coordinated by UNSD with the assistance of experts that are members of the Expert Group on Environment Statistics (EGES). This Manual provides methodological guidance for developing countries with regard to the compilation and collection of environmental data and its transformation into statistics, and comprises a series of methodology sheets. It is a practical and detailed guide to each of the Basic Set themes, and includes variable definitions, description of sources and data collection, methods of data compilation/processing for environment statistics production, dissemination and other relevant information. So far the work has been focused on 13 methodology sheets: water resources, generation and management of waste, energy resources, mineral resources, land cover and land use, ecosystems and biodiversity, environmental protection expenditure, human settlements, forests, air quality, crops and livestock, greenhouse gas emissions, and natural extreme events and disasters.

These different methodology sheets have been discussed during the third meeting of the EGES in April 2016. Since then the Experts and UNSD have updated some of these methodology sheets. The ones on Energy Resources and Mineral Resources will shortly be available on UNSD's website (http://unstats.un.org/unsd/ENVIRONMENT/FDES/Manual_BSES.htm). They will be followed by the other methodology sheets that were seen as needing a final revision during the last EGES (e.g., water resources, generation and management of waste). The remaining methodology sheets will be presented for final review during the next EGES that will take place in May 2017.

Due to the growing importance of the Sustainable Development Goals (SDGs) and their indicators, the methodology sheets have been modified to include a section on the links between the statistics contained in the Basic Set of Environment Statistics of the FDES and the SDG indicators. The development of a set of basic statistics is a necessary step towards the monitoring of the SDGs. Thus it was seen as relevant by the Experts to link the Basic Set of Environment Statistics of the FDES 2013 to the SDG indicators in the methodology sheets. This has been done by briefly describing the indicator and then showing which statistics can be used to build the indicator, and when possible by giving the formula to produce the indicator with the statistics contained in the methodology sheets.

Translation of Methodological Resources in Support of the FDES 2013

Having been originally compiled in English, two of the key methodological resources in support of the Framework for the Development of Environment Statistics (FDES 2013) are now available in several UN official languages. UNSD is continually striving to have the FDES 2013 and all of its supporting methodological resources made available in all UN official languages (and where demand is deemed sufficient, other languages) so as to best serve its Member States.

The Basic Set of Environment Statistics which consists of 458 individual statistics organized into the structure of the FDES (components, sub-components and topics) has been translated into Arabic, Chinese, French and Russian. Portuguese and Spanish versions shall be made available in the coming months. All five current versions are available at: http://unstats.un.org/unsd/environment/FDES/BasicSet.htm

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The Environment Statistics Self-Assessment Tool (ESSAT) which UNSD has developed in collaboration with the Expert Group on Environment Statistics has been translated into Arabic, Chinese, French and Russian. Portuguese and Spanish versions shall be made available in the coming months. The ESSAT assists countries in both developing their environment statistics programmes and collecting their own data on the environment. It also assesses the state of environment statistics and the needs for their development at the national level consistent with the scope of the FDES 2013. All five current versions are available at: http://unstats.un.org/unsd/environment/FDES/essat.htm

Both methodological resources are being used extensively by UNSD and countries at the sub-regional level for capacity building, and at the national level as part of countries' multi-stakeholder discussions on their environment statistics programmes.

All translations have been provided voluntarily by institutions external to the United Nations. UNSD is most grateful to collaborating member states and institutions that have provided assistance with translations, and continues to seek countries and international agencies with capacity to assist with future translations. If you would like to assist in a translation of a supporting methodological resource for the FDES 2013, please contact: envstats@un.org

Compilation of Environmentally-related Questions in Censuses/surveys and of Specialized Environmental Surveys

With an ever increasing demand for high quality environment statistics especially bearing in mind the Sustainable Development Goal Agenda, the United Nations Statistics Division (UNSD) is now sharing publicly environment-related censuses and surveys in a repository on its website. The Environment Statistics Section of UNSD has undertaken this initiative in collaboration with the Expert Group on Environment Statistics and has received contributions of censuses and surveys from experts in the field of environment statistics from various countries around the world.

The censuses and surveys are being made available for information and to help improve environment statistics collections, and analysis of environment statistics. Censuses and surveys available cover a variety of themes all relevant to environment statistics including agriculture, air and climate, energy, environment expenditure, fisheries, waste and water.

UNSD is grateful for contributions received and it is intended that this repository will grow over time. Censuses and surveys are made available for information only and are not intended to be used as a data collection tool.

UNSD welcomes further submissions of censuses and surveys from all countries in all official UN languages and other languages. Environmentally-related censuses and surveys, and specialized environmental surveys can be shared with the Environment Statistics Section (contact: envstats@un.org) where they may then be made available at http://unstats.un.org/unsd/environment/censusesandsurveys.html. This webpage will be updated with additional censuses and surveys periodically.

Development Account Project on "Supporting Member States in Developing and Strengthening Environment Statistics and Integrated Environmental-Economic Accounting for Improved Monitoring of Sustainable Development"

This Development Account Project notes that in light of the importance of high quality statistics and their effective use in supporting evidence-based policy making and monitoring the achievement of internationally agreed goals, it is necessary to improve the availability and quality of environment statistics and environmental-economic accounts. The overall objective of the Project is to strengthen national capacities of developing countries for the sustained, regular production of a priority set of environment statistics, and environmental-economic accounts and supporting statistics, and the resulting indicators in order to measure progress towards sustainable development.

The Project consists of two complementary modules, Module A on environment statistics and Module B on environmental-economic accounts. Module A of the Project focuses on strengthening environment statistics in the East African Community (EAC) Secretariat and its five member states. Module A of the Project focuses on advancing the statistical and institutional capacity for the collection, compilation and dissemination of environment statistics needed for environmental reporting, indicator-based assessment and environmental-economic accounting, based on national policies and priorities, using the FDES 2013 and the Basic Set of Environment Statistics.

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To this end, UNSD organized a sub-regional workshop for the EAC countries, entitled "Environment Statistics in support of the Implementation of the Framework for the Development of Environment Statistics (FDES 2013)", in collaboration with the EAC Secretariat. It took place in Arusha, United Republic of Tanzania from 6 to 10 July 2015, with hosting and on-ground support provided by the EAC Secretariat and the National Bureau of Statistics of the United Republic of Tanzania. Two national missions have since then been organized in August in Uganda (Kampala, 15 to 19 August 2016) and Kenya (Nairobi, 22 to 26 August 2016). For more information on these activities please go to the UNSD website at: http://unstats.un.org/unsd/ENVIRONMENT/EAC.html, and for Kenya, please also see the relevant article from Kenya under Country News in this issue of ENVSTATS.

In the coming months UNSD will continue its activities with three additional national missions in Rwanda (Kigali, 16 to 20 January 2017), Tanzania (Dar es Salaam, 23 to 27 January 2017) and Burundi (Bujumbura, 20-24 March 2017). As for the missions in Uganda and Kenya, these missions will be composed of two activities, two days (Monday and Friday) of bilateral consultations and a national workshop for the remaining three days. The bilateral consultations with the national statistical offices (NSOs) aim to engage in detailed discussions with the counterparts in the NSOs about the main issues regarding environment statistics in the country. The bilateral discussions on the first day should also lead to a better understanding of the main data gaps, which could then be discussed during the workshops. The bilateral discussions on the last day will examine the way forward and identify steps to be taken to finalize the work plan and fill data gaps. The main goal of the national workshops is to bring the stakeholders together to increase awareness of the need for environment statistics in the country. For this purpose the FDES 2013 and the Environment Statistics Self-Assessment Tool (ESSAT) will be used extensively in the workshops. A draft national work plan will also be discussed during the workshops.

The target audience of the workshops includes the technical staff of the NSO, Ministry of Environment and other line ministries. The workshop content is very relevant to the Sustainable Development Goals (SDGs) since many of the environment statistics to be discussed and analysed are necessary for the measurement of countries' progress towards achieving the Goals. The use of the FDES 2013 will help countries address the increasing demand for integrated information in support of integrated policies in the follow-up to Rio+20 and the 2030 Agenda for Sustainable Development through the strengthening of environmental statistics and indicators.

Following these missions, UNSD will organize two regional workshops in 2017, one to link the work done so far to the SDG indicators, and the other to share progress and lessons learned. To ensure follow-up to the project and to strengthen capacities at the sub-regional level, a staff member of the EAC Secretariat is also participating in the different activities.

INTERNATIONAL NEWS:

FAO NEWS

SEEA Agriculture, Forestry and Fisheries: Internationally Approved Methodological Document in Support of the SEEA Central Framework

(Contributed by Francesco N. Tubiello, Silvia Cerilli, Giulia Conchedda and Aldo Femia)

The year 2016 saw very good progress for the SEEA for Agriculture, Forestry and Fisheries (SEEA AFF). The UNCEEA accepted the SEEA AFF as an 'Internationally Approved Methodological Document in support of the SEEA CF. In finalizing the current draft, to be published on the UNSD website in early 2017, FAO held a series of technical discussions with international and national experts. Final results were presented at the London Group, including a new section on Air Emissions Accounts, reconciling for the first time in the literature land-based air emissions reporting for national accounts and the international climate processes under the United Nations Framework Convention on Climate Change (UNFCCC).

The work plan for 2017 includes contributions to ongoing statistical processes relevant to agriculture, forestry and fisheries, including Technical Notes for the SEEA, support to the Framework for the Development of Environment Statistics (FDES 2013) process of data definitions and collections, and the SEEA Experimental Ecosystem Accounting. FAO plans to begin work in countries, building on activities that have begun this year. These include a SEEA AFF Working Group composed of Australia, Canada and the Netherlands to test country implementation issues in developed economies. At the same time, FAO is starting collaboration with the World Bank's WAVES Program for jointly testing the SEEA and WAVES methodologies in developing countries, starting with analyses in Guatemala, Uruguay and Kyrgyzstan. Additionally, FAO remains available to support its member countries upon explicit request of national focal points. Interested parties should contact us at environment-statistics@fao.org.

Climate Change Relevant Statistics

(Contributed by Francesco N. Tubiello, Javier Montero Serrano, Giulia Conchedda, Eduard Bukin)

FAO continued its development of climate change relevant statistics in 2016. Its signature FAOSTAT Emissions database (http://www.fao.org/faostat/en/#data/GT/visualize) was updated to include 2014 estimates, showing global annual increases of about 1% in total CO_2 eq. emissions from agriculture, forestry and other land uses, in contrast with observed trends in fossil-fuel emissions, which had remained flat in recent years. As done in 2015, the European Union completed its GHG reporting to the UNFCCC by including a full QA/QC analysis of its 28 GHG Inventories using FAOSTAT data as a reference.

Furthermore, FAO launched a new data domain on 'Emissions by Sector,' a new agri-environmental indicator representing, for each country and over the time series 1990-2010, the percentage share of emissions from agriculture and the land use sector compared to the total economy (http://www.fao.org/faostat/en/#data/EM/visualize). The data are specifically useful in providing an overview of the importance of land-related emissions compared to other sectors, to inform mitigation policies. Such analyses can usefully support the new process of National Determined Contributions (NDCs) of the Paris Agreement under the UNFCCC. FAO is preparing an analysis of the results to be published in early 2017. Overall, the data show the larger preponderance of agricultural emissions in least-developed countries, as well as a tendency for such shares to diminish over time as rural economies develop. An additional agri-environmental indicator of relevance to climate change is planned for release by end of December 2016, representing GHG emission intensities, i.e., emissions per unit of specific agricultural commodities (milk, meat, eggs, rice, etc.). These new data products contribute to ongoing international efforts led by UNECE on the production of climate change-related statistics.

E-waste Statistics Project on "Improving the Knowledge Base to Solve the E-waste Problem"

(Contributed by Kees Balde, United Nations University)

Why?

According to UNU e-waste statistics report, about 42 million metric tons (Mt) of e-waste were generated globally in 2014. Although these devices are an essential part of our daily modern life, the societal impact of e-waste can be severe if the e-waste is not managed according to proper waste management standards. One of the sad highlights is that of the 42 Mt generated e-waste, only 6.5 Mt were documented as collected and recycled. In Africa and Asia, there are many examples of large e-waste dumpsites, but from where and how exactly the e-waste gets there, is not officially documented. In developed countries, large flows of undocumented e-waste may be treated or processed with inferior standards. Needless to say, the environment is also adversely affected.

The Plan

To improve the current e-waste statistics, UNU, OECD, and UNECE have done pilots in e-waste statistics in 2015 and 2016. This covered the OECD and CIS region. UNSD, in collaboration with UNU, will continue with testing those questionnaires by sending it to a selection of countries in early 2017.

Main Concepts

The main concept of e-waste statistics is to calculate "e-waste generated" through sales and lifetimes, and to track the flows of the generated e-waste. The e-waste is treated with the highest standards if it is collected and recycled by official take back systems. Other flows of e-waste are disposal in waste bin (residual waste) and trading of it outside official take back systems. If traded outside the official take back systems, it is not clear if the waste is properly recycled, moved across borders, or dumped.

For more information:
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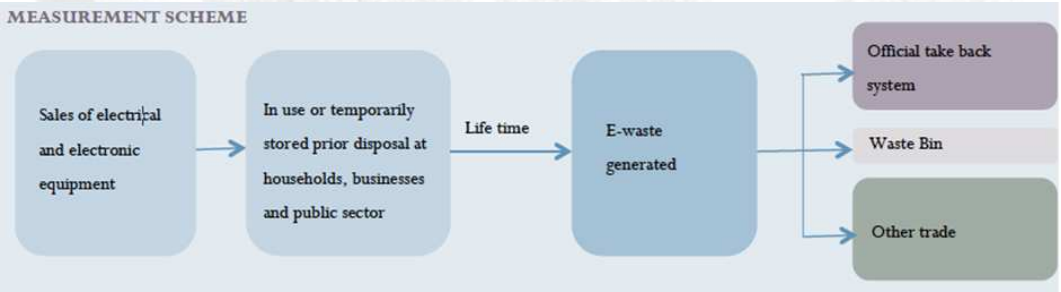
Guidelines on methodology and can be found here:
http://ehs.unu.edu/research/e-wastequantification.html#outputs



OECD NEWS

(Contributed by Myriam Linster, Environment Directorate, OECD)

The 2016 meeting of the OECD Working Party Environmental Information (WPEI) took place on 16-17 November in Paris. It gathered over 80 delegates from OECD member, accession and partner countries, and international organisations, and was chaired by Paula Brand (Environment Canada).

The WPEI is the formal body of the OECD that steers the work on information, indicators and reporting related to environment and sustainable development. The aim is to develop, through appropriate co-ordination, objective, reliable and comparable environmental information at international level, and to establish effective mechanisms to inform the public and decision-makers. The WPEI also provides a forum for helping countries improving their environmental information systems.

The 2016 meeting discussed ongoing work to further improve the relevance and quality of environmental and green growth indicators, work on environmental accounting, as well as efforts to further streamline the collection of internationally harmonised environmental data. It also allowed for more general exchange on recent developments and challenges in the field of environmental information and reporting (big data and citizen science projects; information systems and institutional coordination).

Green growth headline indicators remain high on the WPEI agenda as the OECD has been advancing the measurement agenda on several of these indicators. Work in 2017-18 will dwell upon the ease of communication and interpretation of the indicators. It will also include further research on indicators reflecting economic opportunities arising from green growth or the policy measures taken to create such opportunities, further testing of indicators on environmentally related transfers (taxes, subsidies) and on innovation (patents), in OECD country reviews, as well as continued methodological and statistical work on conversions in land cover and changes in soil quality, building on data from earth observations, and on demand-based measures of material flows (material footprints). An updated report on OECD Green growth indicators will be published in June 2017.

Another work stream that remains high on the WPEI agenda is environmental accounting and the implementation of the SEEA. Countries supported an extension of the mandate of the **OECD Task Force** on the implementation of the SEEA for the next two years, and appreciated new work on estimating **carbon emission accounts** by using energy statistics and emission inventories. This is coordinated with work at Eurostat and at UNSD to compile global environmental accounts starting with energy, air emissions and material flow accounts.

New work on measuring **protected areas**, using the World Database on Protected Areas (WDPA) maintained by the UNEP World Conservation Monitoring Centre, was welcomed. It consists of a GIS-based methodology developed to improve existing OECD indicators on protected areas in a way that is harmonised across countries and over time, and that reflects the actual extent of protected areas without double-counting overlapping sites. A call was made to connect this OECD work with ongoing discussions under the Convention on Biological Diversity (CBD), and to search for a broader international validation and use of the methodology.

The WPEI supported a further **streamlining** of the OECD's regular data collection and treatment process, in co-operation with international partners, and welcomed a proposed **alignment of the data collection on environmental expenditure with the SEEA** and the EU environmental protection expenditure accounts. Calls were also made to ensure that the data collected by the OECD in cooperation with UNSD/UNEP and Eurostat are used efficiently at international level, and that proper coordination takes place when it comes to mobilising data for calculating SDG-related indicators.

UNSD presented recent developments concerning environment statistics, including the implementation of the FDES 2013, the application of the Environment Statistics Self-Assessment Tool (ESSAT) for countries, the biennial data collection through the UNSD/UNEP Questionnaire on Environment Statistics (waste and water statistics) that is fully coordinated with OECD and Eurostat, and the role of the Inter-Secretariat Working group on Environment Statistics (IWG-ENV) in coordinating work on environment statistics among international organisations (UN bodies, OECD, Eurostat).

Hans Bruyninckx, the Executive Director of the European Environment Agency, gave a presentation on Europe's transition agenda towards green, circular, resource efficient and low carbon economies, and the need for information and knowledge that not only capture past and future trends, but help understand systemic challenges and increasingly integrated policy issues.

UN-ESCWA NEWS

(Contributed by Wafa Aboul Hosn, Statistics Division, UN ESCWA)

Climate Change-related Statistics in the Arab Region. A Proposed Set of Indicators

In the countries of the Arab region, climate change and its impacts represent a major challenge to sustainable development. Availability of reliable statistics is crucial for measuring and monitoring its economic and social impacts at the national and regional levels. In the current issue of the Compendium of Environment Statistics in the Arab Region 2014-2015 (E/ESCWA/SD/2015/3), a new chapter was introduced on air pollution and climate change. However, there is a lack of climate change-related statistics in the region. Available statistics suffer, among others, from poor quality and accessibility. National statistical offices (NSOs) in the Arab region are aware of the complexity of the climate change issue and the challenge related to the compilation of the related statistics. They support the recommendations of the United Nations Statistical Commission on climate change statistics and have expressed interest in assistance to build their capacity to respond to the need for climate change-related statistics.

The Statistics Division in ESCWA prepared a report that proposes a set of climate change-related indicators for compilation by all countries in the region. The set has been chosen to be relevant to the region, not so large as to be burdensome to compile, feasible given existing data and methods and consistent with international recommendations in this area.

The report will be discussed in an expert group meeting in 2017 to gather the views of experts in the region on climate change-related statistics to be collected by national statistical offices (NSOs) in the Arab region.

UNECE NEWS

(Contributed by Tiina Luige, Michael Nagy, Gady Saiovici and Anu Peltola)

Conference of European Statisticians Road Map on Statistics for Sustainable Development Goals

The Conference of European Statisticians (CES)' Steering Group is currently finalising the work on the **CES Road Map on Statistics for SDGs**. The Steering Group consists of 17 countries, three international organisations and is co-chaired by Switzerland and the United States. The first edition of the Road Map will be presented to the CES plenary session in June 2017.

The Road Map supports the implementation of the *Declaration on the role of national statistical offices in measuring and monitoring the Sustainable Development Goals*[2] that CES adopted in June 2015. The Road Map deals with assessing readiness of countries to report global SDG indicators; criteria and process for selecting national and regional indicators; reporting on global indicators (data flows, etc.); capacity building; and communication and dissemination. Each section contains recommendations to national statistical offices and actions for the Steering Group. The Road Map will contribute to the Global Action Plan for Sustainable Development Data by initiating concrete actions to implement statistics for SDGs.

A number of countries are setting up National Reporting Platforms for providing SDG indicators. The CES Bureau set up a dedicated Task Force in October 2016 to exchange experience in this area and describe the key technical features of National Reporting Platforms. The Task Force will prepare a guide explaining pros and cons of different reporting possibilities. The first results of the work of the Task Force will be presented at the CES plenary session in June 2017.

CES has produced the ***CES Recommendations on measuring sustainable development***[3] (adopted in 2013). This work was done before the discussion on SDGs had even begun. Therefore a dedicated Task Force (chaired by the Netherlands) adjusted the Recommendations take into account SDGs and mapped the SDG indicators to the framework presented in the CES Recommendations. The Task Force is currently preparing its final report.

Advancing the Development of Climate Change-Related Statistics

The Paris Climate Change Agreement, agreed under the United Nations Framework Convention on Climate Change (UNFCCC), came into force in November 2016 following a vote of the European Parliament and ratification by the European Union in early October 2016. On 5-7 October 2016, 78 climate experts and statisticians were gathered in Geneva for the **2016 UNECE Expert Forum for producers and users of climate change-related statistics** to consider the upcoming data requirements of the Paris Agreement. The Expert Forum is organized annually by a UNECE Steering Group (led by Norway) including UNFCCC, IEA, EEA, Eurostat, FAO and a number of countries.

[2] See ECE/CES/89/Add.1 under http://www.unece.org/index.php?id=38920#/
[3] http://www.unece.org/publications/ces_sust_development.html

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The Paris Agreement will oblige governments across the world to take stronger action to address climate change and its impacts, including larger emission reductions, adaptation to the impacts of climate change and provision of financial and technological support to developing countries. All these aspects will need to be measured using reliable data and statistics. As many of the new nationally determined contributions (NDCs) relate to energy efficiency, the 2016 Expert Forum included a session on developing energy statistics for climate change.

The meeting also shared the most recent results of the work on climate change-related statistics in the UNECE region, including:

- A narrative[4] to demonstrate the value of official statistics for climate change analysis.
- A template for developing road maps[5] to improve official statistics for climate change analysis and reporting and illustrate how to implement the *Recommendations on Climate Change-related Statistics*[6].
- Results of a survey of countries' progress in developing data for greenhouse gas emission inventories and climate change-related statistics targeted to statistical offices and inventory agencies.

The Forum encouraged active national collaboration in climate reporting, involving the national statistical office, environment agencies and greenhouse gas inventory compilers as well as UNFCCC and IPCC focal points. As an outcome of the Forum, some countries volunteered to develop a national road map to improve official statistics for climate analysis and share their experience at the next meeting.

For more information on the Expert Forum, see: www.unece.org/index.php?id=41299

A UNECE Task Force (led by Italy) is currently finalising a core **set of climate change-related indicators**. In March 2016, UNSC expressed interest in using the indicator set as a basis for developing a global set of indicators applicable to countries at various stages of development.

The objective of the Task Force is to define an internationally comparable set of key climate change-related statistics and indicators that can be derived from the UN System of Environmental-Economic Accounting (SEEA) to the extent possible and other sources, such as the UN Framework for the Development of Environment Statistics (FDES 2013). The work takes into account the UN Sustainable Development Goals (SDGs), the Sendai Framework on Disaster Risk Reduction (Sendai Framework) and the requirements under the UNFCCC, including, as appropriate, the recent Paris Agreement (December 2015). Members of the Task Force represent the National Statistical Offices (NSOs) of 10 CES member states and 9 international organisations. The work of the Task Force work is guided and overseen by the CES Steering Group on Climate Change-related Statistics.

By applying a selection procedure that takes into consideration the criteria of relevance, methodological soundness and data availability the Task Force identified a set of 39 headline climate change-related indicators for the five main areas: drivers, emissions, impacts, mitigation and adaptation. These indicators are internationally comparable and aim to paint the big picture of climate change. Some countries will pilot test the climate indicator set nationally. The Task Force will present its final report to the CES plenary session for approval in June 2017.

Another UNECE Task Force is working on **Measuring Extreme Events and Disasters** (led by Italy). The aim is to clarify the role of official statistics in providing data related to extreme events and disasters, and identify practical steps how national statistical offices in coordination with national agencies responsible for disaster management can support disaster management and risk reduction. The work is undertaken in close collaboration with the ESCAP Working Group on Disaster-related Statistics in Asia and the Pacific.

The monitoring of the Sendai Framework on disaster risk reduction will require data from statistical offices. Important data requirements relate to official statistics, for instance data needed to analyse missing or affected people, economic and agricultural losses, economic value of damage, impacts on houses, road and railway networks, airports, electricity plants, education and health facilities, cultural heritage sites etc. The Task Force is also contributing to the process led by the UNISDR Open-ended Intergovernmental Expert Working Group (OEIWG) Indicators and Terminology to develop a monitoring system for the 2030 Sendai Framework for Disaster Risk Reduction.

[4] www.unece.org/fileadmin/DAM/stats/documents/sustainable_development/Growing_need_for_official_statistics_in_measuring_climate_change.pdf
[5] www.unece.org/fileadmin/DAM/stats/documents/ece/ces/2016/mtg/Road_maps_final_for_discussion.pdf
[6] www.unece.org/stats/publications/ces_climatechange.html

Implementing the System of Environmental-Economic Accounting (SEEA) in the UNECE region

The second **Joint OECD/UNECE Seminar on SEEA Implementation** was held in Geneva from 3-4 October 2016. Representatives of 30 countries, international organisations, research, NGOs and some private sector participants discussed the applications of SEEA and their communication, and implementation challenges and solutions related to energy and air emission accounts, and related to accounts on environmental taxes and subsidies.

The session on applications and communication of SEEA presented examples from a number of countries and considered the key success factors for better engaging with users. While countries face a range of practical problems in compiling the accounts, the meeting showed that even with imperfect data it is possible to compile accounts that provide users with valuable and fit for purpose information.

The participants considered the format of Joint OECD/UNECE Seminars on SEEA implementation very useful for exchange of experience and for advancing SEEA implementation in countries. The future seminars will bring forward the regional and national SEEA implementation plans, discuss new developments, such as the extensions of SEEA modules, allow exchange of knowledge and experience on difficult issues related to the implementation of SEEA, and support the coordination of SEEA-related activities of international organisations.

All presentations, background documents and the report of the seminar can be found on the meeting website
http://www.unece.org/index.php?id=41150#

Developing Environment Statistics and Indicators

The UNECE Joint Task Force (JTF) on Environmental Statistics and Indicators works under the auspices of the Conference of European Statisticians (CES) and the UNECE Committee on Environmental Policy (CEP). Its aim is to assist the countries of Eastern and South-Eastern Europe, the Caucasus and Central Asia in implementing environmental indicators in the context of the pan-European Shared Environmental Information System (SEIS), SEEA, sustainable development and green economy.

The 12th Meeting of the JTF (Geneva, 17-18 November 2016) reviewed the implementation of the UNECE recommendations for the production and online sharing of environmental indicators, focusing on energy and biodiversity. Another focus of the meeting was on the development of a Shared Environmental Information System (SEIS) and countries' needs for capacity building.

The meeting decided to revise the production templates for the energy indicators in the UNECE online *Guidelines for the application of environmental indicators*. This should result in simplified tables, consistent with the Standard International Energy Product Classifications, and provide more detail on renewable energy. All member countries were encouraged to establish a process of coordination and data sharing among all relevant governmental agencies producing energy data. The meeting also decided to revise the set of biodiversity indicators in the UNECE Guidelines to take into consideration better alignment with biodiversity-related SDG indicators. The future meetings will discuss the use of non-official data sources for production of environmental statistics and indicators, and the link between indicators related to energy, climate change, agriculture and forestry. The next meeting of the JTF will be on 29-30 June 2017 in Geneva.

All presentations, background documents and the report of the meeting can be found on the meeting website
http://www.unece.org/index.php?id=43450#

EUROSTAT NEWS

(Contributed by Arturo de la Fuente, Eurostat)

An overview of Eurostat activities on environmental statistics, environmental accounts and sustainable development indicators can be found here. The following is a summary of developments in the last six months.

Environmental statistics

- Water statistics: as regards water statistics, the 2016 OECD/Eurostat Joint Questionnaire on Inland Waters was launched at the end of September 2016 with a reporting deadline of December 2016.
- Waste statistics: In October 2016, European waste statistics were updated with data for reference year 2014. Moreover, data on management of waste excluding major mineral waste, corrected by data on waste imports and exports, are published for the first time. This dataset shows the amounts of waste recovered, landfilled and incinerated.

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- As regards the Environmental Data Centre on Natural Resources (EDCNR), Eurostat launched a completely revised and user friendly web site of the EDCNR on 18 December 2015. The web site was translated into German and French languages. In the first half of 2016 the implementation of German and French versions of the EDCNR homepage was conducted.
- As regards chemical indicators, the new dataset 'Production and consumption of chemicals by hazard class' was published in the Eurostat Database in October 2016, see Database by themes>Environment>Chemicals (env_chm) >Production and consumption of chemicals by hazard class (env_chmhaz). The naming of the classes was revised in order to be consistent with other datasets of Eurostat. This harmonization has no impact on the methodological definition of the classes, i.e., only the names have been adjusted. The update of Statistics explained article 'Chemicals production statistics' is planned for December 2016. On 8 November 2016 Eurostat published the Statistical working paper 'Compilation of chemical indicators. Development, revision and additional analyses'. The methodology paper provides a comprehensive description of the way chemical indicators have been developed by Eurostat.
- Forestry statistics: data on production and trade in wood products in 2014 and 2015 were collected through the Joint Forest Sector Questionnaire between June and October 2016 and will be published in December 2016.
- Biodiversity indicators: data on Natura 2000 areas were updated to 2015, while the sufficiency indices were updated to 2013. The latter express the degree to which the European Commission considers each national network of Sites of Community Importance (SCIs) under the Habitats Directive to suffice in terms of number, extent, distribution and representativeness of species and habitats covered. For birds as a special indicator taxon, composite EU indicators for common bird species and the latest national farmland bird indicators were updated to 2014.

SEEA Environmental Accounts

Eurostat launched the 2016 collections of environmental accounts data, including environmental taxes, economy-wide material flow accounts, air emission accounts, environmental goods and services sector accounts ('*EGSS*'), environmental protection expenditure accounts ('*EPEA*') and physical energy flow accounts. These datasets are collected on an annual basis. Provision of the former three datasets is mandatory for the EU Member States. The latter three datasets are in 2016 still reported on a voluntary basis until their transmission becomes mandatory in 2017. Eurostat will publish the results once the processing of specific datasets has been completed (at the latest by April-2017). In addition there is a pilot data collection on environmental subsidies.

With a view to assisting the EU Member States in the changeover to the mandatory reporting of the data on EGSS and EPEA, Eurostat initiated the process of updating and enhancing the handbooks with guidance for compilers of the data. The new Eurostat EGSS handbook was published in October 2016. In the coming months, a release of final versions of other manuals is envisaged.

In the first half of 2016, Eurostat completed a review of the economic and environmental accounting framework for data on forests, and the collection of the European Forest Accounts was launched in July 2016. The final set of the tables covers physical and monetary accounts for land, timber and physical and monetary supply and use of wood. The economic aggregates collected continue the existing time series (since 1986) and will be published in December 2016.

Many environmental accounts handbooks and questionnaires are available here.

Eurostat facilitated training courses on environmental statistics and SEEA for European compilers. Material from past courses is available here. The following courses are planned for 2017: waste statistics, water statistics, environmental goods and services sector accounts, environmental protection expenditure accounts, environmental taxes, environmental subsidies and similar transfers, and physical energy flow accounts.

European Environment Agency's Activities on Environment Statistics in the Context of the European Neighbourhood Policy

(Contributed by Cécile Roddier-Quefelec, Galina Hristova, Roberta Pignatelli (EEA) and Jean-Pierre Giraud (UNEP MAP, Plan Bleu))

The European Environment Agency (EEA) is continuing its cooperation activities with regard to the Shared Environmental Information System (SEIS). In addition to its 33 member and six cooperating countries[7], the EEA also cooperates and fosters partnerships with its neighbours and other countries and regions in the context of the European Neighbourhood Policy (ENP).

The EEA is engaged in implementing SEIS principles and practices in the ENP South and East regions. After a first implementation phase (2010-2015), the second phase (2016-2020) involves two projects that cover the ENP East and South regions, respectively. The projects are funded by the EU's European Neighbourhood Initiative (ENI) and implemented by the EEA.

For both regions, the main project partners in the countries are leading national environmental and statistical organisations in the field of environmental information, i.e., ministries, agencies and statistical offices responsible for collecting, producing, storing and disseminating environmental data and information. Each partner country has nominated two National Focal Points. These are high-level officials who represent the environmental and statistical organisations and take responsibility for managing and developing environmental information in the countries.

The overarching objective of the ENI SEIS II East project is to support the further implementation of SEIS principles and practices in the six Eastern Partnership countries (Armenia, Azerbaijan, Belarus, Georgia, Moldova and Ukraine). The specific objective of ENI SEIS II East is to strengthen the regular production of environmental indicators and assessments as a contribution to knowledge-based policy-making and good governance in the field of the environment. This will result in the improved implementation of countries' international commitments related to environmental reporting; improved national capacities related to management and use of environmental data, statistics and information; and technical assistance in the preparation of regular State of the Environment reports and indicator-based assessments in line with EU/EEA best practices.

The development of common data structures and indicators for the Eastern Partnership countries will be done in close partnership with UNECE and its Joint Task Force on Environmental Statistics and Indicators and the Working Group on Environmental Monitoring and Assessment. Throughout the project, synergies will be maintained with relevant initiatives at the regional level and in line with EU and international developments. These will link to the green economy, environmental accounting, Sustainable Development Goals (SDGs) and the post-2015 agenda.

The SEIS Support Mechanism - South will be implemented jointly by the EEA and the United Nations Environment Programme/Mediterranean Action Plan (UNEP/MAP). This will ensure proper linkages with the agreed work programme of Horizon 2020 for the second phase of work (2015-2020) and other relevant EU-funded initiatives in the region.

The specific objective of the SEIS Support Mechanism - South is to improve the availability of and access to relevant environmental information to the benefit of effective and knowledge-based policy-making in the ENP South region (Algeria, Egypt, Israel, Jordan, Lebanon, Libya, Morocco, Palestine and Tunisia).

Among the expected results is the refinement and consolidation of the Horizon 2020 indicator set, such that it can serve multiple purposes, ensure that the progress towards achieving Horizon 2020 objectives is properly measured and contribute to assessing compliance with commitments under the Barcelona Convention. The preparation of indicator-based reports and assessments is envisaged to be done in line with good practice examples from the EU region, and based on the Eionet's experience of working with the EEA.

This will be achieved through specific regional and country-level activities that aim to support regional reporting through established and regular national data flows based on common requirements; ensure coherence and harmonisation of methodologies; and guaranteeing the policy relevance and uptake of the information reported in support of better environmental governance.

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[7] The 33 EEA member countries include the EU member countries together with Iceland, Liechtenstein, Norway, Switzerland and Turkey. The six cooperating countries are the western Balkan countries. Southern neighbours include Algeria, Egypt, Israel, Jordan, Lebanon, Libya, Morocco, Palestine*, Syria and Tunisia. Eastern neighbours include Armenia, Azerbaijan, Belarus, Georgia, Moldova, Russia and Ukraine.

* This designation shall not be construed as recognition of a State of Palestine and is without prejudice to the individual positions of the Member States on this issue.

[8] http://eni-seis.eionet.europa.eu/east

[9] http://eni-seis.eionet.europa.eu/south

[10] Horizon 2020 work programme 2015-2020 as agreed by the H2020 Steering Group in December 2014: http://enpi-seis.pbe.eea.europa.eu/assessment/assesment-south/horizon-2020-workprogramme-2015-2020/h2020-workprogramme-en, Actions and priorities table: http://enpi-seis.pbe.eea.europa.eu/assessment/assesment-south/horizon-2020-workprogramme-2015-2020/h2020-workprogramme-activity-table-en

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The envisaged activities up to 2020 are in line with the **Union for the Mediterranean Ministerial Conference on Environment and Climate Change**[11] Declaration of May 2014 and the agreed work plan for the second phase of the Horizon 2020 Initiative for a Cleaner Mediterranean (2015-2020). Further to that, the mandate of the H2020 Group for Review and Monitoring (RM) has been revised with the overall objective of monitoring progress in the implementation of the Horizon 2020 Initiative, particularly through appropriate information sharing systems that are easily accessible to all Mediterranean partners, in cooperation with relevant partner organisations. The Group is co-chaired by the EEA and the UNEP-MAP Secretariat.

The main tasks of the H2020 RM Group are to support projects and activities that develop a coherent indicator-based reporting process for Horizon 2020, as well as to coordinate activities of the EEA, Eurostat, UNEP/MAP and other relevant institutions that improve knowledge on the Mediterranean environment and help to prepare the State of the Mediterranean Environment report. The Secretariat of the Union for the Mediterranean and representatives of its member countries, the League of Arab States, representatives of NGOs and civil society organisations, European Commission partners, academia and other sub-group partners have been invited to the group's yearly meetings along with the EEA and UNEP/MAP. Each country designates a representative who will act as a Focal Point for Review and Monitoring (MEDPOL[12] Focal Point or its representative together with the person in charge of the national State of the Environment reporting process).

The SEIS/H2020 indicator activities are closely linked with the Plan Bleu[13] programme of work and, in particular, with the development of indicators that monitor the implementation of the **Mediterranean Strategy for Sustainable Development (MSSD) 2016-2025** in line with the **SDGs**. In 2016, two international workshops took place, which gathered representatives of the Mediterranean countries, international experts and institutions and selected a core set of about 50 indicators linked to the six objectives of the MSSD.

This core set will be assessed and presented as a "Mediterranean Sustainable Development Dashboard" to the Mediterranean Commission on Sustainable Development and then to the Contracting Parties of the Barcelona Convention in 2017[15]. The involvement of the Mediterranean countries and Plan Bleu partners is the key success factor for the completion and regular update of the dashboard. In addition to this process, Plan Bleu is developing a core set of indicators on the Blue Economy in Mediterranean coastal and sea areas in order to monitor MSSD Objective 5: Transition towards a green and blue economy.

In the development of these core sets of indicators in the Mediterranean region, Plan Bleu takes the SDG process, the System of Environmental-Economic Accounting (SEEA) and the Framework for the Development of Environment Statistics (FDES 2013) into account as far as possible.

Progress in Implementation of the Framework for the Development of Environment Statistics (FDES 2013) in the COMESA Member states

(Contributed by the Common Market for Eastern and Southern Africa (COMESA))

The implementation of the FDES 2013 in the COMESA Member States took another leap with a national kick off workshop in Egypt in September 2016 and a national data validation workshop for Ethiopia. Another kick off workshop was held in Madagascar in September. Besides these two countries, the implementations are on-going in Zambia and Zimbabwe.

The workshop for Ethiopia was held in early November 2016.The main purpose of the workshop was to validate the data gathered from different environmental data producers for effective implementation of the FDES 2013 in Ethiopia. Following the initial workshop in June 2016 and the results of the Environment Statistics Self-Assessment Tool (ESSAT), each of the stakeholders was assigned to gather relevant data from the respective institutions. Accordingly, this workshop was prepared to achieve the following specific objectives: to thoroughly assess the data gathered by the members as per the requirements of the framework; to identify any missing data but could be obtained by exerting further efforts; to cross-check environmental statistics generated or compiled from more than one source; and to discuss the way forward concerning Ethiopia's FDES implementation before the end of 2016 as well as the various challenges and their possible solutions to achieve the target.

The workshop in Ethiopia was attended by 16 local participants representing the following institutions: Central Statistical Agency,

[11] http://ufmsecretariat.org/euro-mediterranean-cooperation-on-environment-and-climate-change-ufm-holds-ministerial-meeting-in-athens/
[12] The MED POL Programme is the marine pollution assessment and control component of UNEP/MAP.
[13] Plan Bleu is the observation, analysis and prospective centre of the UNEP/MAP – Barcelona Convention (http://planbleu.org/).
[14] https://planbleu.org/sites/default/files/publications/mssd_2016-2025_final.pdf
[15] A first version of the Indicators factsheets is available at http://planbleu.org/en/outils-et-methodes/indicateurs

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Ministry of Agriculture and Natural Resources, Ethiopian Development Research Institute, Geological Survey of Ethiopia, Ethiopian Revenues and Customs Authority, Ministry of Water, Irrigation and Energy, Ministry of Urban Development And Housing, Institute of Biodiversity, National Planning Commission, and Ministry of Environment, Forest and Climate Change.

In Egypt, the kick-start opening remarks were made about the objectives of the workshop, led by the Ministry of Environment and the Central Agency for Public Mobilisation and Statistics (CAPMAS). The following were the objectives of the workshop:

- To build capacity among stakeholders for effective implementation of the FDES;
- To understand the FDES;
- To create awareness on the FDES to stakeholders that produce environmental data;
- How to use the ESSAT;
- To enhance coordination among environmental data users; and
- To localise the FDES tool in the Egyptian context.

The stakeholders presented the statistics already available for the different components of the FDES 2013. The overview of the situation of statistics, and also particularly on environment statistics, was clearly encouraging as the country already publishes State of the Environment reports and a few environment statistics. The workshop was therefore expected to bring the wider group of stakeholders especially the primary data producers. COMESA and UNSD both provided their technical assistance during the workshop.

In order to understand the scope of environment statistics in various sectors of the country, challenges and strengths being experienced, stakeholders were invited to make presentations with respect to their sectors following the various presentations on the FDES 2013 components. The ESSAT was used to assess the data availability. The tool revealed that important data sets were available and that the way forward and roadmap were promising for the successful implementation of the FDES 2013. The next step would therefore be the steering committee meetings, data collection, validation and publication.

All the countries listed above are on the way to implement the FDES 2013 and it is expected that environmental statistics would be available as per the FDES 2013 soon. The next member states to benefit from COMESA technical supports to implement the FDES 2013 include Seychelles, Sudan and Malawi.

ECLAC Activities in Latin America and the Caribbean

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

ECLAC's environment statistics team is carrying out the compilation and validation of environment statistics data series to update the CEPALSTAT database (http://estadisticas.cepal.org/cepalstat/WEB_CEPALSTAT/Portada.asp; http://estadisticas.cepal.org/cepalstat/WEB_CEPALSTAT/Portada.asp?idioma=i) with the most recent data. The compilation of these data series is also used for the 2016 Statistical Yearbook, which will be published at the beginning of 2017. The Statistical Yearbook has been recently redesigned to properly show the economic, social and environmental situation of the region in relevant issues. ECLAC's environment statistics team has made an effort to update the most relevant issues according to the 2030 Agenda.

Within its capacity building activities to LAC countries, ECLAC's office in Brasilia in cooperation with ECLAC's Division of Statistics, Brazil's IBGE and its Ministry of the Environment, organized a national Training Workshop for Brazil between 22 and 26 August 2016, which trained 40 national practitioners in the fundamentals of environment statistics and methodologies to construct and sustain environment SDG indicators using real data sets. As a result, seven complete environmental SDG indicators were compiled and their respective methodological sheets were completed. Recently, another national Training Workshop and Technical Assistance mission were organized jointly by ECLAC's environment statistics team and the Ministry of Environment of Panamá. It was held in Panama City between 15 and 18 November 2016. It trained 50 national practitioners in the development of SDG indicators and environment statistics using their national environmental data sets (http://www.cepal.org/es/eventos/fortalecimiento-la-produccion-estadisticas-elaboracion-indicadores-ambientales-seguimiento). This time, nine complete environment SDG indicators were compiled and their respective methodological sheets were completed.

ECLAC's environment statistics team is also technically supporting the INEGI-ECLAC-IDB Regional Public Goods project "Development and Strengthening of Official Environmental Statistics through the Creation of a Regional Framework in Latin America and the Caribbean". The activities of the project are progressing very well. Within the last regional meeting held in Quito,

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Ecuador from 13 to 14 April 2016, the regional strategy and national plans to strengthen and develop environment statistics that were constructed were discussed with participating countries (Bahamas, Belize, Colombia, Costa Rica, Dominican Republic, Ecuador, Jamaica, Mexico, Panama, Suriname and Venezuela) and partner agencies. Currently, the activities of the third component are being prepared, focusing on the development of a regional environment statistics toolkit, which was presented and launched in the recent project workshop held in the Bahamas from 1 to 2 December 2016.

Activities in the first stage of the 10th Tranche UN Development Account Project "Regional sub-program to strengthen the statistical capacities of Central America, Dominican Republic and Cuba for the construction and maintenance of SDG environment indicators" are being developed. Invitation letters have been sent to the main involved institutions in each selected country (National Statistics Institutes and Ministries of Environment) to actively participate in the project. Related agencies have been accordingly informed and invited to participate (for instance: FAO Regional Office, Regional UN Environment, SICA and OLADE). Mexico has been invited as a collaborator country to support other countries in the region. It has had a very good response from countries expressing their availability to participate.

The coordinator of environment statistics of ECLAC participated, made presentations and delivered substantial inputs, on different training workshops and seminars. In chronological order, Regional UN Environment organized the training workshop "Regional expert meeting on sustainable consumption and production indicators: Latin America and the Caribbean initiative for sustainable development and the Sustainable Development Goals" held in Panamá on 2 to 3 August 2016. The statistical relevance and feasibility from a LAC perspective was discussed for relevant SDG's. Within ECLAC's Natural Resources Governance Week, held in Santiago 7-11 November (http://www.cepal.org/es/eventos/semana-la-gobernanza-recursos-naturales-la-infraestructura), the coordinator of environment statistics of ECLAC made two oral presentations. The first one discussed the current situation on SDA2030 on monitoring Energy SDGs, and was presented on the BIEE technical meeting. The other one presented on the seminar "Energy Efficiency and logistics: key issues for sustainable development" pointed out the current situation and methodological challenges for measuring sustainable development were discussed.

With regard to environmental accounting activities, ECLAC continues the implementation of the 9th Tranche UN Development Account Project, "Strengthening statistical capacities for building macroeconomic and sustainable development indicators in Latin America, the Caribbean and Asian-Pacific countries". The project, which is led by ECLAC and ESCAP in their respective regions, aims at the implementation of the SEEA 2012 Central Framework. LAC pilot countries (Brazil, Colombia, Curacao, Jamaica, Paraguay and Uruguay) were evaluated with respect to their current state of or potential for environmental accounting in 2015. At present, they are in the second project phase which means they receive an active support from ECLAC in their efforts to initiate or improve their accounts. As the needs of the six pilot countries differ widely, so did the activities realized by ECLAC in recent months. Brazil had already initiated the work on its first water account in 2012. Now the Executive Group on Water Accounts comprised of the National Water Agency (ANA), the National Statistical Office (IBGE) and the Secretariat for Water Resources of the Ministry of Environment (SRHU) is close to publishing the account and in order to review the results requested a technical assistance by ECLAC. Together with international experts from the Australian National University and the Inter-American Development Bank (IDB), this technical assistance was delivered in November 2016 and was accompanied by a public seminar to promote the use of water accounts for policy making. Paraguay, on the other hand, has not had any experience with the SEEA prior to the 9th Tranche project. During the evaluation mission an Environmental Accounting Committee (Comité de Cuentas Ambientales) was founded and is currently initiating the work for pilot accounts in the area of water, forests and environmental protection expenditure. In order to facilitate the work of the teams for these three accounts, ECLAC provided a one week introductory course on environmental accounting in November 2016. Further technical assistance in Paraguay is planned for the first semester of 2017.

ECLAC also continues the collaboration with the World Bank's WAVES project (**W**ealth **A**ccounting and the **V**aluation of **E**cosystem **S**ervices) in order to promote the implementation and use of environmental accounts in the LAC region. For this purpose a detailed study of the present state of SEEA implementation in LAC countries is currently under way and a second regional conference is planned for spring 2017.

A Toolkit to Support the Development of the Official Environment Statistics in Latin America and the Caribbean

(Contributed by Martin Wilson, INEGI-MEXICO)

Two workshops were held, one in Belize City, Belize (31 August - 1 September 2016) and the other in Nassau, The Bahamas (1-2 December 2016) to present and validate the methodological and technical Toolkit that has been developed to help the growth of the environment statistics in Latin America and the Caribbean. Such events called upon the National Statistics Offices and the Environment Ministries' representatives from the 11 signatory countries participating in the Regional Public Goods Project financed by the Inter-American Development Bank and executed by INEGI.

In terms of structure, the Toolkit is an attractive and easy to use digital application, and in terms of content, incorporates many technical and methodological tools addressed to guide and support the tasks of the environment statistics information producers, whatever their stage of development.

Beyond the national institutions involved, the events included the participation of the United Nations Statistics Division (UNSD) representative, the Economic Commission for Latin America and the Caribbean (ECLAC) representative, and the United Nations Environment Programme (UNEP) representative. From the Executing Body (INEGI), Mr. Carlos Guerrero Elemen, General Director of Geography and Environment, in his role of chief of Project and Mr. Martín Wilson Sanchez, Director of Environment Surveys, in his role of Project technical coordinator, attended the events.

ESCAP NEWS

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

ESCAP is working with its member States to improve the availability and quality of environment statistics, guided by the Framework for the Development of Environment Statistics (FDES) and the System of Environmental-Economic Accounting (SEEA) to support policy decisions in achieving national development priorities and the Sustainable Development Goals (SDGs).

In 2016, ESCAP initiated a series of sub-regional assessment/training/work planning workshops on environment statistics. The workshops bring together government officials from national statistical offices, environment ministries and planning departments to enhance understanding of basic approaches to and discuss strategic planning for improving environment statistics. Two workshops were held in September 2016 for Pacific island countries in Nadi, Fiji, and in November 2016 for South-East Asian countries in Bangkok, Thailand. Two additional workshops for South and South-West Asia and East and North-East Asia are tentatively scheduled to be held in the first quarter of 2017.

ESCAP provided technical assistance to a number of countries in the region to strengthen environment statistics in accordance with FDES and SEEA:

- Scoping mission to Myanmar Central Statistical Organization to assess priorities and capacity for strengthening environment statistics, 15-16 November 2016;
- Technical assistance and training on the SEEA in Fiji on Water, Energy, Land in collaboration with the United Nations Statistics Division (UNSD), Nepal on Land and Forest, and Vanuatu on Water and Land;
- Assessment and training mission to Malaysia in collaboration with UNSD (focus on Water);
- Technical assistance to Fiji in collaboration with the UN World Tourism Organization to prepare a case study on linking tourism satellite accounts with the SEEA to account for tourism-related environment supply and use. A study will be completed by December 2016.

In addition, the Statistical Institute for Asia and the Pacific (SIAP) hosted a four-month training programme on Improving Capability in Producing Official Statistics for Monitoring the Post-2015 Sustainable Development Goals in Chiba, Japan from August to December 2016. The Sessions on environment statistics were delivered in November 2016 with the focus on Land, Water and Physical Supply and Use.

The regional work in the area of disaster statistics has resulted in a draft statistical framework for improving the quality of disaster-related statistics, including international comparability for global monitoring of Disaster Risk Reduction indicators. Built on work of the Asia-Pacific Expert Group on Disaster-related Statistics and pilot testing of the draft framework in Bangladesh, Fiji, Indonesia and the Philippines, the draft framework and subsequent development of statistical guidance material will be discussed at a workshop in Bangkok during the week of the ESCAP Committee on Statistics in December 2016.

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Planned activities

December 2016

Training and workshops

- Workshop on disaster-related statistics framework to advance the work on developing guidance for improving the quality of disaster-related statistics.

1st quarter, 2017

Training and workshops

- FDES training to the Philippines Statistics Authority and other departments providing environment statistics
- Sub-regional workshops on environment statistics for South and South-West Asian countries, and East and North-East Asian countries

In-country technical assistance

- Bangladesh Bureau of Statistics on environment statistics in collaboration with the UNEP/UNDP Poverty and Environment Initiative (PEI)
- Maldives National Bureau of Statistics on assessing availability and quality of environment statistics
- Nepal Central Bureau of Statistics to review pilot SEEA Land and Forest Accounts
- BPS Statistics Indonesia to review pilot SEEA Land Account
- Federated States of Micronesia (FSM) and Palau on compiling selected SEEA accounts
- Fiji Bureau of Statistics to review pilot SEEA Water and Energy Accounts
- Vanuatu National Statistics Office to review pilot SEEA Water and Land Accounts

COUNTRY NEWS

Environmental Statistics and Accounts in Finland

(Contributed by Leo Kolttola, Statistics Finland)

Finland has a long history in environmental statistics. The first compendium on environmental statistics was released already in 1973 and presented in the first UN/ECE meeting on environmental statistics. In its "framework", statistical data on the environment was presented by fields of administration. Later Statistics Finland has actively taken part in international co-operation, including contributing to the revision of the Framework for the Development of Environment Statistics (FDES 2013) and participating in the Expert Group on Environment Statistics (EGES) with few exceptions during the financial crises of Statistics Finland in 2014 to 2015. Budget cuts brought the end of the environmental yearbook, which had been compiled annually for 15 years.

The environmental statistics yearbook was an important tool in the coordination of environmental statistics in the national system of statistics. However, relations with the other two most important producers of environmental and natural resource data, the Finnish Environment Institute (SYKE) and the Natural Resource Institute Finland (LUKE), are tight and are developing. Both organizations are today part of the European Statistical System (ESS) and Statistics Finland has written agreements on cooperation with them.

During recent years, Statistics Finland has focused on the development of environmental accounting and the fulfillment of EU regulations concerning accounting. Recently, the work on Material Flow Accounts was transferred from the University of Oulu to

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Statistics Finland, the Air Emission Accounts were revised and Energy Accounts were developed. Revisions of Environmental Goods and Services Statistics and Environmental Expenditure Accounts are underway. In Finland, Statistics Finland is responsible for the National Greenhouse Gas Inventory. Environmental statistics and accounts, Energy statistics and the Inventory are compiled in close cooperation. Statistics Finland has tried to harmonize its data as far as possible and work with a common data management system. It has also provided technical advisory services in environmental statistics, accounts and energy statistics to countries in Europe and Central Asia: e.g., in Latvia, Ukraine, Russia and Kazakhstan.

As regards the dissemination and use of environmental statistics and accounts, Statistics Finland has been involved in the development of sustainable development and green growth indicators in many national and international projects:

http://tietokayttoon.fi/documents/1927382/2116852/Key+indicators+for+green+growth+and+material+and+resource+efficiency+in+Finland/73752af7-bffa-4fa0-ab9a-35d70f1826a4?version=1.0

https://norden.diva-portal.org/smash/get/diva2:915431/FULLTEXT01.pdf

Environmental accounts are presented on Statistics Finland's special thematic pages:

www.stat.fi/environmentalaccounts

Jamaica: Plastic Pollution – The Multi-Million Dollar Problem

(Contributed by Janet Geoghagen-Martin and Schmoi McLean, Statistical Institute of Jamaica)

The March 2015 fire at the Riverton City Dump affected 808,553 persons living in Kingston, St Andrew and St Catherine[16]; while the flooding of Marcus Garvey Drive in Kingston in September 2016 had devastating impacts on businesses and individuals working and living along that corridor The Fisheries Division and the Sugar Company of Jamaica estimated losses at between $200 and $300 million dollars[17]. Plastics are the second most collected item at the Riverton Dump, while the flooding was attributed to garbage, made up of plastic bottles, bags and Styrofoam among others, blocking drains along the Shoemaker Gully. These environmental events have made Jamaicans more aware of how human actions can have an adverse impact on economic activity, health and the overall quality of life.

Environment statistics is the application of statistical methodologies to the study of how such human activities and natural events not only affect the environment, but society's response to these impacts and nature's ability to rehabilitate and sustain itself.

Impact of plastics

Modernisation and growth of the Caribbean society, coupled with poor or inadequate solid waste management, has resulted in the improper disposal of waste. Most Central American and Caribbean countries dispose of their wastes into open air dumps due to a lack of adequate landfills, as stated by the United Nations Environment Programme (UNEP)[18].

In 2001, Jamaica developed a policy framework entitled "**A Short-term Strategy for the Management of Plastic Packaging Materials in Jamaica**[19]". The document recognised that plastic packaging materials (PPM), particularly polyethylene terephthalate (PET), which is mainly used to produce bottles, poses an immediate threat to public health and the natural environment due to indiscriminate dumping.

Jamaica imports over 40 items of plastics for the use of packing and conveyance. Figure 1 represents the top ten plastic items imported into Jamaica between 2011 and 2015.

[16] Public Defender's Investigative Report into March 2015 fire at Riverton City Dump/Disposal Site
[17] Jamaica Observer, Tuesday, 16 September 2016.
[18] http://www.unep.or.jp/ietc/ESTdir/Pub/MSW/RO/contents_Latin_A.asp
[19] A Short-term Strategy for the Management of Plastic Packaging Materials in Jamaica retrieved from the Ministry of Economic Growth and Job Creation.

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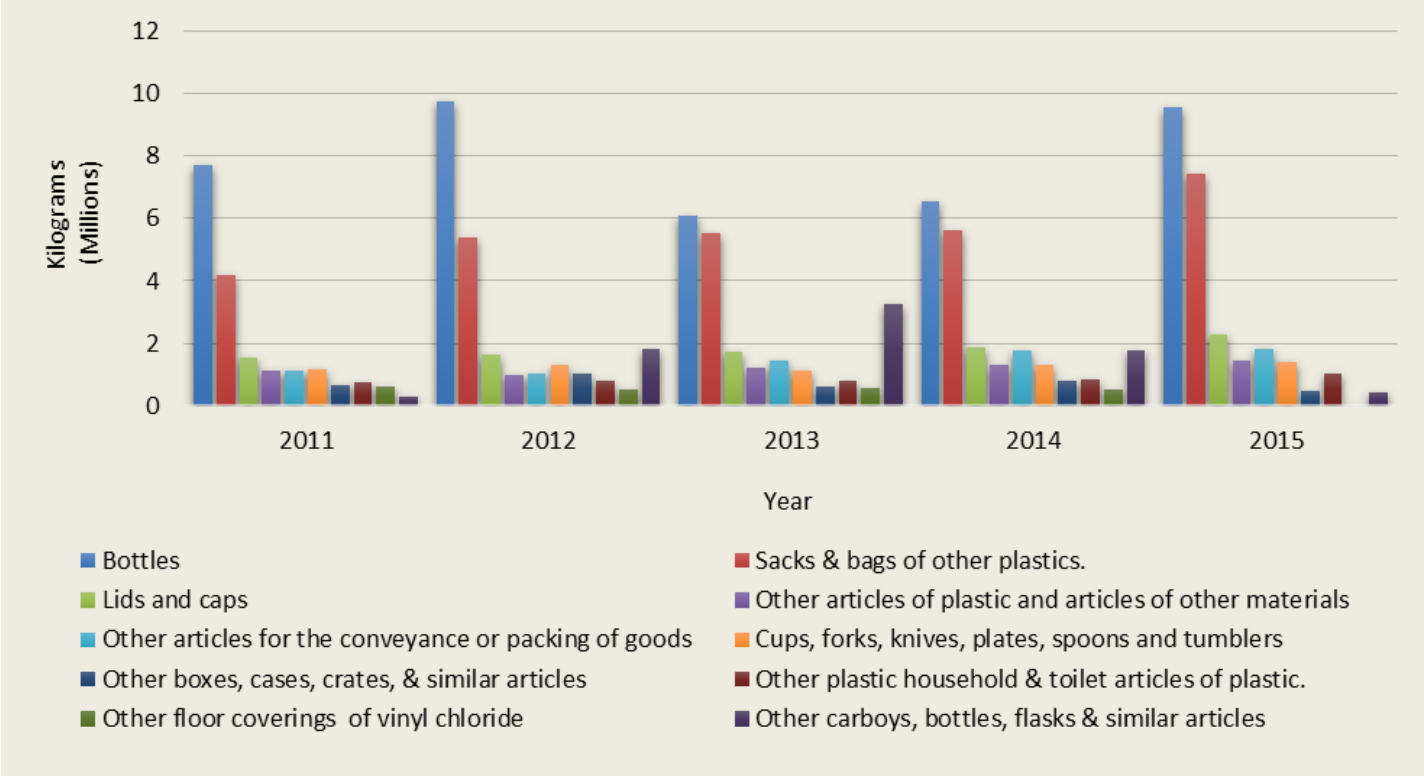
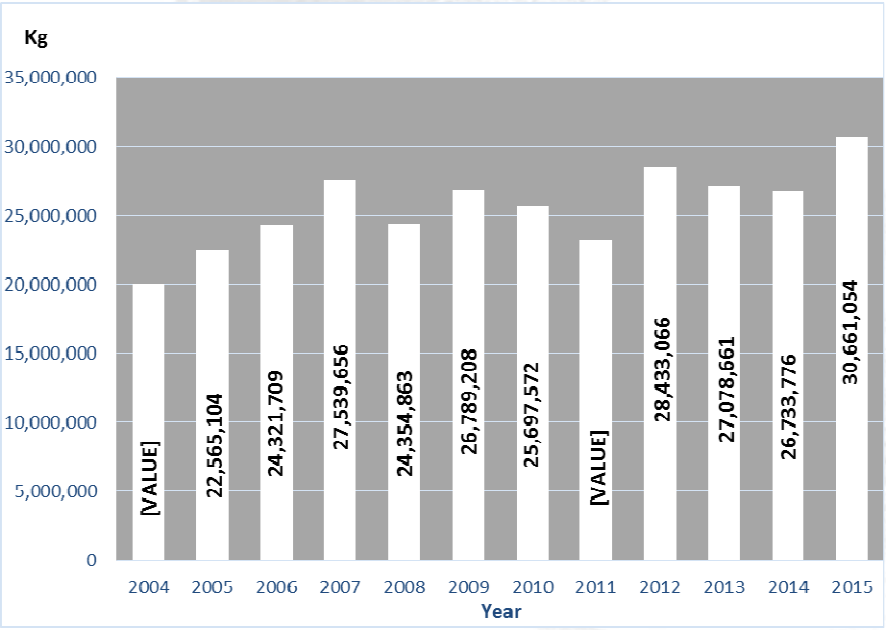
Figure 1: Imports of Plastic for Packaging or Conveyance: 2011-2015, kg



Source: International Merchandise Trade, Statistical Institute of Jamaica

Jamaica imported a grand total of 307.4 million kilograms of plastic between the period 2004 and 2015, averaging approximately 25.6 million kilograms per annum. The greatest volume of plastic imports, 30.7 million kilograms, was recorded in 2015 (see figure 2). Imports increased by 27.3 per cent between 2004 (20.0 million kg) and 2007 (27.5 million kg), with a decrease of 11.6 per cent in 2008 over the previous year. The volume of plastics imported between 2009 and 2015 has fluctuated, averaging 27 million kilograms annually.

Figure 2: Total Imports of Plastic for Packaging or Conveyance: 2004-2015, kg



Source: International Merchandise Trade, Statistical Institute of Jamaica

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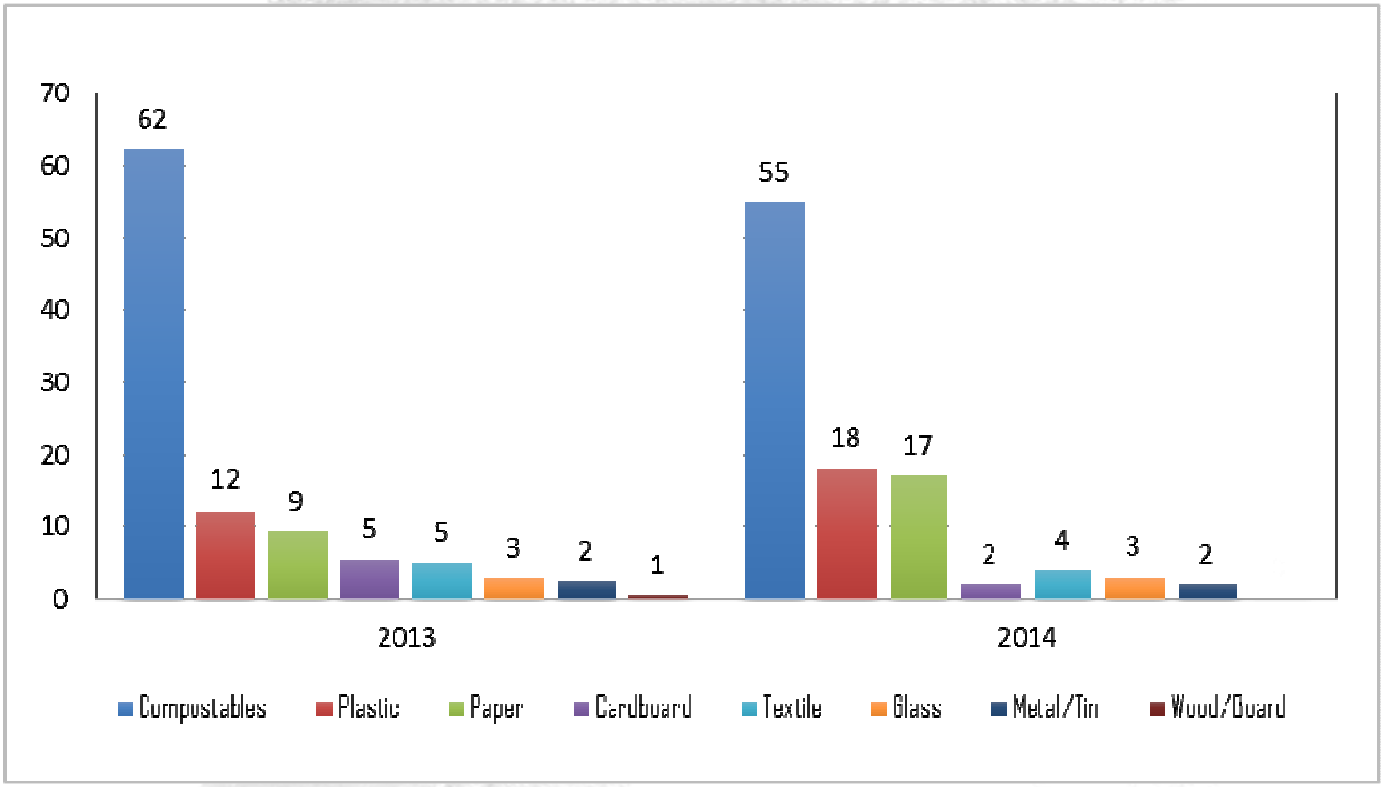
Waste Management

In Figure 3, which shows waste composition for the years 2013 and 2014, waste made up of compostable or organic material averaged 58.5 per cent of total waste collected, followed by plastics at 15 per cent.

Figure 3: Waste Composition: 2013-2014



Source: Waste Characterisation Study, Planning Institute of Jamaica

Initiatives undertaken to minimise plastic pollution

- A ***Plastic Separation Initiative in Government Entities*** programme was introduced to government entities in April 2014 with the objective of encouraging employees and visitors to separate plastic containers from regular waste.
- Jamaica Environment Trust (JET) ***International Coastal Cleanup Day*** is an event spearheaded by the Ocean Conservancy, an international environmental agency aimed at protecting the world's ocean and their natural resources.

Table 1: Coastal Clean-up Day Activities in Jamaica: 2015

Number of participants	KG of garbage collected	Km cleaned	Total items collected
7,985	35,679	169.3	507,704

Source: Ocean Conservancy Annual Report 2015

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Table 2 shows that Jamaica recorded a large quantity of plastic items plastics at the 2015 International Coastal Cleanup Day.

Table 2: Top Ten Items Collected in Jamaica at Coastal Clean-up Day 2015

Rank	Item	Number
1	Beverage bottles (plastic)	156,862
2	Bottle caps (plastic)	62,434
3	Other plastic bags	24,961
4	Cups and plates	17,826
5	Beverage bottles (glass)	17,512
6	Food wrappers (sweets, chips, etc.)	15,657
7	Cups and plates (foam)	15,581
8	Other plastics/Foam packaging	13,304
9	Grocery bags (plastic)	13,168
10	Forks, knives, spoons	13,042

Source: International Coastal Cleanup Day Jamaica National Report 2015

- ***Recycle Now Jamaica*** is an initiative launched in 2014 between the Government of Jamaica and the private sector, whereby an organisation is to be established, with the main objective of an island-wide collection and recycling of polyethylene terephthalate (PET) bottles. The bottles were to be collected and placed at four depositories across the island and persons would be paid based on the weight of the bottles distributed for recycling.
- The ***Nuh Dutty Up Jamaica*** campaign was introduced by the Jamaica Environment Trust (JET), which received funding from the Tourism Enhancement Fund (TEF). This campaign is aimed at sensitising Jamaicans to proper waste management and sanitation practices.

Jamaica has begun to show signs of curbing the deleterious impact of plastic with the Senate recently approving a ban on plastic. This, coupled with greater public awareness of the impact of plastics on the environment, is hoped to lessen this very serious problem.

Development Account Project on "Supporting Member States in Developing and Strengthening Environment Statistics and Integrated Environmental-Economic Accounting for Improved Monitoring of Sustainable Development" – Progress Made in Kenya

(Contributed by the Kenya National Bureau of Statistics)

Kenya Experience in Implementation of FDES 2013

The Kenya National Bureau of Statistics (KNBS) is a semi-autonomous agency within the Ministry of Devolution and Planning. In an endeavor to improve the availability and quality of environment statistics across the National Statistical System (NSS), the Bureau is implementing the Framework for Development of Environment (FDES 2013).

Kenya organized a national three-day Workshop on Environment Statistics from 23 to 25 August 2016 in collaboration with the United Nations Statistics Division (UNSD) and the East African Community (EAC). The workshop brought together key stakeholders in environment statistics. During the workshop, the FDES 2013 was disseminated among institutions producing environment statistics and participants appreciated the interactive practicability of the FDES dimensions/components. The main objectives of the workshop were to build capacity of the stakeholders and assessments of environment data availability in the country.

The institutions involved in the production of environment statistics have since been very active and are currently exploring the FDES contents in depth. Further analysis of the Basic Set of Environment Statistics in terms of the country priorities, capabilities and institutional organization, is ongoing.

Lessons learnt

The FDES 2013 is an important tool in strengthening the development and management of environment statistics in a holistic manner. The Framework provides the necessary guidelines on the type of data to be collected, analysed and dissemination mechanisms. Application of the Environment Statistics Self-Assessment Tool (ESSAT) Parts I & II based on the FDES 2013 was found to be well structured, flexible and easy to use. Apart from facilitating identification of main sources of data, the FDES 2013 strength lies in the way it organizes statistics into components, sub-components, statistical topics and individual statistics.

Activities and plan

As a way forward, the KNBS remains committed to enhancing environment statistics in the country through the following initiatives;

i) Data collection from sources already identified and strategies to fill data gaps as a priority for the National Statistical System.

ii) The Bureau has made progress towards the establishment of a National Environment Statistics Committee that will be launched by December 2016. The Committee will comprise institutions producing official environment statistics and will be responsible for implementing the FDES 2013, and harmonization of environment statistics in the country.

iii) The Bureau is coordinating the development of a National Action Plan (NAP) to implement the FDES 2013. The Framework is expected to be an input into the future development of national environmental indicators and statistics and monitoring of the Sustainable Development Goals (SDGs).

Suriname: Recent and Forthcoming Activities Regarding Environment Statistics

(Contributed by Anjali DeAbreu-Kisoensingh, General Bureau of Statistics, Suriname)

Introduction

Environmental statistics are important to provide a sound basis for decision making, to monitor progress and to support public awareness with respect to the environment. They also aim to provide synthetic presentation of data from various subject areas and sources. It is now globally accepted that the state of the environment is of fundamental importance to human survival. At the same time, the environment is subject to changes as a result of the way that human activities and natural events can have an impact on it. Therefore, environment statistics provide such information and enhances the policy making process that ensure that the present needs are met without compromising the ability of future generations to meet their needs.

Activities leading to the launch of the seventh Environment Statistics publication

For data collection contact was made with the relevant ministries and institutions, either through an official data request letter or via email. With the collected information the draft publication was compiled and presented at an Environment Statistics workshop organized by the General Bureau of Statistics (GBS) in collaboration with the United Nations Development Programme (UNDP) on 27 July 2016 in Hotel Torarica, Paramaribo, Suriname.

More than 72 participants from various organizations attended the seventh Environment Statistics Workshop held on 27 July 2016. The media was also presented at the opening. The opening speeches were delivered by the following officials: Mr. Armstrong Alexis, The Deputy Resident Representative of UNDP; Mr. John Goedschalk, Director of Conservation International Suriname (CIS); Mr. Iwan Sno, Director of GBS; and Mrs. Marci Gompers who represented the Cabinet of the President of Suriname. After the speeches two presentations were given by the GBS, namely a presentation regarding the Seventh publication of Environment Statistics delivered by Mrs. DeAbreu- Kisoensingh combined with a DevInfo presentation containing the Draft EnvironmentInfo (online database) made by Mrs. Giovanna Amatsoeran, and one speech by the National Institute for Environment and Development in Suriname (NIMOS) regarding the importance of Environment Statistics and Environmental Policy making.

Guideline used for the Environment Statistics publication

The Sustainable Development Goals (SDGs) were also introduced at this workshop together with the FDES 2013 statistics.
This publication deals with Environmental matters, marks 15 years of Environmental Statistics in Suriname and is presented as one of the outputs emanating from the UNSD/CARICOM Project (Now: CARICOM Program): "Strengthening Capacity in the Compilation of Statistics and Indicators for Conference Follow-up in the CARICOM Region".
Data collection is guided by the **CARICOM Core Indicators**, **the UNSD guidelines through the Framework for Development of Environment Statistics (FDES 2013)**, and as of 2015, **the Sustainable Development Goals (SDGs).**

Chapters of the Environment Statistics publication

The publication covers 13 major sectors and mainly contains data for the years 2011-2015. The relevant sectors are: Demographic and Socio-economic Background, Climate and Natural Disasters, Tourism, Transport, Environment and Health, Water, Energy and Minerals, Forestry, Coastal and Marine Resources, Land use and Agriculture, Biodiversity, Air and Waste.

Future activities regarding Environment Statistics

Launch the Seventh Environment Statistics publication on 21 December 2016 in collaboration with UNDP. More than 45 relevant organizations (inter alia: line ministries, large enterprises, unions and institutions), who provided data and helped with the analyses will receive a hard copy as an appreciation for their substantive contribution to the publication on 21 December 2016.

Regional Public Goods (RPG) activities

Suriname is part of the IDB-RPG project: "Development and Strengthening of Official Environmental Statistics through a Regional Framework in Latin America and the Caribbean" - where the application of the Environment Statistics Self-Assessment Tool (ESSAT) based on the Basic Set of Environment Statistics of the FDES 2013 is the basis for creating this Regional framework. Eleven countries are involved in this project from which four are CARICOM member states (*Jamaica, Bahamas, Suriname & Belize)* and seven are from Latin America *(Costa Rica, Columbia, Mexico, Panama, Ecuador, Dominican Republic and Venezuela).*

Expert Group on Environment Statistics (EGES)

Suriname participated in the Third Meeting of the Expert Group on Environment Statistics (EGES), organized by the United Nations Statistics Division (UNSD), which was held in New York from 20 to 22 April 2016 and will participate in the fourth EGES meeting in 2017. Suriname will continue to use the FDES 2013 as a baseline for collecting their Environment Statistics in combination with the CARICOM Core Set and the SDG indicators.

Statistics in the Swedish Garbage Bin

(Contributed by Anna-Karin Nystrom and Jonas Allerup, Statistics Sweden)

Swedish households dispose of 4.2 million tons of household waste each year in the garbage bin. This corresponds to about 430 kg per person per year. Approximately 30 percent of the food that was thrown could have been prevented by consumption instead of becoming waste. Furthermore, 60 percent of all plastic packages are thrown in the garbage bin instead of being recycled. How well does this compare with the ambitions to become a more sustainable society?

The Swedish parliament has decided that we should solve our environmental problems now and not pass them over to future generations. The Swedish environmental objectives are the benchmark for this environmental task. By investigating and measuring what goes into the households' garbage bins it is possible to track how well we reach some of these environmental objectives.

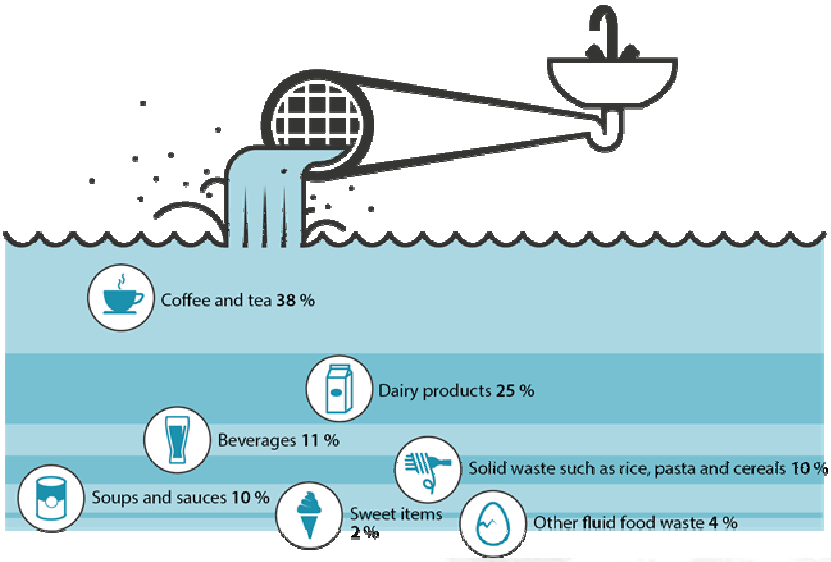
An important indicator on the state of Sweden's environment regarding waste is to estimate how much waste that is generated and how it is managed. To improve the situation it is necessary to climb upwards in the European Union waste management hierarchy according to the Waste Framework Directive (Directive 2008/98/EC). It means that the waste should be managed as sustainably as possible. Preferably the amounts of generated waste should be prevented. To detect the improvement potential for households one way is to investigate what goes into the households' garbage bins.

Waste management hierarchy

Lots of different things end up in our garbage bins. Much of what we throw away is food waste, about 70 kg per person per year, and about 20 kg of this could have been eaten and hence prevented. It is often assumed that restaurants and grocery stores throw away even more than the households, but at least for Sweden that is not the case. Households throw away most of the edible food waste (unnecessary) in Sweden, followed by restaurants at 2 kg per person per year and the trade and grocery stores at 1 kg per person per year each.

The Swedish milestone target for food waste is that at least 50 percent should be separately collected out to be recycled by composting or anaerobic digestion by 2018. In 2014 the collection rate was 38 percent. The rate is rapidly increasing since more and more municipalities introduce separate collection for food waste so the target might be fulfilled.

Some food and drink also ends up in the kitchen drain. The most common things to be poured into the drain are coffee and tea followed by dairy products and other beverages. In total this amounts to 224000 tons each year in Sweden which is equivalent to 425 million cups of coffee and the content of 56 million liters of milk. Food and drinks that are poured down the drain or thrown in the garbage is an environmental concern in many aspects.



Source: Food and drinks down the drain ("Mängd mat och dryck via avloppet") Report 6624, Naturvårdsverket 2014.

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Much of what we buy in stores is wrapped in packaging material. This usually consists of plastic, metal, glass, paper or cardboard. In Sweden, there is a producer responsibility (polluter pays principle) which means that anyone who produces packaging material for the market is responsible for ensuring that it is collected and recycled. The results for 2015 show that 45 percent of the plastic packaging, 71 percent of the metal packaging, 94 percent of the glass packaging and 82 percent of all paper, cardboard and corrugated cardboard packaging was recycled. Seven out of eight material recycling goals for packaging materials were achieved in 2015.

Each year, Swedes buy on average 13 kg of clothing and textiles and each year 8 kg of clothing and textiles ends up in the garbage bin. Analyses of textile wastes have shown that 60 percent are intact textiles which could have been reused. The Swedish Environmental Protection Agency is working on a governmental assignment to develop targets for the recycling of textiles and possibly a target to reduce the amount of textiles in the garbage bin.

Until now Sweden and many other countries have focused the waste statistics on the three lowest steps in the waste management hierarchy. Further on there will be an increased focus on the two upper steps to follow the necessary development. The focus on retrieving data for all steps in the waste hierarchy will raise awareness about environmental statistics such as waste statistics and hence the awareness about the environmental challenges. Statistics Sweden has newly included waste statistics at the website "Sverige i Siffror" (Sweden in figures: http://www.sverigeisiffror.scb.se/hitta-statistik/sverige-i-siffror/ - not yet in English). The website is made to present statistics in a public friendly way for a broad audience.

The Swedish Environmental Protection Agency has the overall responsibility for official waste statistics in Sweden and much of the statistics is produced on their behalf by Statistics Sweden and IVL Swedish Environmental Research Institute in a cooperation called SMED Swedish Environmental Emission Data (www.smed.se)

Links for further reading:

Waste data:
http://www.scb.se/en_/Finding-statistics/Statistics-by-subject-area/Environment/Waste/Waste-generated-and-treated/

Packaging waste:
http://www.scb.se/en_/Finding-statistics/Statistics-by-subject-area/Environment/Waste/Packaging-and-packaging-waste/

Food waste volumes in Sweden
Report in English with data from 2012:
http://www.naturvardsverket.se/Documents/publikationer6400/978-91-620-8695-4.pdf

Food waste in Sweden. Generated and treated 2014.
Report in Swedish with English summary
https://www.naturvardsverket.se/Documents/publikationer6400/978-91-620-8765-4.pdf?pid=18807

Food and drinks down the drain
Report in Swedish with an English summary.
http://www.naturvardsverket.se/978-91-620-6624-6

Togo: Strengthen Statistical and Institutional Capacities in Environment Statistics at the National Level, Towards the Implementation of the FDES 2013

(Contributed by Feyssal Moumouni, Ministry of Environment and Forestry Resources, Togo)

In Togo, as part of the implementation of the recommendations of the High-Level Forum on Environment Statistics (Lomé, Togo, 27-28 October 2015) in which the United Nations Statistics Division (UNSD) participated, an international consultant was recruited to carry out an inventory of statistics on the environment with the financial support of the European Union.

The Regional Workshop on Environment Statistics on the Implementation of the Framework for the Development of Environment Statistics (FDES 2013) (Lomé, Togo, 19-23 October 2015), organized jointly by UNSD and the ECOWAS Commission, and the High-Level Forum, made it possible to formulate recommendations whose effective implementation should make it possible to establish a monitoring and measurement mechanism for monitoring the progress made in the Sustainable Development Goals (SDGs) in general, and in particular, the measurement of environmental and ecological sustainability in Togo. At this regional workshop training was provided, inter alia, on the six components of the FDES and the Environment Statistics Self-Assessment Tool (ESSAT) which was also developed by UNSD.

To this end and with the logic to make this assessment of environment statistics in Togo a success, a national workshop based on the UNSD/ECOWAS Regional Workshop on Environment Statistics and the applicability of the FDES 2013 in Togo with key stakeholders, was organized from 27 to 29 July 2016. The workshop was supported by the World Bank and the European Union.

This national workshop, which brought together 70 people involved in the production and management of environment statistics (ministerial departments, private sectors, civil society, universities of Togo, etc.), made it possible to:

• Inform and train these players on the FDES 2013.

• Complete the ESSAT by all stakeholders during a national consultation on the state of environment statistics and the strategic plan for their development.

• Make a pre-selection of priority indicators for the country (270 of the 458 statistics of the Basic Set of Environment Statistics contained in the FDES 2013 based on relevance, priority and availability).

• Establish a preliminary database on environment statistics validated by national actors and organized according to the FDES 2013.

This was followed by an information gathering phase which took place from 11 to 27 October 2016 throughout the country and a report of the study was produced. In order to validate this report, a national workshop was organized on 6 December 2016 and was attended by about a 100 people.

The methodological approach of the study consisted of a quantitative as well as a qualitative analysis. In quantitative terms, the ESSAT was used to collect relevant information to arrive at a list of statistics for the FDES 2013. For these priority statistics, the treatment associates the attributes of Availability, Dissemination and Data Sources from the national institutions.The implementation of the diagnosis of environment statistics was also the subject of a participatory and inclusive process which consisted of:

- Meeting with stakeholders in the management of environmental issues.
- Facilitating a dialogue for the establishment of an Environment Statistics Production Facility.
- Holding of working meetings with experts on environment statistics.
- Conducting a bibliographic review.

The objective of the development of environment statistics for Togo is to feed into the monitoring of the SDGs and to improve the effectiveness of the national statistical system by informing about environmental and ecological sustainability.

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Faced with the challenges identified, the report makes the following proposals:

As soon as possible:

- Establishment of an Environment Statistics Production Facility that meets the international standard (based on the recommendations of ECOWAS and UNSD), which is part of a long-term vision (responding to the need for the environment statistics for the next 15 years) and with a view to mobilizing increased resources (national budget as well as technical and financial partners).
    - Establishment of a Technical Advisory Commission on Environment Statistics.
    - Establishment of a Technical Committee on Environment Statistics from the Technical Advisory Committee.
    - Establishment of a Department of Environment Statistics in the Ministry of Environment and Forestry Resources.
    - Establishment of a system that will allow for the creation and operation of a true environment statistical system, ensuring a regular, harmonized collection in line with international standards.
    - Validate the list of priority statistics.

Short term:

- Provide training on the FDES 2013.
- Require technical assistance for the formulation and implementation of the FDES 2013 in Togo.
- Provide financial and human resources to carry out the statistical activities for collecting and compiling the environmental data available for the implementation of the data production program.

Medium term:

- Train statisticians and managers in the management of environment statistics.
- Create a partnership between the public and private sectors to facilitate data collection operations.
- Develop a database based on available environmental data.
- Produce and disseminate publications on environment statistics.

FORTHCOMING EVENTS

Forty-eighth session of the United Nations Statistical Commission (New York, 7-10 March 2017)

Fourth Meeting of the Expert Group on Environment Statistics (Prague, 3-5 May 2017)

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