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envstats News and Notes

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

FOCUS: Climate Change Statistics and Indicators

IN THIS ISSUE

Climate change affects all countries and remains one of the most important development challenges facing humanity. Building on the United Nations Framework Convention on Climate Change (UNFCCC) and the Kyoto Protocol, countries and the United Nations reached a new universal agreement at the 21st session of the Conference of the Parties to the Convention (Paris, 30 November to 11 December 2015) to reduce emissions, keep global warming below 2°C compared with the preindustrial era (about 1850) and mobilize resources to finance adaptation, as societies move towards a low-carbon economy base. The session and its outcome, the Paris Agreement, were of critical importance, given that it was the first time that humanity had reached a landmark universal agreement on the climate.

Climate change is addressed as a separate Goal of the Sustainable Development Goals (SDGs) contained in the 2030 Agenda for Sustainable Development as Goal 13: Take urgent action to combat climate change and its impacts. The Goal has five targets that will be monitored through indicators that require statistics for their measurement. Several other Goals also contain climate-related indicators and will require similar monitoring.

Climate change is a cross-cutting issue involving complex dynamics, which include economic, social and environmental factors that affect each other and pose a considerable challenge with regard to statistical measurement. The statistical community around the world will undoubtedly face increasing demands for data from diverse stakeholders. Efforts must be stepped up to more rapidly and accurately inform societies about climate change in terms of emissions, occurrence, impacts, mitigation and adaptation, so that policymaking and monitoring can be more robust and evidence-based.

The United Nations Statistics Division (UNSD), in response to increased demands for climate change statistics and indicators, prepared, in collaboration with the Economic Commission for Europe (UN-ECE), the Secretary-General's Report on Climate Change Statistics (E/CN.3/2016/15) for the 47th session of the Statistical Commission (New York, 8-11 March 2016).[1] Prior to this, in 2008, UNSD organized two conferences on climate change and official statistics, in Oslo and in Seoul, at which the statistical implications of the emergence of climate change in the policy realm, the related challenges and the road ahead were discussed. In subsequent meetings and workshops, UNSD has produced documentation and training materials describing the interlinkages between climate change and environment statistics, using the Framework for the Development of Environment Statistics (FDES) and other relevant sources. Chapter 5.3 of the FDES contains statistical information to guide countries; it identifies and describes the many environment statistics needed to provide information about climate change, organized in the sequence of climate change events on the basis of the Intergovernmental Panel on Climate Change (IPCC) framework.

[1] http://unstats.un.org/unsd/statcom/47th-session/documents/2016-15-Climate-change-statistics-E.pdf (available in all six official UN languages). The background document for the Statistical Commission prepared by the ECE entitled the Conference of European Statisticians' activities on climate change-related statistics is available at: http://unstats.un.org/unsd/statcom/47th-session/documents/BG-2016-15-ClimateChange-E.pdf.

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Given the importance of climate change statistics and its relationship to environment statistics, the Environment Statistics Section of UNSD has developed a knowledge platform dedicated to climate change statistics at http://unstats.un.org/unsd/environment/climatechange.html. It is currently being populated and will include various documents, tools and resources such as: a fact sheet on Climate Change Statistics based on FDES/IPCC; detailed lists of environment statistics of the Basic Set of Environment Statistics (BSES) of the FDES needed to inform about climate change organized in the FDES/IPCC sequence; the Statistical Note prepared for the Open Working Group on SDGs on climate change and disaster risk reduction; relevant links to climate change-related indicators; a fact sheet about SDG 13 and environment statistics; a set of methodological guidance tools about climate change statistics (including methodology sheets of the BSES related to climate change, and explanations and links to the IPCC and FAO emission methodologies); the CES Recommendations on Climate Change-related Statistics; presentations identifying the environment statistics needed to inform about climate change; links to the two international climate change and statistics conferences in Oslo and Seoul; and an inventory of related work on climate change statistics by partner organisations.

The UN-ECE launched activities in 2011 to improve the use of official statistics for providing information on climate change, with regard to drivers, impacts, mitigation and adaptation. Their pioneering work in developing the CES Recommendations on Climate Change-related Statistics and the current work on the development of a set of key climate change-related statistics and indicators under the auspices of a Steering Group and Task Force has been impressive. Their current activities, outputs and plans are captured in more details in their article below under Regional News and more information is available on their website at: http://www.unece.org/stats/climate.html.

The Statistical Commission at its 47th session in March 2016, inter alia, welcomed the Secretary-General's Report on Climate Change Statistics and urged countries to develop and strengthen environment statistics, which are necessary for the effective monitoring of key aspects of climate change. Further, the Statistical Commission recommended that countries use the FDES 2013 to guide the development of climate change statistics and indicators, given the close interrelationship between environment statistics and climate change statistics, and urged the international statistical community to expand its regional, sub-regional and national capacity-building efforts in climate change statistics, in line with the Paris Agreement, adopted by the parties to the UNFCCC in 2015, and the 2030 Agenda for Sustainable Development. The Commission also noted the link between climate change and disaster reduction and requested that the Sendai Framework for Disaster Risk Reduction 2015-2030 be considered in the development of climate change statistics and indicators. Finally, the Commission requested UNSD to review the set of climate change-related statistics and indicators being developed by UN-ECE and consider it as a basis for developing a global set of climate change statistics and indicators, applicable to countries at various stages of development. The report of the Commission, which includes the decisions on climate change statistics can be found at: http://unstats.un.org/unsd/statcom/47th-session/documents/Report-on-the-47th-session-of-the-statistical-commission-E.pdf and is available in all six official UN languages.

UNSD NEWS:

UNSD Third Meeting of the Expert Group on Environment Statistics – Conclusions and Agreed Work Programme for 2016-2017 (New York, 20-22 April 2016)

The Third Meeting of the Expert Group on Environment Statistics (EGES), organized by UNSD, was held in New York from 20 to 22 April 2016. It was attended by 26 experts from countries and organisations and was chaired by Ms. Iva Ritschelova, President of the Czech Statistical Office.

The meeting was organized into four sessions. Session 1: Environment Statistics Toolbox, which includes the Manual on the Basic Set of Environment Statistics and the Environment Statistics Self-Assessment Tool (ESSAT); Session 2: Environment Statistics Data Collection and Surveys; Session 3: Other Work in Environment Statistics; and Session 4: Ongoing and Planned International, Regional and National Activities.

Regarding the Environment Statistics Toolbox there are currently 13 methodology sheets comprising the Manual which were discussed. The implementation of the FDES 2013 and the ESSAT was also discussed. Presentations on the implementation of the FDES and the use of the ESSAT in the countries were made.

UNSD Environment Statistics - Data Collection and Dissemination

As part of the session on data collection and surveys, UNSD presented its own international environmental data collection programme. UNSD also presented the Inventory of Regular, International Environmental Data Collection, Reporting and Dissemination from Countries. Upon the invitation of UNSD, several experts expressed their willingness to contribute to the proposal of creating a repository of environment-related surveys and censuses on UNSD's website.

The latest development on climate change statistics and on measuring extreme events and disasters were presented to the experts. Moreover, presentations on the SDG indicators were made. All presentations were well received and generated a rich discussion among experts especially with regard to the important involvement of national statistical offices (NSOs) for the measurement of climate change statistics and the SDG indicators. Several experts expressed interest in a comparison document between the SDG indicators and the statistics contained in the Basic Set of Environment Statistics contained in the FDES developed by UNSD. With the assistance of other experts, UNSD will coordinate and finalize this comparison document.

Based upon the progress made by experts in the preceding 12-month period, presentations at this meeting, and on opinions expressed by experts throughout the meeting, UNSD presented to the experts the priorities for 2016-2017, which include the agreed work assignments for continued compilation of methodology sheets, the continuation of the compilation of environment-related surveys and censuses, the ongoing work of the Inventory of Regular, International Environmental Data Collection, Reporting and Dissemination from Countries, and the finalization of a comparison document between the SDG indicators and the FDES statistics.

Further information about the meeting is available at UNSD's website at: http://unstats.un.org/unsd/ENVIRONMENT/FDES/fdes_eges3.html and more details about some of the outputs are further explained in articles below.

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 was started in 2014. 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. Current work is focusing 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.

In preparation for the third meeting of the EGES in April 2016, UNSD revised most of the methodology sheets and sent them for comments to the experts. They were then all discussed during the Expert Group meeting in April. The Expert Group welcomed the progress made. Due to the growing importance of the SDG indicators, it was agreed that the chapters should 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 methodology sheets forming the Manual are now at different stages of production, with advanced chapters needing a last revision before final review, chapters needing more work before final review, and finally chapters at the draft level. The Experts and UNSD have decided to share the work to bring most chapters at a stage of final draft submission by the end of the year, and to continue the work in the other areas to improve them and present them during the next Expert Group.

Inventory of regular international environmental data collection, reporting and dissemination

UNSD prepared a Report of the Secretary-General on Environment Statistics (E/CN.3/2016/27) for the 47th session of the United Nations Statistical Commission (New York, 8-11 March 2016). This report was complemented by a Background Report that contains an Inventory of Regular International Environmental Data Collection, Reporting and Dissemination which was compiled by the Environment Statistics Section of UNSD in collaboration with the members of the Intersecretariat Working Group on Environment Statistics (IWG-ENV)[2] and other partner organisations.

[2] The IWG-ENV was established in response to a request by the thirty-fourth session of the United Nations Statistical Commission (http://unstats.un.org/unsd/statcom/34th-session/documents/statcom-2003-34th-report-E.pdf). The Statistical Commission empowered UNSD to convene the IWG-ENV to coordinate and harmonize the development of standards, methods, data collections and capacity building programmes in environment statistics.

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The inventory was presented to the Third Meeting of the Expert Group of Environment Statistics (New York, 20-22 April 2016). Having received the presentation, the Expert Group confirmed that the inventory serves as a useful reference and requested that UNSD maintain it on-line with support and contributions from the institutions and experts.

The purpose of the inventory is to collectively construct a synthesis of environment statistics data collection processes at the international level. The specific objectives are to:

- support institutions' continuous efforts to promote data sharing and exchange mechanisms on the basis of common data templates and to encourage in-depth assessment of data being collected;
- provide a platform to compare and harmonize data collection from a methodological point of view; and
- provide countries and institutions with a picture of data flows from various national sources with the intention to reduce reporting burden and avoid duplication of efforts, both at the national and international levels.

This mapping exercise is a first step towards developing a full scale inventory of environmental data collection which will provide more specification details such as on:

- the type of national institution that provides the data and the focal point;
- methodological guidance used for the data collection;
- the data validation process;
- an assessment of the data quality; and
- information on whether data are collected/reported on regularly or only when an occasion occurs (such as a natural disaster or declaration of a protected area), etc.

Both the Report and the Background Document are available at: http://unstats.un.org/unsd/statcom/47th-session/documents/.

The precise links are below:
The Report of the Secretary-General on Environment Statistics (E/CN.3/2016/27) is available at:
http://unstats.un.org/unsd/statcom/47th-session/documents/2016-27-Environment-statistics-E.pdf.
The Background Report containing the inventory is available at:
http://unstats.un.org/unsd/statcom/47th-session/documents/BG-2016-27-EnvironmentStats-E.pdf.
For more information about the inventory please see:
http://unstats.un.org/unsd/environment/Inventory_datacollection_dissemination.html

UNSD Environment Statistics - Data Collection and Dissemination

UNSD publishes global environment statistics through two main web-based products: the UNSD Environmental Indicators and Country Snapshots. The environmental indicators in the areas of Air and Climate; Biodiversity; Energy and Minerals; Forests; Governance; Inland Water Resources; Land and Agriculture; Marine and Coastal Areas; Natural Disasters; and Waste have been recently updated.

Statistics on Water and Waste are based on official statistics supplied by national statistical offices and/or ministries of environment (or equivalent institutions) in response to the biennial UNSD/UNEP Questionnaire on Environment Statistics, complemented with comparable statistics from OECD and Eurostat, and water resources data from FAO Aquastat. Statistics on the other themes were compiled by UNSD from other international sources. The updated Environmental Indicators, published in the form of indicator and time series tables and charts are available at: http://unstats.un.org/unsd/environment/qindicators.htm. The Country Snapshots are in the process of being updated.

The seventh round of the biennial UNSD environment data collection will take place in the second half of 2016 and the UNSD/UNEP Questionnaire (water and waste sections) will be sent to the national statistical offices (NSOs) and Ministries of Environment in all non-OECD/Eurostat countries.

The UNSD/UNEP Questionnaire on Environment Statistics serves as a very good and accurate source for different uses, and 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:

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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 prepared a Report of the Secretary-General on Environment Statistics (E/CN.3/2016/27) for the 47th session of the United Nations Statistical Commission (New York, 8 to 11 March 2016), which contains, inter alia, a summary of the results of the UNSD/UNEP Environment Statistics data collection rounds from 1999 through 2013. The Report also highlights the responses from 2000 to 2012 for those variables that have direct relationship to potential indicators that would support the monitoring of SDGs 6, 11 and 12 as described above.

To support the Report of the Secretary-General in more detail as it pertains to data collection, a Background Document was also prepared describing UNSD's analysis of responses to each environment statistics variable in the UNSD/UNEP Environment Statistics data collection. Both the Report and the Background Document are available at: http://unstats.un.org/unsd/statcom/47th-session/documents/.

The precise links are below:
The Report of the Secretary-General on Environment Statistics (E/CN.3/2016/27) is available at:
http://unstats.un.org/unsd/statcom/47th-session/documents/2016-27-Environment-statistics-E.pdf.
The Background Report containing the inventory is available at:
http://unstats.un.org/unsd/statcom/47th-session/documents/BG-2016-27-EnvironmentStats-E.pdf.

Compilation of environmentally-related questions in censuses/surveys and of specialized environmental surveys

The Environment Statistics Section of UNSD continues its compilation of environmentally-related questions in censuses/surveys and of specialized environmental surveys. Having received many such censuses and surveys from colleagues worldwide, the idea of compiling a repository of censuses and surveys was promoted at the Third Meeting of the Expert Group of Environment Statistics (New York, 20-22 April 2016) and well received by the experts. It was agreed that one possible benefit of compiling a repository may be the transparency of surveys and censuses which could potentially decrease overlap in data collections. An additional benefit is that the sharing of these surveys may help countries analyse good practices in survey design, estimation procedures and data analysis. As pertains to the sharing of surveys and censuses on its planned on-line repository, UNSD will make every possible effort to include surveys in at least English and in their original languages. As a starting point, UNSD is actively compiling and analysing surveys on waste and water statistics, given that many countries still face a challenge in obtaining these data at the national level and that these two topics are part of the biennial UNSD data collection exercise from non-European Union and non-OECD member States.

Several countries have shared their national environmental surveys with UNSD and such submissions will soon be available for reference on UNSD's website at: http://unstats.un.org/unsd/environment/envcensusesandsurveys.html. This exercise is viewed as an ongoing activity and is being undertaken so as to assist countries requesting examples of such surveys for use at the national/sub-national level.

The UNSD is welcoming further submissions of censuses and surveys from 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 of UNSD (contact: envstats@un.org) where they may then be made available at the above link.

The Basic Set of Environment Statistics

The Basic Set of Environment Statistics is a comprehensive, but not exhaustive, set of statistics designed to support countries developing national environment statistics programmes by helping them make decisions on priorities for statistical development. It is embedded in the FDES 2013 and consists of 458 individual statistics organized into the structure of the FDES (components, sub-components and topics). The Basic Set is divided into three tiers, based on the level of relevance, availability and methodological development of the statistics:

The complete Basic Set of Environment Statistics is available in both English and French at: http://unstats.un.org/unsd/environment/FDES/BasicSet.htm. Other languages (Arabic, Chinese, Portuguese, Spanish and Russian) will follow soon.

The Environment Statistics Self-Assessment Tool

UNSD, in collaboration with the Expert Group on Environment Statistics, developed the Environment Statistics Self-Assessment Tool (ESSAT) in support of the FDES 2013. The purpose of the ESSAT is to assist countries in both developing their environment statistics programmes and collecting their own data on the environment, and to assess the state of environment statistics and the needs for their development at the national level consistent with the scope of the FDES 2013.

In addition to its Introduction, the ESSAT consists of two parts, Part I: Institutional Dimension of Environment Statistics, and Part II: Statistics Level Assessment. Parts I and II are closely related and should ideally not be treated as independent of one another.

The ESSAT has been used extensively in training workshops on environment statistics in support of the implementation of the FDES in several regions of the world. Participants have found it to be very useful and a number of countries have already implemented the ESSAT at the national level.

The Introduction, Parts I and II of the ESSAT are available in both English and French at: http://unstats.un.org/unsd/environment/FDES/essat.htm. Other languages (Arabic, Chinese, Portuguese, Spanish and Russian) will follow soon.

UNSD Side Event on Empowering NSOs to Produce Environment Statistics for Monitoring Climate Change and the Sustainable Development Goals (SDGs) at the United Nations Statistical Commission

The Environment Statistics Section of UNSD hosted a side event entitled "Empowering National Statistical Offices (NSOs) to Produce Environment Statistics for Monitoring Climate Change and the Sustainable Development Goals (SDGs)" on 8 March 2016 during the 47th session of the United Nations Statistical Commission. Four separate presentations were made (two by UNSD, and one by each of the United Nations Economic Commission for Europe (UNECE) and Suriname). The presentations were well received by an audience of approximately 25 people, most of whom were NSO directors. A question and answer session revealed the audience's keen interest in the content and comments were made in praise of the content presented.

Ms. Reena Shah of UNSD presented on Environment Statistics, Environmentally-related SDG Indicators and UNSD's Environment Statistics Data Collection. This presentation detailed the importance of environment statistics and noted that statistics in this field are weakest when compared to the other two pillars of sustainable development. She also elaborated on the Framework for the Development of Environment Statistics (FDES) 2013, and its supporting tools, the Basic Set of Environment Statistics and the Environment Statistics Self-Assessment Tool (ESSAT). She further noted that almost half of the SDG targets require environment statistics in order to have their indicators compiled which shows the great need for improved data and statistics in the field of environment. She provided detail on developments in UNSD's environment statistics data collection and specifically made mention of the UNSD/UNEP Questionnaire on Environment Statistics which completed its seventh round in 2013.

Ms. Rayén Quiroga of UNSD delivered a presentation entitled, Climate Change Statistics and the FDES. She gave detail of the importance of climate change, mentioning that demand for data and statistics in this field far outweighs supply. By using the Intergovernmental Panel on Climate Change's (IPCC) framework, examples were provided of how the FDES 2013 can be applied to climate change statistics. This analysis used statistics within the FDES 2013 grouped into Climate Process Drivers, Climate Change Evidence, Climate Change Impacts and Vulnerability, and Mitigation and Adaptation.

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Ms. Lidia Bratanova of UNECE presented on Climate Change and Official Statistics: UNECE work. Content of her presentation included information on UNECE work related to the Conference of Parties 21 (COP21), SDG 13 (Take urgent action to combat climate change and its impacts), and the Sendai Framework for Disaster Risk Reduction 2015-2030. She also referenced the Conference of European Statisticians' Recommendations on Climate Change-related Statistics which provides practical steps on confronting climate change.

Ms. Anjali De Abreu-Kisoensingh of the General Bureau of Statistics, Suriname, presented on Environment Statistics and Some Indicators Relevant to Climate Change in Suriname. Inter alia, her presentation detailed progress made in Suriname's environment statistics publications, compilation of environment statistics and environment statistics frameworks used (including the FDES 2013). Advantages of Suriname's approach were also mentioned which included the use of various surveys and maintaining relationships with key stakeholders.

Information about this side event, including PDF versions of all presentations, is available at: http://unstats.un.org/unsd/statcom/47th-session/side-events/20160308-1M-empowering-nsos/.

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.

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. More information on this Workshop is available at: http://unstats.un.org/unsd/ENVIRONMENT/unsd_EAC_Project.html.

Following the Workshop on Environment Statistics, UNSD is organizing two national missions in August in Uganda (Kampala, 15 to 19 August 2016) and Kenya (Nairobi, 22 to 26 August 2016). Both missions will be composed of two activities, bilateral consultations and a national workshop. The bilateral consultations with the national statistical offices (NSOs) in Uganda (15 and 19 August) and in Kenya (22 and 26 August) 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 in Uganda (16-18 August) and in Kenya (23-25 August) 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.

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Following these missions, UNSD will organize national missions in the other three EAC countries (Tanzania, Rwanda and Burundi) involved in the project, as well as a final regional workshop to share progress and lessons learned. To ensure follow-up to the project and to strengthen capacities at the sub-regional level, staff of the EAC Secretariat are also participating in the different activities.

INTERNATIONAL NEWS:

FAO NEWS

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

Joint FAO World Bank Training on Environmental Economic Accounting and Greenhouse Gas Emissions

The SEEA for Agriculture, Forestry and Fisheries (SEEA AFF) (http://www.fao.org/economic/ess/environment/seea/en/) is currently being finalized by FAO and UNSD, in collaboration with several international and national partners. Intended as an application of the SEEA Central Framework, it defines core national accounting tables for the measurement and reporting of physical and monetary assets and flows related to natural resource use, production, trade and consumption of food and other agricultural products. The SEEA AFF thus usefully brings together a wide range of economic, social and environmental data, including those described in the Framework for the Development of Environment Statistics (FDES). It thus provides a robust statistical framework for developing and monitoring transparent, coherent and internationally comparable indicators, including in support of the SDG process. The SEEA AFF also provides accounting guidance on greenhouse gas (GHG) emission statistics, linking SEEA CF concepts to the guidelines of the Intergovernmental Panel on Climate Change (IPCC) for country reporting needs to the UN Framework Convention on Climate Change (UNFCCC).

In this framework, a workshop was jointly organized by FAO and the World Bank on "Environmental and Economic Accounting and GHG emissions," (http://www.fao.org/economic/ess/ess-events/envacc/en/) which took place in Kampala, Uganda from 15 to 17 April 2016. The workshop gathered about 25 participants including international experts, and nationally from the Ministries and National Agencies primarily involved in the development of Uganda agricultural and environmental statistics and of national environmental and economic accounts.

The training was funded by the World Bank project on Improving Statistics for Sustainable Agriculture (ISSA) and supported in kind by FAO staff from the Environmental Statistics Team (http://www.fao.org/economic/ess/environment/en/), which develops the SEEA AFF and the FAOSTAT Emissions database (http://faostat3.fao.org/browse/G1/*/E). A series of power-point lectures delivered by FAO provided essential background information on the SEEA, with a focus on SEEA AFF, as well as a detailed overview of the FAOSTAT Emissions database. Detailed country applications provided a first view of possible data gaps, and facilitated a dialogue on opportunities to support national statistical processes for improved decision-making, including efficient delivery towards key international reporting needs such as the 2030 SDG indicators and UNFCCC GHG emissions. Data sources available internationally and in Uganda were explored, applied and tested with practical exercises.

The workshop was attended by 17 national experts from the following Ministries and Agencies:

- Ministry of Agriculture, Animal Industry and Fisheries (MAAIF)
- Ministry of Water and Environment (MWE)
- National Environment Management Authority (NEMA)
- National Forestry Authority (NFA)
- Uganda Bureau of Statistics (UBOS).

They were joined by three staff from FAO headquarters as trainers and three from the World Bank ISSA team.

Participants highlighted the importance of similar initiatives towards strengthening of national statistical processes, needed for improving synergies at national level, especially in the area of climate change and SDGs.

FAO is planning additional training activities on Environmental Economic Accounting and Greenhouse Gas Emissions in the near future, and is available to support its member countries. Interested parties should contact environment-statistics@fao.org for more information.

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Regional Workshop on the Estimation of Statistics on N Inputs from Livestock Manure

The Statistics Division (ESS), the Agricultural Production and Plant Production and Protection Division (AGP) and the Animal Production and Health Division (AGA) of FAO organized a regional workshop on the estimation of statistics on N inputs from livestock manure, as part of its capacity development efforts towards improved environmental-economic statistics and in support of FAO Strategic Objective 2 on Sustainable Food and Agriculture.

The workshop was held in Kigali, Rwanda on 30 November 2015 and its conclusions were reported at the 24th session of the African Commission on Agricultural Statistics (AFCAS) (http://www.fao.org/economic/ess/ess-events/afcas/afcas24/en/), which took place in Kigali from 1 to 4 December 2015. A total of 16 participants attended from nine African countries: Benin, Botswana, Burkina Faso, Cameroon, Côte d'Ivoire, Ethiopia, Ghana, Rwanda and Uganda.

The workshop aimed at raising awareness on the importance of improved livestock manure data, including availability, storage and application as fertilizer. Manure plays an important role in sustaining agricultural production, particularly in extensive (low inputs) systems, where it provides a cheap, readily available resource that helps to replenish soil nutrients and maintain soil fertility. Appropriate knowledge and data on manure management, storage and application is needed, in order to minimize possible negative environmental impacts linked to nitrogen leaching and runoff and to greenhouse gas emissions. Despite the importance of manure for sustainable food and agriculture production, data on manure availability, storage management and application are currently scarce and scattered.

The workshop brought together high-level technical staff of Ministries of Agriculture, National Statistical Agencies and Ministries of Environment, to explore how to improve livestock manure statistics. The workshop provided an opportunity to exchange information on relevant national data processes, identify critical institutional and technical gaps and explore the role that FAO can play in support of its member countries' needs towards improved data for evidence-based decision making in agriculture, with relevance to the new 2030 Sustainable Development Agenda, national GHG inventories, and the emergent System of Economic and Environmental Accounting for Agriculture (SEEA-Agriculture).

More information on the workshop agenda and presentations can be found at:
http://www.fao.org/economic/ess/ess-events/ninputs/en/

UNEP NEWS

(Contributed by Jillian Campbell, UNEP)

United Nations Environment Assembly

The second session of the United Nations Environment Assembly (UNEA-2) was held at UNEP headquarters in Nairobi, Kenya, on 23-27 May 2016, under the overarching theme of Delivering on the environmental dimension of the 2030 Agenda for Sustainable Development. The Assembly, which has universal membership of all 193 UN Member States, is the world's highest-level decision-making body on the environment. The importance of improving environmental data and statistics was highlighted throughout the meeting and during the two-day Science Policy Forum which preceded UNEA-2. Of the UNEA resolutions which outline the role of UNEP in supporting countries to improve their ability to monitor the SDGs and in building national capacity in the area of natural capital accounting and valuation. All resolutions are available from: http://web.unep.org/unea/list-resolutions-adopted-unea-2.

Mapping of the Multilateral Environment Agreements (MEAs) to the SDGs

UNEP has recently completed a mapping of the synergies between the indicators under a number of the MEAs and the SDGs. This mapping is available at: http://uneplive.unep.org/portal#synergies. The visual display of information demonstrates that there is an extremely high synergy between the MEAs and the SDGs - thus the reporting obligations that countries have under the MEAs will facilitate the ability of countries to also monitor the SDGs. UNEP plans to continue this work by continuing to analyze additional MEAs.

Monitoring the Shift to Sustainable Consumption and Production Patterns in the context of the SDGs

Achieving Sustainable Consumption and Production (SCP) patterns has been recognized as an integral part of the 2030 Agenda for Sustainable Development. Statistics Sweden and the Ministry of Environment of Chile, in collaboration with UNEP, have written a paper that makes an initial proposal for the crucial task of monitoring progress towards SCP targets within the SDGs. This paper highlights the importance of using indicators which are compliant with the System of Environmental-Economic Accounting and proposes a number of key multi-purpose indicators to monitor progress towards SDG targets and SCP patterns. The report is available from the SCP Clearinghouse: http://www.scpclearinghouse.org/.

OECD NEWS

(Contributed by Myriam Linster, Environment Directorate, OECD)

OECD – Environmental data

The purpose of OECD work on environmental data is to provide objective and reliable data on the environment to support international policy work, and to harmonise these data across OECD countries and regions (Europe, Americas, and Pacific) and beyond. The data are collected from member countries, accession countries and key partners via the OECD questionnaire on the state of the environment and from other international sources. A database bringing together the main environmental datasets is available at: http://dx.doi.org/10.1787/env-data-en.

In 2016, data will be collected on inland waters and solid waste with focus on priority tables, and an annual quality assurance will be carried out for reference data on threatened species and forest resource use. The questionnaires will be sent to countries in early October 2016. This is closely coordinated with the UNSD/UNEP Questionnaire on Environment Statistics, and done jointly with Eurostat for European Union Member States.

OECD – Environmental indicators and country profiles

The OECD maintains several sets of indicators to measure environmental performance and monitor policy integration that are used in policy analysis and country reviews. Among these is the ***OECD Core Set*** of Environmental Indicators, developed in 1991 and revised in 2013. An updated set of indicators was published in October 2015 (OECD 2015, Environment at a Glance). A set of environmental ***country profiles*** presenting key environmental indicators is available at http://www.oecd.org/site/envind/#.

OECD – Indicators to monitor progress towards green growth

The OECD set of green growth indicators, first published in 2011, describes progress in four areas: (1) the environmental and resource productivity of the economy; (2) the economic and environmental asset base of the economy with focus on natural assets; (3) the environmental dimensions of quality of life and well-being; and (4) the economic opportunities associated with green growth and the policy measures to deliver green growth. To facilitate communication with policy makers, the media and citizens, six *headline indicators* have been selected: carbon productivity; material productivity; multi-factor productivity adjusted for environmental services; population exposure to air pollution; and land cover and land use change. They are to be complemented with a headline indicator on economic opportunities.

A ***database*** bringing together the indicators is available at: http://dx.doi.org/10.1787/data-00665-en. An ***updated report*** on Green Growth Indicators will be published in June 2017. ***Practical applications*** of green growth indicators in countries are progressing. Recent examples include countries in the EECCA region (Armenia, Azerbaijan, Kazakhstan, Kyrgyzstan, Moldova, Ukraine).

New and improved ***methodologies*** for the calculation of green growth and environmental indicators have been elaborated and ***new datasets*** have been compiled.

A new set of ***green patent indicators*** helps address questions such as *How many patents in environment-related technologies are registered in each country? By whom? How much do researchers collaborate across countries?*
[See http://www.oecd.org/environment/indicators-modelling-outlooks/green-patents.htm.]

- New indicators on ***people's exposure to air pollution*** by fine particulates (PM2.5) address questions such as *What is the average level of pollution to which people are exposed at national level? in metropolitan areas?* The indicators and their underlying data cover about 200 countries and 13 country groups, and the years 1990, 1995, 2000, 2005, 2010-2013.
- A methodology for measuring the growth of ***multi-factor productivity*** adjusted for selected environmental factors (air emissions, exploitation of sub-soil assets) has been developed and a pilot dataset was produced (forthcoming under http://dx.doi.org/10.1787/env-data-en).
- A methodology for measuring ***raw material flows*** embodied in international trade and final demand (material footprints) is being developed together with the UNEP International Resource Panel and Eurostat. Results are expected to be available by the end of 2017.

OECD – Environmental Economic Accounting

Since 2012, the OECD Environment and Statistics Directorates have been working in cooperation with Eurostat and the World Bank, and via a Task Force on the Implementation of the SEEA Central Framework, on the compilation of internationally comparable core datasets on air and greenhouse gas emissions by industry and on sub-soil assets (in monetary and in physical terms). (http://dx.doi.org/10.1787/data-00735-en). Work continues to expand the geographical coverage of the datasets, and to develop methods for compiling core accounts from other international data sources.

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OECD – Monitoring progress towards the Sustainable Development Goals

Turning the ambition of the SDGs into reality will require robust data to capture progress and evidence to inform decision making. The OECD is helping countries to track progress in several areas including green growth, well-being, water, climate, biodiversity, resource productivity, and sustainable consumption and production. It supports countries in developing and using environmental and green growth indicators and is mainstreaming the SDGs in its country reviews. The OECD also supports developing countries in building their own statistical capacities and systems through the PARIS21 partnership.

REGIONAL NEWS:

UN-ESCWA NEWS

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

Expert Group Meeting on the Water-related Sustainable Development Goals (SDGs) (Beirut, 12-13 April 2016)

The Economic and Social Commission for Western Asia (ESCWA), in collaboration with the League of Arab States' Technical Secretariat of the Arab Ministerial Water Council and ACWUA, organized an Expert Group Meeting on the Water-Related Sustainable Development Goals (SDGs) at the UN-House in Beirut, Lebanon, from 12 to 13 April 2016 (https://www.unescwa.org/events/expert-group-meeting-water-related-sustainable-development-goals-sdgs). The main objectives of the meeting were as follows: a) increase the understanding of the water-related goals and targets adopted in the 2030 Agenda for Sustainable Development; b) review the outcomes of the United Nations Statistical Commission deliberations on the global indicators framework as it relates to the water-related SDGs; c) exchange experiences, best practices and information on new technologies and institutional frameworks that can contribute to monitoring and reporting on water-related indicators at the global, regional and national levels; d) consider how the MDG+ Initiative indicators and monitoring framework can contribute to regional follow-up on the water-related SDGs; e) discuss the benefits, opportunities, challenges and constraints of adopting a common regional monitoring and reporting framework for the SDGs, and particularly for the water-related SDGs; and f) formulate recommendations on a way forward for monitoring and reporting on the water-related SDGs in the Arab region.

A number of recommendations were made during this meeting. Participants and experts called upon governments to: adopt common, unified information systems for SDG monitoring and reporting and to decide on a framework for compilation; coordinate data among different stakeholders at the national, regional and global levels; use innovative new technologies for data collection and consider undertaking new surveys; establish a National Council/Committee and technical subcommittees/teams; and consider reporting according to clusters rather than goal levels. They also called upon ESCWA to: ensure common definitions of targets and indicators; build upon existing model provided, existing reports and data initiatives; adopt constant baseline information across countries; provide regional and subregional training; follow LAS framework; and consider sub-regional clustering of States.

SDG readiness in the Arab region (Amman, Jordan 8-12 May 2016)

ESCWA contributed to the workshop on SDG Preparation: Data Readiness and Developing a Monitoring Matrix in the Arab region organized by the Arab Institute for Training and Research in Statistics (AITRS) and PARIS21 in Amman, Jordan 8- 12 May 2016. Sixteen Arab countries participated. In the sessions, an overview of the SDGs was presented by UNSD and sector specific challenges in the region were addressed UN-ESCWA. UNDP also presented the Arab Development Portal and Paris21 presented ADAPT. See: http://www.paris21.org/fr/node/2532

The Arab meeting on Environment and Sustainable Development Indicators (Cairo, Egypt, 12-16 October 2015)

In addition to capacity-building in environment statistics and accounts, ESCWA continued its cooperation with the League of Arab States and the United Nations Environment Programme in technical assistance and methodological documents on the sustainable development indicators of priority to the Arab region and the way forward for the sustainable development goals, The Arab meeting on Environment and Sustainable Development Indicators", which was the second meeting of the working group and, after a series of workshops since 2006 on sustainable development indicators, was held in Cairo, Egypt from 12 to 16 October 2015 to follow up on the compilation of indicators in the Arab countries. The meeting brought together about 20 representatives from National Statistical

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Institutes and intergovernmental institutions of the Arab League member states. INSEE was also invited to attend. The presentations focused on the following topics: progress with dashboards for development indicators produced by the countries in this region; difficulties encountered in creating databases, mainly due to certain data not being available; quality of data collected; and calculating the corresponding indicators. With the SDGs, all countries must prepare a national strategic plan, and a regular report must be produced. All Member States have produced National Sustainable Development Strategies (NSDS). A description of the production process and coordination between the different stakeholders was included in the discussions, especially the key role of the official statistical system in the process. See: https://www.unescwa.org/events/preparatory-meeting-arab-working-group-sustainable-development-indicators

Arab Forum on Sustainable Development in 2016 (Amman, Jordan, 29-30 May 2016)

ESCWA, in partnership with the League of Arab States, the United Nations Environment Programme (UNEP) and the United Nations Fund for Population (UNFPA), organized in collaboration with the Ministry of Planning and International Cooperation of the Hashemite Kingdom of Jordan, the Arab Forum on Sustainable Development of 2016 in Amman, Jordan.

The forum was a high-level meeting and a regional platform for dialogue and coordination on mechanisms of implementation, monitoring and review of the 2030 Agenda for Sustainable Development in the Arab region and in accordance with United Nations General Assembly resolution A / 70/1, and in response to the recommendations of the Executive Committee of ESCWA who requested the secretariat to convene the Arab Forum on Sustainable Development, and to monitor progress in the Arab region towards achieving the SDGs, and the preparation of regional reports, as well as assist countries in the region to integrate sustainable development objectives into national development plans, support statistical systems, and conducting follow-up and review at the regional level.

The Arab Forum on Sustainable Development builds on the success of the previous sessions of the Forum held in Manama in 2015, and the leading role played by ESCWA and its partners in promoting regional dialogue and consensus-building in preparation for the 2030 Arab Plan for the Sustainable Development.

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) has launched work on developing a CES Road Map on Statistics for SDGs. A Steering Group has been set up for this purpose, consisting of 14 countries and chaired by Switzerland and the United States. The Road Map's aim is to guide the CES work in this area by providing a strategy on how to develop statistics for SDGs and to implement the CES Declaration on the role of national statistical offices in measuring and monitoring the Sustainable Development Goals (http://www.unece.org/fileadmin/DAM/stats/documents/ece/ces/2015/2015_CES_declaration_on_the_role_of_NSOs_in_SDG_monitoring.pdf) adopted in 2015. The Road Map contains six substantive sections focusing on: (i) assessing readiness of countries to report on global SDG indicators; (ii) how to select regional indicators; (iii) how to select national and subnational indicators; (iv) reporting on global indicators (data flows, etc.); (v) capacity building for global indicators; and (vi) communication and dissemination of statistics for SDGs. The Conference considered the first draft of the Road Map at its April 2016 plenary session. The work will continue throughout 2016 and 2017, aiming to finalise the first edition of the Road Map by June 2017.

CES produced the CES Recommendations on measuring sustainable development adopted in 2013 (http://www.unece.org/publications/ces_sust_development.html). This work was done before the discussion on SDGs had even begun. Therefore a dedicated Task Force (chaired by the Netherlands) is working on adjusting the Recommendations to take into account SDGs. The Task Force presented its interim report at the April 2016 CES plenary session and is continuing work to map the SDG indicators with the measurement framework presented in the CES Recommendations. The Task Force will submit its final report to the 2017 CES.

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Advancing Climate Change-Related Statistics (Expert Forum and two Task Forces)

In March 2016, the United Nations Statistical Commission discussed new needs for climate change-related statistics arising from global initiatives, in particular from the Paris Climate Agreement from COP21, Sustainable Development Goals and the Sendai framework for disaster risk reduction. The Commission welcomed the work done by UNECE, and decided that its work on a set of climate change-related statistics and indicators should be considered as a basis for developing a global set, applicable to countries at various stages of development.

UNECE will organize the second Expert Forum for producers and users of climate change-related statistics on 5-7 October 2016, in Geneva, in coordination with a UNECE Steering Group (led by Norway). The online registration link, a concept note and further information are available on the meeting website at: http://www.unece.org/index.php?id=41299#

The first Expert Forum took place in 2015. It was attended by 84 participants from 36 countries and 18 international organizations representing national statistical offices, environment agencies and ministries, meteorological services, disaster risk agencies, research institutes and international organizations.

In 2015, the participants reconfirmed the CES Recommendations on climate change-related statistics (http://www.unece.org/publications/ces_climatechange.html) and asked the Steering Group to develop example road maps with a tool allowing prioritization of national actions to implement the *CES Recommendations*. The Steering Group developed a narrative to demonstrate why involve official statisticians in measuring climate change, its causes and impacts (http://www.unece.org/fileadmin/DAM/stats/documents/sustainable_development/Growing_need_for_official_statistics_in_measuring_climate_change.pdf).

A number of countries have asked for capacity building to meet the increasing demands for climate-relevant data. At the request of the Expert Forum, UNECE is now conducting a survey of national statistical offices to review the challenges and progress made. The results will be discussed at the next Expert Forum to further strengthen the role of official statistics in relation to the COP21 and high quality reporting to the UNFCCC. In addition to delivering data for emission inventories, official statistics should be used much more widely as baseline data for emission projections and for reporting on national circumstances, climate change adaptation and mitigation, technological exchange, financial resources and education.

The sessions of the 2016 Expert Forum will focus on the changed data requirements for UNFCCC reporting, development of road maps to improve statistics for climate analysis, and energy statistics and climate change.

Two UNECE Task Forces are working on climate-change related issues. A Task Force (led by Italy) is developing a set of key climate change-related indicators using the System of Environmental-Economic Accounting (SEEA) Central Framework, the Framework for the Development of Environment Statistics (FDES) and other statistical frameworks. The Task Force plans to conduct a review of data availability for the indicator set. The final report and an indicator set are expected by the end of 2016.

Another UNECE Task Force (led by Italy) works on the measurement of extreme events and disasters to identify practical steps for national statistical offices to better support disaster management and risk reduction. The work is done in close collaboration with the ESCAP Expert Group on Disaster-related Statistics and will feed into the monitoring of the Sendai Framework for Disaster Risk Reduction. The final report is expected in 2017.

Implementing SEEA in UNECE region (the second joint OECD/UNECE Seminar - 3-4 October 2016 in Geneva)

The first *Joint OECD/UNECE Seminar on the Implementation SEEA* was held in Geneva, Switzerland in October 2015 (http://www.unece.org/index.php?id=37910#/). More than 80 participants representing 37 countries and several international organisations attended the Seminar. The participants benefited greatly from the opportunity to share knowledge and experience, and recommended that Joint OECD/UNECE Seminars on the Implementation of SEEA should continue to allow for exchange of practical experience, advancing the implementation of SEEA and discussing coordination issues among international agencies active in the SEEA work in the UNECE region.

The second Seminar will be held from 3-4 October 2016 in the Palais des Nations, Geneva. It will build upon the outcomes and recommendations of the 2015 Seminar (see final report on the meeting website at http://www.unece.org/index.php?id=37910#/). It will also provide a forum to present and discuss the activities of international organisations related to the implementation and the use of SEEA, and contribute to their coordination.

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The 2016 Seminar includes the following sessions (session organisers and chairs are provided in brackets):

1. Overview on activities of International Organisations (UNECE, Eurostat)
2. SEEA and SDGs (UNSD)
3. Applications of SEEA and their communication (Australian Bureau of Statistics, Statistics Canada)
4. Implementation of SEEA modules: challenges and solutions
5. Energy and Air Emission Accounts (Statistics Netherlands)
6. Environmental Taxes and Subsidies (Statistics Sweden)
7. Conclusions and recommendations for further work (UNECE, OECD)

The online registration link, a concept note and further information are available on the website of the 2016 Seminar (http://www.unece.org/index.php?id=41150#).

Developing Environment Statistics and Indicators (11th meeting of the Joint Task Force 30 June - 1 July 2016 in Geneva)

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 11th Meeting of the JTF (Geneva, 30 June – 1 July 2016) reviewed the implementation of the UNECE recommendations for the production and online sharing of environmental indicators, focusing on ambient air quality, greenhouse gas emissions and waste. The meeting encouraged countries to use the UNSD Environment Statistics Self-Assessment Tool (ESSAT) for self-assessment of the progress in implementing the UNECE core set of environmental indicators and their underpinning statistics. The Eurasian-Economic Commission offered to translate the ESSAT into Russian.

Participants highlighted the need for developing specific guidelines for quality assurance of environment statistics and metadata, building on the existing quality assurance frameworks and taking into account the specifics of environment statistics. The conceptual and terminological problems related to waste statistics were discussed in-depth, and the need to develop a framework for waste statistics was raised.

The next meeting of the JTF will be on 17-18 November 2016 in Geneva.

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 at: http://ec.europa.eu/eurostat/web/environment/overview. The following is a summary of developments in the last six months.

Sustainable Development Goals (SDGs)

Eurostat, at the 46th United Nations Statistical Commission, coordinated a common position of the European Union countries on the report of the Inter-agency and Expert Group on SDG indicators (IAEG-SDGs), thus actively contributing to the approval of the report and of the global indicator list.

Eurostat also participated as an observer to the third meeting of the IAEG-SDG in March-April 2016 and supported the EU members of the IAEG-SDG in the following consultations for the establishment of a tier classification of the global indicators.

Environmental statistics

The results of the 2014 OECD/Eurostat Joint Questionnaire on municipal waste are available at: http://ec.europa.eu/eurostat/data/database and explained here: http://ec.europa.eu/eurostat/statistics-explained/index.php/Municipal_waste_statistics.

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The data collections on waste statistics (generation and treatment), packaging waste, waste electric and electronic equipment, end of life vehicles and batteries are being launched with a reporting deadline of June 2016. The data collection on inland waters, including regional information will be launched in the second half of the year with a reporting deadline of December 2016.

As regards forest statistics, data on the production and trade in wood products will be collected through the Joint Forest Sector Questionnaire and published by the end of November 2016 (http://ec.europa.eu/eurostat/web/forestry/data/database).

The SEEA environmental accounts

The results of the 2015 data collections on environmental taxes, economy-wide material flow accounts, air emission accounts, environmental goods and services sector accounts, environmental protection expenditure accounts and physical energy flow accounts. All these data collections are annual and the first three are mandatory for EU Member States. The latter three will become mandatory in 2017.

Eurostat published the data results (see Eurostat online database: http://ec.europa.eu/eurostat/data/database), as well as articles (http://ec.europa.eu/eurostat/statistics-explained/index.php/Main_Page) and other material (see http://ec.europa.eu/eurostat/web/environment/overview/policy-context), as follows: 2013 results of air emission accounts and reconciliation with UNFCCC emission inventories, 2014 results for 2014 environmental protection expenditure accounts, 2013 results of environmental taxes, 2013 results of environmental goods and services accounts, 2014 results for material flow accounts (early estimates for 2015 due in July). Results of physical energy flow accounts were published for the first time. Tests on environmental subsidies and other transfers continue.

Eurostat, together with other EU partners, participates in an experimental project on an integrated system of national capital and ecosystem series accounting (KIP INCA). The first stage on feasibility and design was completed in June. The second stage on implementation will start later in 2016 with an estimated end time of 2020.

Eurostat also facilitated training courses on environmental statistics and SEEA for European compilers on the following subjects: EGSS, EPEA, PEFA and water statistics and accounts. There were courses about SDMX too. Material from past courses is available at: https://circabc.europa.eu/faces/jsp/extension/wai/navigation/container.jsp

European Environment Agency's indicators in the Environmental Indicator Catalogue

(Contributed by Roberta Pignatelli, European Environment Agency and Evangelia Ford-Alexandraki (Eurostat))

The work on environmental indicators carried out by the European Environment Agency (EEA) has been recently recognised through their inclusion in the 'Environmental Indicator Catalogue', created and published by Eurostat in November 2015. The catalogue is updated every three months.

The idea of developing a catalogue of environmental indicators emerged during the project 'Streamlining of European environmental indicators' in which Eurostat and the EEA were stakeholders. For a set of policy indicators, the project aimed to: i) identify duplicate indicators, and indicators with the same names but different data or with different names but the same data; ii) harmonise these indicators and reduce their number; and iii) ensure that all indicators are complemented by metadata files. The project was designed to shed light on the situation and help reduce the overlap of work and reporting.

The EEA and Eurostat develop and maintain different types of indicators, depending on the purpose for which they were created. Eurostat develops indicators in the form of a table with numerical data describing the evolution of a parameter over time and space, while the EEA's indicators combine multiple tables, as well as maps and graphs from different sources, and focus on the assessment of progress towards targets. Therefore, in most cases it was proved to be difficult to compare and streamline indicators of different nature.

In order to bring some clarity in the world of environmental indicators, Eurostat created the 'Environmental Indicator Catalogue'. This is a repository of environment-related indicators that have been developed by European and international bodies and which are currently scattered across various media. Over 200 European indicators — produced mainly by the two institutions as well as the European Commission's Joint Research Centre (JRC) and other international sources — have so far been included. The catalogue serves as a one-stop shop for the users to easily find existing indicators.

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The catalogue is structured in three levels - themes, sub-themes and indicators - all of which are listed in alphabetical order. Each indicator includes a hyperlink to its data and metadata. A metadata file provides information on the definition, properties, dissemination and methodology of the indicator. The catalogue is presented either as an Excel file, where themes and sub-themes can be expanded and compressed, or as a pdf file where all themes and sub-themes are fully expanded.

More information on the Environment indicator catalogue is available at: http://ec.europa.eu/eurostat/web/environment/overview/environmental-indicator-catalogue.

Forthcoming EEA event:

5th European Environmental Evaluators Network Forum: Evaluation for better regulation in environment and climate policies – Lessons from research and practice (Copenhagen, Denmark, 15-16 September 2016) http://www.eea.europa.eu/themes/policy/events

ECOWAS Activities in Environment Statistics

(Contributed by Gbogboto Musa, Economic Community of West African States)

The Economic Community of West Africa States (ECOWAS) has been working in collaboration with the United Nations Statistics Division (UNSD) on environment statistics since 2010, and more recently in support of the implementation of the Framework for the Development of Environment Statistics (FDES 2013) in West African States.

Workshops have been organised by the ECOWAS Commission in collaboration with UNSD in the ECOWAS Region with the focus on building national capacities in environment statistics and in the implementation of the FDES.

In October 2015, a workshop was organised to provide statisticians from National Statistics Offices and experts from selected Ministries of Environment (or equivalent institutions) in ECOWAS Region with a detailed knowledge and understanding of contemporary approaches to environment statistics. The workshop identified gaps and deficiencies in environmental data in the region. The Workshop also discussed further development and implementation of the regional programme on environment statistics for the ECOWAS Member States. For more information please see: http://unstats.un.org/unsd/environment/unsd_TogoWorkshop.html

The implementation of the FDES 2013 in the ECOWAS Region has commenced, with Member States in the process of establishing National Committees on Environment Statistics that bring together all key producers and users of Environment Statistics in each Member State. ECOWAS Commission is encouraging these institutions to coordinate the establishment of two National Committees (National Steering Committee and National Technical Committee).

Draft Terms of Reference (ToR) for the two committees has been prepared and letters have been forwarded to Member States to adapt based on their existing situation. ECOWAS Commission is awaiting confirmation from Member States for the establishment of these committees.

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

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

The work on the technical assistance to COMESA members on the implementation of the FDES 2013 is being carried onwards this year. After Zimbabwe and Zambia, Ethiopia, Egypt, Madagascar, Malawi, and Seychelles are among the countries that are involved in the implementation.

For Zimbabwe and Zambia, the data collections have been completed and draft statistical bulletins have been prepared for publication. The steps adopted for these two countries involved stakeholder participations for capacity buildings, data collections and report preparations. The latter two phases entailed workshops for validation of data and the report. It is expected that the publications with appropriate available data will be published this year. In another phase, the data gaps will be filled and the publication is envisaged to be prepared regularly with updated data.

For Ethiopia, the kick-off national workshop was held from 13 to 17 June 2016 in Debre Zeit, not far from Addis Ababa. All the relevant stakeholders were invited to participate. Most of the invited ministries, departments and other stakeholders were present (around 12 institutions). These include line ministries and related departments working on topics/issues like water, forestry, industry,

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energy, minerals, finance and development and research. The main objectives of the workshop were to build capacity of the stakeholders and the coordinating institutions which is the Central Statistical Agency (CSA) and also assess data availability. The Ministry of Environment and Forests was also invited to collaborate closely. The Environment Statistics Self-Assessment Tool (ESSAT), which is a supporting tool of the FDES 2013, was used to assess the data availability. After presenting the FDES 2013 components to the participants, break-out sessions were held, followed by discussion in plenary. Stakeholders presented their mandates and the data available. Interestingly, the stakeholders displayed ample interest and presented adequate data availability for initiating the FDES 2013. The CSA was the coordinating organization for the next phase where data will be collected from the participating institutions and from others known to be having the necessary data. Examples of publications from other countries and dissemination practices were presented and the COMESA statistics bulletin of environment statistics was proposed as a template for the preparation of the publication.

Agreements were reached between the FDES implementation coordinators and the national stakeholders for data sharing. A work plan was also established for data collection, report preparation and dissemination which are scheduled by the end of 2016.

The next country to initiate the FDES implementation is Madagascar where a kick-off national workshop is scheduled to take place in August 2016. A similar approach is envisaged where capacity will be built and data assessed before embarking on data collection and report publication. Other COMESA member states, also in the pipeline, will be soon initiating the process for FDES implementation.

ECLAC Activities in Latin America and the Caribbean

(Contributed by Rayén Quiroga and Birgit Altmann, Statistics Division, Economic Commission for Latin America and the Caribbean)

Recently, the Fifteenth Meeting of the Executive Committee of the Statistical Conference of the Americas (EC SCA) (http://www.cepal.org/deype/ceacepal/2016_EC_XVmeeting.htm) took place in Santiago, 14 to 16 June 2016. The Working Group on Environment Statistics (WGES) Program of Work for 2016-2017 (http://www.cepal.org/deype/ceacepal/2016-CE15/PPT/CE15-GT-Estadisticas-Ambientales-2016-2017.pdf) was presented by INEGI in its coordinator country capacity, and it was approved during the meeting. The coordinator of the WGES has also liaised with the members of the SCA to confirm membership and receive new intentions of participating from countries for all Working Groups including Environment Statistics.

During the EC SCA regional seminar on the follow-up framework of the SDGs, a presentation was made by ECLAC's environment statistics team in its capacity as Secretariat of the WGES, focusing on the environment indicators of the SDGs (http://www.cepal.org/en/events/seminar-follow-framework-sustainable-development-goals-sdgs). This presentation summarized the state of the art of environment statistics in the Latin America and Caribbean countries, and described the links, opportunities and challenges of compiling environment indicators of the SDGs within the National Statistical Systems. The session was very well received and commented on with high interest by the countries' delegates. Consequently, in its agreement number 10, the EC of the SCA "Highlights the central importance of environmental statistics in the follow-up framework of the 2030 Agenda for Sustainable Development, and urges the countries to create and strengthen their environmental statistics programmes and the Economic Commission for Latin America and the Caribbean to strengthen its efforts to provide technical support and capacity-building in this area". (http://www.cepal.org/deype/ceacepal/2016-CE15/INFORME/EC15-Agreements.pdf)

ECLAC's environment statistics team is 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". For more information see the next article below.

The ECLAC environment statistics team is also collaborating with the regional project "Towards a set of indicators of greener production" led by the Productive Development Division with the collaboration of the International Development Research Centre of Canada (http://www.cepal.org/es/proyectos/un-conjunto-indicadores-produccion-mas-verde), particularly in the design of a new Questionnaire/Module about greener production to be implemented through existing industrial/manufacture national surveys in the project's participating countries of the LAC region (Argentina, Brazil, Bolivia, Chile, Costa Rica, Colombia, Dominican Republic, Ecuador, México, Panamá and Peru). A regional workshop took place in Brazil from 5 to 7 April 2016 (http://www.cepal.org/es/eventos/segundo-taller-indicadores-verdes-empresas), jointly organized by ECLAC and IBGE, where the main components of the potential questionnaire and main indicators that could be compiled as a result of the survey were presented and analysed. Currently the draft Questionnaire/module and the core and extended list of indicators are being discussed among the participating partners and countries.

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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, are organizing a national training workshop for Brazil from 22 to 26 August 2016, which will train national practitioners in the fundamentals of environment statistics and methodologies to construct and sustain environment SDG indicators using real data sets.

With respect to the environmental component 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" implemented by ECLAC and ESCAP, ECLAC is currently undertaking the activities of the second phase, which aims to actively support SEEA 2012 implementation in pilot countries (Brazil, Colombia, Curacao, Jamaica, Paraguay and Uruguay). The week-long evaluation missions of the first project phase have highlighted the diversity of present needs in the region. For instance, Colombia, which has worked on environmental accounting for more than 20 years, has received an in-depth revision of its energy accounts in May 2016 with the help of an international expert. On the other hand, Jamaica, a country just starting with the compilation of SEEA accounts benefitted from a week-long intensive training on energy accounts in February 2016. With the help of an energy accounting expert from Norway, STATIN Jamaica calculated the first draft versions of energy accounts for the years 2011 and 2012. Further capacity building and technical assistance activities for pilot countries are currently being planned.

As part of the project, a regional workshop was organized in Bogotá, Colombia in March 2016, in collaboration with the World Bank's WAVES project (Wealth Accounting and the Valuation of Ecosystem Services) and the German Development Cooperation GIZ. The objectives of this "Latin America and the Caribbean Regional Workshop on Environmental Accounting for Policy Analysis" were two-fold: first, to provide a platform for knowledge sharing on SEEA implementation with a focus on the institutional set-up as well as the use of accounts and policy applications; second, to discuss the establishment of a Regional Cooperation Program. The workshop brought together almost 40 participants from 15 countries in Latin America and the Caribbean, who discussed intensively on these aspects during two days of work.

INEGI´s leadership moves forward the development and strengthening of environment statistics in Latin America and the Caribbean

(Contributed by Martin Wilson, INEGI-MEXICO)

According to the Project "Official Environmental Statistics Development and Strengthening through a Regional Framework in Latin America and the Caribbean" based on an agreement of technical cooperation signed between the Inter-American Development Bank (IADB) and the National Institute of Statistics and Geography of Mexico (INEGI), the diagnosis of the state of environment statistics in Latin America and the Caribbean has been completed, as Project component 1 through a document review and applying a questionnaire in the following 11 countries: Bahamas, Belize, Colombia, Costa Rica, Dominican Republic, Ecuador, Jamaica, Mexico, Panama, Suriname and Venezuela.

The above triggered Project component 2 focused on the design of a Strategy and Action Plan to develop and strengthen environment statistics in Latin America and the Caribbean. Within the component, activities were developed as part of the Strategy and Action Plan, and validation and presentation workshops were held in Dominican Republic and Ecuador. Such events called upon the Executive Board and Technical Committee representatives from the participant countries, officials from the financial institution (IADB), and the multilateral agencies which provide technical support: Economic Commission for Latin America and the Caribbean (ECLAC), the United Nations Statistics Division (UNSD), and the United Nations Environment Programme (UNEP).

The Strategy and Action Plan *validation* workshop was held in Santo Domingo, Dominican Republic from 2 to 4 December 2015. At the workshop intense analytical work and discussion took place around the strategic axes and specific actions that should shape a *Plan* to guide this emerging domain of official statistics to the level of development required by the increased demand of environmental information, from both the national and international perspective.

The Strategy and Action Plan *presentation* workshop was held in Quito, Ecuador from 13 to 14 April 2016. The event allowed the representatives of each member country to frame the work plan designed to improve the environment statistics in the context of the Agenda 2030 implementation and the SDGs. This global agenda introduces new and demanding requirements of official environment statistics to generate indicators that promote the monitoring of progress towards the objectives and goals of the environmental dimension of sustainable development.

The previous activities helped to complete the Project component 2, contributing with elements to design the Strategy and Action Plan to develop and strengthen the national programmes of environment statistics, based on the coordination between the diverse

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participating officials and the environment statistics standardization following the best international practices.

Finally, component 3 which is the methodological and technical toolkit, is underway, The products of components 1 and 2, the Diagnosis and the Strategy and Action Plan, are key inputs for component 3. Furthermore, logistical activities are being carried out to put in consideration of the Project Governance Bodies, a prototype during the Toolkit *presentation* workshop to be held in August 2016 in San Pedro, Belize.

CARICOM NEWS

Current Data Gaps and Successes 1998-2009 - the Implication for SDG Monitoring in the Caribbean Community (CARICOM) Region

(Contributed by Philomen Harrison and Faustina Wiggins, CARICOM Secretariat)

The work on Environment Statistics at the CARICOM Secretariat involves the collection and compilation of data from member countries, the production of the CARICOM *Environment in Figures* publication and capacity-building in countries and through regional workshops to undertake training in the compilation of the statistics and indicators in collaboration with the United Nations Statistics Division (UNSD). To date there have been four rounds of data collection activities aimed at compiling data on environment statistics for dissemination, the first round of which started under a joint CARICOM/UNSD Development Account Project. An analysis of data submitted since the first round of data collection has revealed that there continues to be significant data gaps in most themes which are compiled by the CARICOM Secretariat as well as for the two themes – Waste and Water – that are compiled by the UNSD and shared with the CARICOM Secretariat. However, there have been *some gains since around 1999/2000 only one country* was effectively engaged in the production and dissemination of Environment Statistics This article provides highlights of a data gap analysis on core indicators that have been collected during the period 1998-2009, by the CARICOM Secretariat, showing also where there have been some successes.

Data on ***Housing*** conditions are primarily sourced from the 2000 Census Round. As a consequence, during the period 1998 to 2009 there were on average 18 data points for the years of census conduct, 2000-2004. This is consistent with data on Housing in the Region.

Of the five tables under the theme ***Tourism***, for three tables there were data submissions on average for about 18 countries, however there were eight countries on average submitting data for the tables requiring the *Number of hotels classified by size, beds and rooms occupied and also for Tourist Arrivals by Type of Accommodation*.

With regard to ***Environmental Health*** which contained five tables, on average eight countries submitted data for the table, *Reported Cases of Environmentally Related Diseases*; for the tables on the *Number of Households by type of Sanitation Facilities and the Number of Households by Type of Water Supply* the number of countries responding were on average about 16 in each case and this was for data obtained during the 2000 Census Round. For other years the response was around one to two countries for each of these two tables. For the remaining two tables which were the *Proportion of the population using an improved drinking water source* and the *Proportion of population using improved sanitation facilities* the data submissions which were also from the Census Round almost mirrored that of the data by households with an average of about 13 countries submitting data for each table.

On the other hand the theme ***Natural Disasters*** had data submissions from 15 out of the 20 countries.

Data on ***Energy and Minerals*** which include five tables had limited data for the table, *Energy Consumption by type and year*. On average eight countries submitted the data for this table and within this table most of the data were on Primary *Electricity Consumption*. For the table on *Mineral Production by type* one to three countries submitted data on this table over the period under review, while for the table, *Mineral Reserves by type* data were submitted by one country for two of the years (2008/9) during the period. Data on the *Number of Households by type of fuel used for cooking* and by *type of fuel used for lighting* showed that there were approximately 17 countries with data points for the 2000 Census Round and almost data for the remaining years.

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For the theme, ***Coastal and Marine Resources***, which compiles data for three tables, data submitted on *Total and Protected Marine Area* ranged from one to seven countries over the period with an average of six countries submitting data over the last five years which imply a measure of improvement for this table. In addition, data submitted on *Fish Landings by Type* ranged from one to 11 countries, which also reflected an increase in data submissions over the last five years with an average of 10 countries in these years. Population of Coastal Areas is available from only one country for most of the period with four countries submitting data in 2000.

For the theme ***Land Use and Agriculture***, (land use was compiled through the UNSD/UNSD Questionnaire on Environment Statistics in the past), for most of the period only one country submitted data except for 2007 when data were available from two countries for the table on Land Use. Recommendations have been made about how countries can fill data gaps in this area using satellite imagery and Geographic Information System (GIS) technologies to monitor land use changes, which normally do not change frequently over a 10-year period. The map display from would be required to be translated into figures. There are two tables on Agriculture which are *Use of Fertilizers by type and year* and *Use of Pesticides by type and year* and these two tables have little or no gaps since they are sourced from data on imports, production and sales.

Under the theme ***Biodiversity***, which contains one table requiring data for the indicators *Total Area and Total Protected Area*, (*terrestrial and marine*), data submissions declined from an average of eleven (11) countries between 2000 to 2004 to an average of five countries between 2005 to 2009. For the theme ***Forest,*** which computes the *Protected forest area as a percentage of the Total forest area*, data submissions averaged five countries over the period. For both themes, data do not change frequently during a 10-year period.

Statistics on ***Air Emissions*** which are collected under the theme *Air*, were previously compiled through the UNSD/UNEP Questionnaire on Environment Statistics and made available to the CARICOM Secretariat. This area is now being compiled directly by the CARICOM Secretariat. The National Communications to the United Nations Framework Convention on Climate Change (UNFCCC) in member countries are recommended sources for data on *Air Emissions*. Very few countries have undertaken studies to monitor air emissions and therefore data submissions have been lacking. Data on the *Emissions of Carbon Dioxide (CO_2)* are available for three countries with an average of one country submitting data for the five years for which data are available. However, estimates for all countries of the region on the *Emissions of Carbon Dioxide (CO_2)* are available from a key international source, Carbon Dioxide Information Analysis Center. One country submitted data on *Emissions of Methane (CH_4)* in 1999 with no data for the remaining years. One country also submitted data on *Emissions of Nitrogen Oxides (NO_x)* for the years 1998 and 1999 only.

The data within the seven tables submitted by countries on ***Waste*** to UNSD through the UNSD/UNSD Questionnaire on Environment Statistics contained numerous data gaps for the main variables. Responses for all tables under this theme ranged from one to seven countries with most countries submitting data for the period 2001 to 2007. For this period the tables, *Generation of Waste by source* and *Management of Municipal waste* had the most data submissions with an average of five countries and six countries respectively while the remaining tables averaged two to three country submissions.

For the theme ***Water***, within the UNSD/UNEP questionnaire under the tables requiring data on *Renewable Fresh Water Resources* and *Freshwater Abstraction* showed an average of five country submissions over the period while the tables *Freshwater Available for Use* and *Water Supply Industry* also had data submissions on average for about five countries. The remaining tables had very low data submissions with on average three countries submitting data for the table *Total Water Use* and on average two countries submitting data for the tables *Wastewater Treatment Facilities* and *Population Connected to Wastewater Treatment*. At the 2014 CARICOM Environment Statistics training workshop in which the UNSD assisted in facilitation, it was recommended that shortened versions of the UNSD/UNEP questionnaires on Waste and Water could be explored in an effort to improve the response rates.

In sum and after approximately 16 years of work in this area by the CARICOM Secretariat it can be said that the areas of success are the following: indicators under ***Tourism; Housing; Natural Disasters; the tables on Environmental Health that are sourced from the Census; the tables on Energy in terms of Households by type of fuel used for cooking and by type of fuel used for lighting also from the Census; the table on fish landings over the more recent years; the indicators on the Use of fertilizers and pesticides by type; and on Emissions of Carbon Dioxide (CO2) based on international estimates***.

Decreases in the submission of data were noted for the indicators, ***Total Area and Total Protected Area, (terrestrial and marine, under the theme Biodiversity***.

While there have been some gains there is need to focus on filling the data gaps that have been identified across themes and countries. Given that the data needs for the Sustainable Development Goals (SDGs) contain a large number of statistical indicators and require more disaggregated data, the implications are that National Statistics Offices (NSOs) will need capacity-building and investment and related support from their respective Governments as well as from International Development Partners to enable monitoring and compilation of these indicators. This investment and support would also help in reducing the data gaps of indicators that are currently compiled. The NSOs also need to work *closely with environmental agencies that produce data for administrative*

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purposes in the course of their work. The CARICOM Secretariat has over the years encouraged strengthening of inter-agency coordination to compile data and fill the gaps in Environment Statistics; this becomes even more important as we monitor progress towards the SDGs. Apart from the inter-agency collaboration there is need to perhaps have dedicated personnel wherever feasible in NSOs to enable concerted attention to this area of statistics, if these gaps are to be filled in CARICOM countries.

ESCAP NEWS

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

Strengthening environment statistics: Fiji, Federated States of Micronesia (FSM), Nepal, Palau and Vanuatu

ESCAP is working with a number of countries in the Asia-Pacific region to strengthen their environment statistics, including implementing the System of Environmental-Economic Accounting (SEEA). The approach applied includes assessments of environment policy priorities, statistical infrastructure, data availability and human resource capacity; followed by provision of technical assistance for compiling and using statistics in prioritised sectors.

In early 2016, Samoa released experimental water accounts, the development of which had benefited from technical assistance by ESCAP.

During 2016, ESCAP is supporting national assessments and providing technical assistance to the Federated States of Micronesia (FSM), Fiji, Nepal, Palau and Vanuatu:

- Following national assessment and scoping, collaboration has been initiated with the Central Bureau of Statistics of Nepal (CBS) on land and forest accounts. A case study showcasing the compilation of the accounts and the production of policy-relevant indicators, including the SDGs related to land and forest, is expected to be published in 2017.
- Fiji plans to produce draft SEEA water, energy and waste accounts by September 2016, and will be supported with technical assistance from ESCAP. In collaboration with the UNWTO assistance will also be provided to the preparation of a case study on linking tourism satellite accounts with the SEEA to account for tourism-related environment use/supply.
- During 2016, plans for support to priority sectors as identified during earlier assessments will be developed for Palau and FSM. The plans are expected to include collaboration on water and energy accounts in Palau and possibly agriculture in FSM. Finally, collaboration with Vanuatu is expected to be initiated during 2016 through scoping and assessment.

Training on Environment Statistics for Asia-Pacific Small Island Developing States

ESCAP is organizing a training course on the SEEA for Small Island Developing States of the Asia-Pacific region, tentatively scheduled to be held in Fiji during 14-16 September 2016. The course is expected to focus on energy, waste and water statistics and accounts, and the links with relevant targets and indicators of the Samoa Pathway and the SDGs.

Pilot Studies underway from Asia and Pacific Expert Group on Disaster-related Statistics

Measurement for a core set of disaster-related statistics has received a rising global interest recently. Natural disasters is one of the major threats to sustainable development for many of the countries, a fact recognized by governments globally through the SDGs and targets and agreement to the Sendai Framework at the World Conference on Disaster Reduction in 2015.

Presently, discussions by the Inter-agency Expert Group (IAEG) on SDG Indicators is deferring further discussions on selected disaster-related indicators (number of deaths and economic losses from disasters) to the outcomes from the Open-ended Intergovernmental Expert Working Group (OIEWG) on Indicators and Terminology Relating to Disaster Risk Reduction (http://www.preventionweb.net/drr-framework/open-ended-working-group/). The OIEWG's discussions on indicators for monitoring the Sendai Framework on Disaster Risk Reduction Targets are on-going and scheduled to be completed by the end of this year.

Meanwhile, member States of the UN Regional Commission for Asia and Pacific (ESCAP) created an Expert Group on disaster-related statistics. Under its current mandate lasting until 2018, the Expert Group is developing a disaster-related statistics framework (DRSF), which will be a tool for use by national statistical systems to improve and integrate disaster-related statistics for risk reduction and sustainable development policy-making.

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The current approach of the Expert Group is to conduct studies of availability of statistics within the governments that are or could be made accessible to policy-makers and for responding to the emerging demands for disaster risk reduction and from the global indicator monitoring systems (Sendai Framework and SDGs). A progress report, describing activities conducted for these studies during the initial three months has been circulated for comment on the Expert Groups Website (http://communities.unescap.org/asia-pacific-expert-group-disaster-related-statistics). A 2nd round of pilot studies will be completed prior to the Expert Group's 4th meeting, which will be hosted by the Philippines Statistics Authority, in Manila, Philippines, in October 2016.

Regional Training Course on the System of Environmental Economic Accounting (SEEA)

SIAP hosted a four day regional training course on the SEEA from 23-26 February 2016 in Chiba, Japan. The training was a collaborative activity with UNSD and GIZ and attracted 32 participants from Bangladesh, Fiji, India, Indonesia, Islamic Republic of Iran, Kazakhstan, Kyrgyzstan Mongolia, Myanmar, Pakistan, Philippines, Samoa, Solomon Islands, Thailand, Turkey, Vanuatu, Viet Nam. The training course covered sessions on the SEEA accounting structure, physical flow, environment activity and asset accounts. Modules on ecosystems accounting and the diagnostic tool were also delivered. SIAP, UNSD and GIZ jointly funded participation of countries in the course.

New ESCAP Regional Advisor on Environment Statistics

Mr. Michael Bordt, Regional Advisor on Environment Statistics, joined the Statistics Division of ESCAP in May 2016.

Prior to his assignment with ESCAP, Mr. Bordt served as Assistant Director, Environment Accounts and Statistics Division, Statistics Canada during 2006-2012, and as consultant with the World Bank and United Nations Statistics Division during 2012-2015. He holds a BSc in Biology, a Masters in Environmental Studies, and is working towards a doctorate in Geography (specializing in ecosystem accounting).

Mr. Bordt has extensive experience in all domains of environment statistics, including the System of Environmental-Economic Accounting (SEEA) and its implementation, the Framework for the Development of Environment Statistics (FDES) indicators, household and business environmental surveys, and analytical publications. Further, Mr. Bordt's expertise covers spatial and statistical analysis, environmental classifications, and measuring ecosystem services.

Member countries are welcome and invited to contact Mr. Bordt (Bordt@un.org).

COUNTRY NEWS

Environmental statistics in the Czech Statistical Office

(Contributed by Iva Ritschelova, Czech Statistical Office, Czech Republic)

Various countries have different experiences with environmental statistics. For the common good any valuable experience in the field should be actively disseminated. The role of international organizations and agencies, and particularly UNSD, in this respect is very important. One of the significant milestones was the introduction of the FDES back in 1984. Since that time the FDES has served a number of countries including the Czech Republic as a very important tool for establishing and developing their environmental statistics systems as well as their environmental policies.

In 2010 the United Nations Statistical Commission decided to revise the framework. It took almost three years of work of many international experts to accomplish this assignment and it was a great honor for the Czech Statistical Office (CZSO) to chair this Expert Group on Environment Statistics (EGES). The revised FDES version was endorsed by the Statistical Commission at its 44th session in 2013. A key strength of the FDES 2013 is that it builds on existing statistical standards and definitions. Therefore, it has a high potential to be used for design and future development of national environmental statistics systems.

In order to support the FDES 2013 implementation, the EGES is now focused at disseminating of the methodological guidance and best practices. The CZSO also takes active part in its work and plans to continue actively sharing its experience. Furthermore, the next EGES meeting in 2017 is planned to take place in Prague. The environmental statistics of the CZSO covers such domains, as water, waste, land and biological resources. Several environmental accounts are among other important outputs. A separate unit for environmental statistics at the CZSO has been around for almost 25 years.

Owing to its importance for agriculture, water statistics of the CZSO has the tradition dating back to the 1960s. Varied series reported to Eurostat are acquired from several data sources. The stock of groundwater and surface water is monitored by the Czech Hydrometeorological Institute. Amounts and types of pollutants released into groundwater and surface water, as well as the water

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abstraction are reported by state-owned watercourse administrators. Data on water mains and sewerage systems are provided by operators of public water supply systems and sewerage systems.

Waste statistics are also very important for the national economy. Data on waste have been monitored since the end of the 1980s when two initial surveys on landfills and waste production were carried out. Since 1992 the regular annual survey on Waste Generation and Management has been carried out. These data are regularly sent to Eurostat. In 2011 in order to meet the needs of the national raw material policy related among others to Waste Framework Directive 2008/98/EC the Ministry of Industry and Trade initiated an expansion of the survey scope with secondary raw materials.

The CZSO is also actively involved in environmental accounting activities (see https://www.czso.cz/csu/czso/environmental_accounts). In the Czech Republic environmental investment expenditure directly related to environmental protection expenditure account compilation have been observed since as early as 1986, non-investment expenditure since 2003. The data collection has been implemented by means of a business sample survey.

In 2003 emissions into air and material flows accounts were first tackled. Data sources for these two accounts were found in cooperation with other institutions and basic time series were compiled within a pilot project. These two accounts as well as environmental taxes account were a basis of Regulation (EU) No 691/2011 of the European Parliament and of the Council of 6 July 2011 on European environmental economic accounts. This is the European example of the System of Environmental-Economic Accounting (SEEA) implementation. At present the CZSO compiles three above mentioned accounts annually.

As the regulation scope was expanded the CZSO currently concentrates on compiling a set of three other additional accounts - environmental protection expenditure, environmental goods and services sector, and physical energy flow account. The environmental goods and services sector account was compiled within a Eurostat project for the first time in 2010. At present activities leading to higher quality of the data take place. The physical flow accounts for energy are based on high-quality energy statistics, which have a long tradition in the Czech Republic. The CZSO activities are also focused on the fields of environmental subsidies and transfers where the Office participates in voluntary data collection.

For the Czech Republic, as a country with developed industry, monitoring of emissions into air is of great importance. Data collection in this field is performed by the Czech Hydrometeorological Institute, which cooperates in compiling of air emission accounts (see above). Some indicators (emissions of greenhouse gases) are compiled using the CZSO data for industry and energy.

Other important fields including land and biological resources have been monitored within the agriculture statistics of the CZSO. All data concerning the environmental statistics are available at https://www.czso.cz/csu/czso/environment.

FDES in Indonesia

(Contributed by Heru Kusharjanto and Winda Sartika Purba, Badan Pusat Statistik, Indonesia)

BPS-Statistics Indonesia has developed the report on environment in the form of publication of Environment Statistics of Indonesia (ESI) since 1982. This publication is published annually based on the FDES 1984. The areas covered in the publication include natural environment, man-made environment and social environment. The last publication, ESI 2015, already based on the framework and the structure of components of the FDES 2013, so the structure is organized into the six FDES components and various sub-components.

The preparation of ESI 2015 using the FDES 2013 framework begins with the translation of the FDES 2013 document into Indonesian language, so it is more easily understood. The next step is identifying the data availability from previous ESI publications and other publications from BPS-Statistics Indonesia itself and from other relevant ministries. The identification of data availability in other relevant ministries was done by visiting the website of the Ministry and directly contacting the correspondent of the related Ministry to request the data needed.

The application of the FDES 2013 into ESI 2015 was not optimal due to the limitation of data availability. It is because there is no discussion that focuses on the application of the FDES between BPS-Statistics Indonesia with the relevant ministries to implement the FDES 2013. Other related ministries are very important in the application of FDES 2013 because most of the data that required in FDES are produced by other ministries.

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Components of FDES 2013		Number of available statistics		
		Core set	Not core set	Total
Comp. 1	Environmental conditions and quality	13	22	35
Comp. 2	Environmental resources and their use	8	7	15
Comp. 3	Residuals	5	1	6
Comp. 4	Extreme events and disasters	2	4	6
Comp. 5	Human settlements and environmental health	4	5	9
Comp. 6	Environmental protection, management and engagement	-	1	1
Total		**32**	**40**	**72**

In the preparation of next ESI publication, BPS will invite the other relevant ministries or other stakeholder to identify the data available to support the application of FDES 2013. If the core data that required in FDES 2013 are not available, discussion on how to produce these data will take place, so the number of data in the next ESI publication will be more complete.

The publication of ESI 2015 is available at: http://bps.go.id/website/pdf_publikasi/Statistik-Lingkungan-Hidup-Indonesia-2015.pdf

FDES in the Philippines

(Contributed by Romeo Recide, Vivial Ilarina and Edward Eugenio Lopez-Dee, Philippine Statistics Authority, Philippines)

Background on environment statistics in the Philippines

With the increased demand for environmental information brought about by accelerated growth in the economy and its effect on the environment, the Philippines had to adopt the strategy of sustainable development and growth with equity, bringing to fore the need for environment statistics. To address this concern, the Philippines embarked on a project to develop the Philippine Framework for the Development of Environment Statistics (PFDES) which was based on the 1984 United Nations Framework for the Development of Environment Statistics (FDES). The PFDES provided a systematic approach to the development and organization of environment statistics in such a way as to be more useful in the formulation and valuation of socio-economic and environmental programs and policies.

Through this project, the Philippines came out with the first edition of the Compendium of Philippine Environment Statistics (CPES) in 2000. The compendium is a compilation of statistical information collected from data produced by various government agencies. Following the PFDES, the compiled statistics were organized focusing on the six main components of the environment, namely, flora, fauna, atmosphere, water, land, minerals and energy, and human settlements. The CPES was subsequently published biennially until 2008. From then on, a database on environment statistics vis-à-vis the framework was maintained, albeit incomplete, due to insufficient resources.

In 2013, with the enactment of Republic Act No. 10625, otherwise known as the Philippine Statistical Act of 2013, the Philippine Statistical Authority (PSA) was established. The Law mandates the PSA to compile environment statistics and environmental accounts and thus established a unit dedicated for the task.

Current experience in compiling environment statistics

With the environment unit in place, the PSA through the locally funded Philippine Economic-Environment and Natural Resources Accounting (PEENRA) Project embarked on updating the CPES based on the UN FDES 2013.

PSA released the 2014 Compendium of Philippine Environment Statistics (CPES) in June 2015.[3] The 2014 CPES focused on the Core Set of Statistics (Tier 1) as recommended by the FDES 2013 - Final Draft (2013). Out of the 107 identified core statistics and

[3] The statistical tables were first released via web in March 2015 (http://nap.psa.gov.ph/announce/2015/PSA-NSCB_cpes.asp), and the 2014 CPES publication was uploaded and released via web in June 2015 (http://nap.psa.gov.ph/announce/2015/PSA-NSCB_cpes2014.asp).

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and indicators from the six components, a total of 71 statistical indicators were compiled.

Summary of environment statistics compiled in 2014 CPES, based on 2013 FDES – Final Draft

Component	Number of statistics	
	Total, Tier 1	Compiled
1. Environmental conditions and quality	35	22
2. Environmental resources and their use	35	25
3. Residuals	19	10
4. Extreme events and disasters	4	3
5. Human settlements and environmental health	11	9
6. Environmental protection, management and engagement	3	2

Currently, work is underway to update the CPES following the final and official edited version of FDES 2013, with the intent of including statistics in Tier 2. A training workshop on the final version of FDES 2013 is also being organized to capacity.

The Status of FDES Implementation and related undertakings in Rwanda

(Contributed by Emmanuel Habimana, Rwanda Environment Management Authority and Jean Niyigaba, National Institute of Statistics of Rwanda)

As a consequence of the regional Workshop on Environment Statistics in Support of the Implementation of the Framework for the Development of Environment Statistics (FDES 2013) organized by UNSD, in collaboration with the East African Community Secretariat, in Arusha, from 6 to 10 July 2015, Rwanda has embarked to make big steps in the implementation of the FDES.

As per the regional workshop's recommendations, representatives from Rwanda Environment Management Authority (REMA) and the National Institute of Statistics of Rwanda (NISR) conducted a national consultative workshop from 8 to 10 December 2015 in Huye. It aimed at discussing with all stakeholders on how FDES 2013 can be domesticated through an existing channel of institutional framework; namely Rwanda Environment Information Network (REIN).

The workshop addressed the following topics:

1) GIS (Geographic Information System) use for environment data collection

The place of GIS and remote sensing in management of environment statistics: NIZEYIMANA Alexis, the Environment Information Systems Officer in REMA gave an overview on the use of GIS in Data processing in general, and Spatial data in particular.

As a result; more insight has been acquired about the use of maps to visualize environmental features, changes overtime and the support GIS can provide for decision making. Furthermore, REIN members are now able to explore country's environmental figures through "National Land Cover Maps" with detailed coordinates.

2) FDES and role of sharing administrative data

Overview of FDES components, topics and sets of environment statistics: HABIMANA Emmanuel, REMA Statistician presented the background on Rwanda State of Environment Report that portrays a biennial picture of our environment. REMA Statistician together with NISR and MINIRENA officers in charge of ENR statistics took enough time for explain how to interpret FDES table for a holistic count of variables to be reported on (environment indicators in the context of Rwanda).

As a results; sample figures published in Rwanda State of Environment Report were used to illustrate how and why institutional sharing of environment statistics matters for better planning. Means of collecting environment data were reviewed and the use of Environment Statistics Self-Assessment Tool (ESSAT) was introduced.

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In a nutshell, participants have been impressed by the way that FDES Components, sub-components, topics and main sets of environment statistics, terminologies and classification of indicators are sequenced perfectly. Their structure is clearly conducive to the working environment the 4th SoER has been developed. The methodological approach "Status, Trend, Driving force, Pressure and Response (STDPR) has served as a guide for all participants to ease understanding and ownership of some topics they thought to be of their special interest.

RECAPITULATED CHECK FOR AVAILABILITY OF DATA:

Group I: Made of REMA, MINIRENA, RNRA, NGOs, RNP & NISR (focused on Environment and Natural resources Sector)

COMPONENTS	1	2	3	4	5	6	Tot
Possible indicators	141	124	58	31	54	50	458
Number of Indicators with available data	79	118	20	0	2	31	250

Group II: Made of Ministry of Health (MINISANTE) & Rwanda Biomedical Centre (RBC) (focused on Environmental Health Sector)

COMPONENTS	1	2	3	4	5	6	Tot
Possible indicators	141	124	58	31	54	50	458
Number of Indicators with available data	0	0	0	0	3	0	3

Group III: Made of WASAC, REG, MININFRA and RHA (focused on Infrastructure Sector)

Group III:	Made of WASAC, REG, MININFRA and RHA (focused on Infrastructure Sector)	Group III:	Made of WASAC, REG, MININFRA and RHA (focused on Infrastructure Sector)	Group III:	Made of WASAC, REG, MININFRA and RHA (focused on Infrastruc-ture Sector)	Group III:	Made of WASAC, REG, MININFRA and RHA (focused on Infrastruc-ture Sector)
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Group IV: Made of PSF, MYICT, NIRDA, MINEAC and MINICOM (focused on trade and development Sector)

COMPONENTS	1	2	3	4	5	6	Tot
Possible indicators	141	124	58	31	54	50	458
Number of Indicators with available data	0	8	0	0	0	0	8

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All groups:

COMPONENTS	1	2	3	4	5	6	All
Possible indicators	141	124	58	31	54	50	458
All Indicators with available data	79	124	22	2	21	31	304
FDES number of core set statistics	32	30	19	4	12	3	100

Suggestions for effective implementation of FDES

For continuity and consistency purposes REIN operationalization, the participants suggested that:

- Representatives of institutions at the FDES training workshop are maintained as REIN members. New institutions suggested to be part of REIN, are required to assign their focal points;
- Assessment of capacity-building needs towards effective implementation of FDES be conducted;
- Sharing Institutional Plans for developing environment indicators and raising awareness on priority environmental statistics that need to be collected by different institutions be carried out;

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