



# envstats

## News and Notes

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

FOCUS:

## Development of Environment Statistics in the East African Community (EAC) Region

(Contributed by Michael Gitau, EAC Secretariat)

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The East African Community (EAC) is a regional intergovernmental organization of six Partner States, comprising Burundi, Kenya, Rwanda, South Sudan, Tanzania and Uganda, with its headquarters in Arusha, Tanzania. The EAC has been collaborating with the United Nations Statistics Division (UNSD) in the implementation of the UNSD supported Development Account project "Supporting Member States in developing and strengthening environment statistics and integrated environmental-economic accounting for improved monitoring of sustainable development". The project has supported the EAC partner states in the development of environment statistics through Technical Assistance (TA) missions to five partner states of Burundi, Kenya, Rwanda, Tanzania and Uganda, and the organization of three regional workshops.

The TA missions composed of bilateral consultations with the National Statistical Offices of the partner states and three-days workshops with national stakeholders on environment statistics. The consultations focused on main environmental issues, priorities, data gaps at the national level as well as way forward in development of environment statistics. The workshops discussed, inter alia, availability of environment statistics in the country, made assessment of the needs of and uses for environment statistics, and developed national work plans for improvement of environment statistics. Partner states who had not assessed the state of environment statistics based on the Environment Statistics Self-Assessment Tool (ESSAT) Part II used the tool to have a comprehensive national status.

The first regional workshop held in July 2015 trained national experts on the implementation of the Framework for Development of Environment statistics (FDES 2013), to provide statisticians and experts from ministries responsible for environment with detailed knowledge and understanding of contemporary approaches to environment statistics, and to discuss the development of a programme on environment statistics for the EAC region. The second regional workshop held in March 2017 discussed the progress by partner states in the implementation of FDES 2013 and the challenges encountered; reviewed national data availability for the environmentally-related SDG indicators and other international datasets; and reviewed a draft regional compendium on environment statistics. The third and final regional workshop held in October 2017 further reviewed the progress in the implementation of the FDES 2013, and developed a regional compendium of environment statistics and a draft list of regional indicators based on EAC

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Also available on <http://unstats/unsd/ENVIRONMENT/newsletters.htm>

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policies. The regional indicators are expected to guide partner states in prioritization of their work to improve regional integration on environment matters.

Compilation of environment statistics in the EAC region has greatly improved through the implementation of the project. The following achievements has been realized:

- Establishment of national technical working group on environment statistics in five partner states to coordinate the development of environment statistics at national level, while a regional technical working group is in the process of being constituted to coordinate at the regional level.
- Human capacity for a critical mass of compilers of environment statistics has been developed in the region;
- National action plans for development of environment statistics and adoption of FDES 2013 as the framework for compilation of environment statistics;
- Regional action plan for development of environment statistics for harmonized and coordinated implementation of the FDES 2013 by the EAC partner states;
- National compendiums on environment statistics for some partner states have been disseminated based on the FDES 2013; and
- Draft regional compendium of environment statistics has been developed and once finalized will be the regional hub for environment statistics.

The EAC and the partner states will follow up on the full implementation of the national and regional action plans, which upon full implementation guarantee availability and dissemination of comparable regional environment statistics in the Community. For monitoring of the progress in the implementation of the plans, the EAC Secretariat shall be convening annual meetings for the regional technical working group on environment statistics.

## UNSD NEWS:

### UNSD Data Collection and Dissemination on Environment Statistics

The UNSD/UNEP Questionnaire 2016 on Environment Statistics was sent out to 173 countries and territories in November 2016. The Questionnaire provides data for several SDG targets and indicators, including:

#### Water

- 6.3.1 Proportion of wastewater safely treated
- 6.4.1 Change in water-use efficiency over time
- 6.4.2 Level of water stress: freshwater withdrawal as a proportion of available water resources

#### Waste

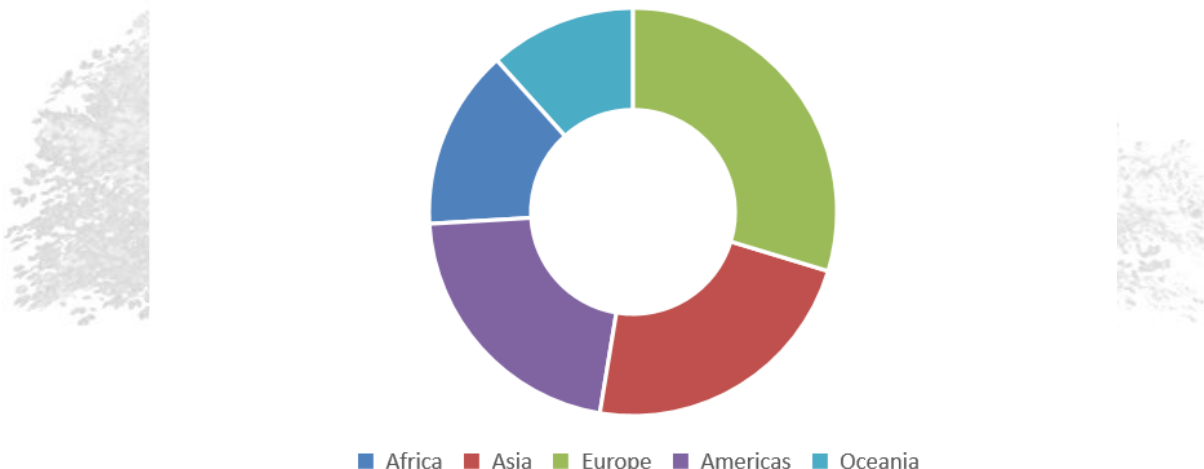
- 11.6.1 Proportion of urban solid waste regularly collected and with adequate final discharge out of total urban solid waste generated, by cities
- 12.4.2 Hazardous waste generated per capita and proportion of hazardous waste treated, by type of treatment
- 12.5.1 National recycling rate, tons of material recycled

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As of November 2017, 89 countries/territories responded, with 82 countries submitting data and seven countries with no data available. The response rates varied significantly for each region. The best response rates were found in Europe (73.3 %), followed by Asia (61.0%) and the Americas (57.1%). The response rate for Africa was 39.6% and for Oceania 29.4%.

### Percentage of Response Rates by Geographical Region



Among the 82 countries submitting data, 69 countries provided data for both the water and waste sections of the questionnaire, while 13 countries provided data for only one of the two sections.

UNSD publishes global environment statistics through two main web-based products, [UNSD Environmental Indicators](#) and [Country Snapshots](#). The environmental indicators in the areas of Inland Water Resources 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 are available at: <https://unstats.un.org/unsd/envstats/qindicators.cshtml>. The [Country Snapshots](#) are in the process of being updated.

In addition, the complete data and footnotes received from each respondent country have been uploaded to the [Country Files](#) webpage. Also, selected water and waste statistics were updated on [UNData](#).

The next biennial UNSD environment data collection will take place in 2018.

### Pilot Questionnaires on Electronic Waste and Water Quality

In March 2017, UNSD sent pilot questionnaires on Electronic waste (e-waste) and water quality to 42 countries spanning all regions. Eurostat, the Organisation for Economic Cooperation and Development (OECD), UNECE, UN Environment, and the United Nations University all collaborated with UNSD for these pilots. The e-waste pilot questionnaire contained pre-filled data sourced from best estimates of the United Nations University. Countries were encouraged to review the pre-filled data against their own sources, and provide their best available data by 7 April 2017. 40 of the 42 countries engaged in correspondence with UNSD. 23 countries provided numerical data, but very informative qualitative information (regarding legislation, policy, collection method of e-waste, etc.) was provided by most countries. Regarding the e-waste questionnaire, nine out of the 16 variables were responded to with data, with the most commonly responded to variables being: total e-waste generated (29 responses); Lamps generated as e-waste (11); and total e-waste collected (9). Rarely were countries able to provide data broken down by type (e.g. large equipment; screens, monitors and equipment containing screens; small IT and telecommunications equipment, etc.) of e-waste (either generated or collected). The water quality questionnaire was designed to capture data relevant to SDG monitoring of indicator 6.3.2, Proportion of bodies of water with good ambient water quality. It consisted of separate tables for the three water bodies, (i) rivers, (ii) lakes and (iii) groundwater bodies, and variables such as dissolved oxygen, pH, electrical conductivity, etc. Response rates were highest for variables within the rivers and lakes tables.

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Responses to the pilot questionnaires have better informed UNSD and its collaborating partners of countries' abilities to provide data for these two challenging fields of environment statistics. Responses provided shall help UNSD take decision when considering possible addition of variables regarding e-waste and water quality into its regular Questionnaire on Environment Statistics (waste and water sections) in 2018.

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

The Manual on the Basic Set of Environment Statistics of the FDES complements it with detailed guidance on concepts and definitions of the statistics; relevant classifications and groupings; reference to international statistical recommendations, frameworks and standards; sources of global and regional environmental statistics and indicators; basic information on data collection to allow environmental statisticians to compile the data from line ministries into environment statistics; and suggestions on data dissemination and relevant indicators, including from the System of Environmental Accounts and the SDGs.

The following methodology sheets have been published as part of the Manual on the Basic Set of Environment Statistics and are available at [https://unstats.un.org/unsd/envstats/fdes/manual\\_bses.cshtml](https://unstats.un.org/unsd/envstats/fdes/manual_bses.cshtml):

- Minerals covering Topic 2.1.1: Stocks and changes of mineral resources, Topic 2.1.2: Production and trade of minerals.
- Energy covering Topic 2.2.1: Stocks and changes of energy resources and Topic 2.2.2: Production, trade and consumption of energy resources.
- Water covering Sub-component 2.6: Topic 2.6.1: Water resources and Topic 2.6.2: Abstraction, use and returns of water.
- Crops and Livestock covering Sub-component 2.5: Topic 2.5.3: Crops and Topic 2.5.4: Livestock.

Methodology sheets which have been peer reviewed by the Expert Group on Environment Statistics and are anticipated to be published soon, include:

- Land use/land cover covering Sub-component 1.2: Topic 1.2.1: Land cover and Sub-component 2.3: Topic 2.3.1: Land use.
- Forest covering Sub-component 1.2 Topic 1.2.3: Forests, Topic 2.3.2: Use of forest land; and Topic 2.5.1: Timber resources.
- Human Settlements covering Sub-component 5.1: Topic 5.1.1: Urban and rural population, Topic 5.1.2: Access to selected basic services, Topic 5.1.3: Housing conditions, Topic 5.1.4: Exposure to ambient pollution and Topic 5.1.5: Environmental concerns specific to urban settlements.
- Waste covering Sub-component 3.3 Topic 3.3.1: Generation of Waste Topic 3.3.2: Management of Waste
- Ecosystems and Biodiversity covering Sub-component 1.2 Topic 1.2.2: Ecosystems and Biodiversity
- Environmental Protection covering Sub-component 6.1 Topic 6.1.1: Government environment protection and resource management expenditure Topic 6.1.2: Corporate, non-profit institution and household environment protection and resource management expenditure

Methodology sheets initiated at the fourth Expert Group Meeting or in development, include:

- Air Quality covering Sub-component 1.3 Topic 1.3.1: Air quality
- GHG Emissions covering Sub-component 3.1 Topic 3.1.1: Emissions of greenhouse gases
- Natural Disasters covering Sub-component 4.1 Topic 4.1.1: Occurrence of natural extreme events and disasters; Topic 4.1.2: Impact of natural extreme events and disasters
- Geology and Soils covering Topic 1.1.3: Geological and geographical information and Topic 1.1.4: Soil characteristics
- Environmental Protection, Management and Engagement covering Sub-component 6.4: Environmental Information and Awareness

## Environment Statistics Compendia and Surveys

Following endorsement of the FDES 2013 by the United Nations Statistical Commission at its 44th session (2013) as the framework for strengthening environment statistics programmes in countries, many countries have compiled environment statistics compendia which apply the FDES 2013. Such compendia and similar publications so far shared with UNSD are being made available on UNSD's website at <https://unstats.un.org/unsd/environment/fdescompendia.html>.

Since the July 2017 Envstats newsletter, UNSD has gratefully received many additional specialized environment statistics surveys and censuses. Now some 90 surveys are available on the website (<http://unstats.un.org/unsd/environment/censusesandsurveys.html>) and one can filter them by country, theme and year. Languages in which surveys are available include Arabic, English, French, Portuguese and Spanish.

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

## UNSD's Work on the Development of the Global Set of Climate Change Statistics and Indicators

Based on the mandate of the forty-seventh session of the Statistical Commission, which inter alia, requested UNSD to review the ECE set of climate change-related statistics and indicators and to consider it as a basis for developing a global set of climate change statistics and indicators (<https://unstats.un.org/unsd/statcom/47th-session/documents/Report-on-the-47th-session-of-the-statistical-commission-E.pdf>), UNSD has been embarking on this work. The ECE set of climate change-related statistics and indicators was endorsed by the Conference of European Statisticians plenary session in June 2017 as an initial list. Given the fact that this remains an initial list and that further refinement is necessary UNSD, which is also an active member of the ECE Task Force on a set of key climate change-related statistics and indicators, is: (i) pilot testing the ECE set of indicators with countries to assess its applicability for developing countries, in particular to consider areas of concern such as adaptation/vulnerability; and (ii) discussing the set of indicators in various fora, including the Expert Group on Environment Statistics (EGES), and regional and national capacity building workshops.

The UNSD Pilot Survey on Climate Change-related Statistics and Indicators is based on the ECE set of indicators and organized around the same areas (drivers of climate change, emissions, impacts, mitigation and adaptation). Comments from countries to date have revealed the following: issues with data disaggregation; methodological issues; lack of technical capacity and human resources; financial and time constraints; no policy framework; lack of a dedicated inter-institutional working group focusing on climate change statistics; several indicators not being applicable, not available or too complex for developing countries; the need to adjust indicators and to include new-sub-areas or indicators which may be pertinent to developing countries. The Pilot Survey is still ongoing but has already demonstrated the need to develop, inter alia, (i) new or additional indicators to reflect the situation in developing countries; (ii) a process on how to identify/modify the indicators based on both existing global processes and regional and national policies, priorities and processes; and (iii) guidance for a systematic process for a full consultation at national level involving all stakeholders.

Based on the responses to the survey, in consultation with countries and experts, and in coordination with the work that ECE will undertake in relation to refining their set of indicators, UNSD will ultimately send out a list of indicators for global consultation. Further details on this and related work of ECE and the United Nations Framework Convention on Climate Change is contained in the Report of the Secretary-General on Climate Change Statistics that will be presented to the 49th session of the Statistical Commission in 2018 and will be available at: <https://unstats.un.org/unsd/statcom/>.

## Final Workshop on Environment Statistics for the East African Community Region (Arusha, Tanzania, 23-27 October 2017)

As part of the Development Account 9th Tranche Project on “Supporting Member States in Developing and Strengthening Environment Statistics and Integrated Environmental-Economic Accounting for Improved Monitoring of Sustainable Development” (see Focus Article “Development of Environment Statistics in the East African Community (EAC) Region” for more information on the Project), UNSD organized a sub-regional workshop for the East African Community (EAC) countries in collaboration with the EAC Secretariat. The Workshop was the final activity of the environment statistics module of the project. It took place in Arusha, United Republic of Tanzania from 23 to 27 October 2017, with hosting and on-ground support provided by the EAC Secretariat and the National Bureau of Statistics of the United Republic of Tanzania. Several other international and inter-governmental organizations participated in the Workshop, including the Food and Agriculture Organization of the United Nations, the United Nations Environment Programme (UN Environment), the United Nations Economic Commission for Africa, the African Development Bank and the Common Market for Eastern and Southern Africa.

The Workshop discussed the progress in the implementation of the FDES 2013 and the Environment Statistics Self-Assessment Tool (ESSAT) in countries, as well as the development of national work plans and the establishment of inter-agency committees. Working groups were organized according to the components of the FDES 2013 to discuss and finalize the EAC compendium of environment statistics. Additional topics such as climate change statistics and indicators, the UNSD/UNEP Questionnaire on Environment Statistics and the related SDG indicators, and environmentally-related agricultural statistics, were also addressed. Finally, the Workshop discussed and adopted a key set of recommendations and actions on the way forward, as well as finalized the Regional Action Plan for Environment Statistics and Terms of Reference for a Regional Technical Working Group on Environment Statistics. All documents for the Workshop are available at: <https://unstats.un.org/unsd/envstats/meetings/2017-EAC/index.cshtml>.

It was the final activity of the project, and UNSD has noticed the evolution in the countries in terms of environment statistics. While back in 2015, before the opening sub-regional workshop, the collection of environment statistics in the countries was not well coordinated, there are now very solid coordination structures led by the national statistical offices. This has resulted in a better knowledge of data availability, and thus supported countries in producing their environment statistics compendiums. It also helped countries being more confident about their national data and put them in a position to better understand the data produced at the international level, which should eventually lead to a faster domestication of the environmentally-related SDG indicators. UNSD is therefore very satisfied with the project and looks forward to continuing its collaboration with both the EAC Member States and the EAC Secretariat in the future.

## Meeting on Electronic Waste Statistics for the East African Community Region

Given UNSD’s recent work with the EAC member states in conducting a Pilot Questionnaire on Electronic Waste (E-Waste) Statistics in collaboration with the United Nations University (UNU), a one-day Meeting focusing on E-Waste Statistics was organized by UNU back-to-back with the Final Workshop on Environment Statistics for the East African Community Region and was held in Arusha, Tanzania on 28 October 2017. Several technical presentations were made by UNU on the general principles and the measurement of e-waste. Countries delivered presentations on their experiences in the collection of e-waste statistics. UNSD also participated in this meeting that should contribute to improving the availability and quality of e-waste statistics in the EAC region.

UNSD hopes to sustain the good collaboration with UNU by possibly helping them hosting another meeting back to back with one of its future sub-regional workshops. Indeed, countries appreciated focusing on a specific topic for an entire day. Moreover, the importance of the issue is growing, and policies are starting to be implemented in many countries, leading to more demand for data on e-waste.

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

(see article contributed by ECA under Regional News for more details)

The Regional Seminar on the Framework for the Development of Environment Statistics (FDES 2013) was held in Nairobi, Kenya from 4 to 8 September 2017 jointly conducted by the United Nations Economic Commission for Africa (ECA), UNSD and UN Environment.

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UNSD participated under the Development Account 10th Tranche Programme, contributing to achievement of results under the Environmental Pillar which aims to strengthen capacity in developing countries to measure and monitor environmentally-related Sustainable Development Goal indicators. UNSD designed and presented several modules under the workshop sessions. These sessions consisted of Session 1: Need for and use of environmental statistics and indicators, Session 2: Review of the e-learning on FDES and taking stock of countries' environment statistics, Session 3: Methodology for FDES statistics, Session 4a: Steps to implementation of the FDES at national level, Session 4b: Ingredients essential for a successful implementation, Session 5: Initiating the implementation, Session 6: Assessment of institutional dimension and data availability, and Session 7: Plan making and implementation.

Follow up activities to implement FDES under the DA 10th Tranche, in conjunction with the Programme on Environment Statistics in Africa of the DA 10th Tranche will start with a selection of pilot countries for implementation of FDES. UNSD will continue to work initially with Gambia and Namibia to continue the work of strengthening environment statistic. The first national missions, to be conducted in February 2018, will initiate implementation of FDES by focusing on conducting the environment statistics assessment using the Environment Statistics Self-Assessment Tool (ESSAT) developed as part of the toolkit for implementation of the FDES.

## **Workshop on Environment Statistics in Support of the Implementation of the Framework for the Development of Environment Statistics (FDES 2013) for the Economic Community of Central African States (ECCAS) Region**

UNSD organized a sub-regional workshop entitled “Workshop on Environment Statistics in support of the implementation of the Framework for the Development of Environment Statistics (FDES 2013) for the Economic Community of Central African States (ECCAS)/Communauté Économique des États de l’Afrique Centrale (CEEAC) region”, in collaboration with the African Development Bank. It took place in Libreville, Gabon from 27 November to 1 December 2017, with on-ground support being provided by the ECCAS Secretariat and the Government of Gabon. Several other international and inter-governmental organizations participated in the Workshop including the United Nations Environment Programme (UN Environment), l’Institut Sous-régional de Statistique et d’Economie Appliquée (ISSEA), la Communauté Économique et Monétaire des États de l’Afrique Centrale (CEMAC), la Commission Régionale des Pêches du Golfe de Guinée, (COREP) and l’Observatoire Économique et Statistique d’Afrique Subsaharienne (AFRISTAT).

The Workshop was part of UNSD’s regular programme of technical cooperation to support the implementation of the FDES 2013 in member states following the 44th session of the Statistical Commission’s endorsement of the FDES 2013 as the framework for strengthening environment statistics programmes in countries. Two staff members of the Environment Statistics Section of UNSD served as overall resource persons and made presentations on the FDES 2013 and related subjects. UNSD also provided the participants with guidance towards the implementation of the FDES 2013 and the Environment Statistics Self-Assessment Tool (ESSAT) in their countries. Climate change statistics and indicators were also discussed extensively given the mandate from the 47th session of the Statistical Commission that UNSD develop a global set of climate change statistics and indicators. In addition, the UNSD/UNEP Questionnaire on Environment Statistics and the environmentally-related SDG indicators were also addressed. Finally, the Workshop discussed and adopted a key set of recommendations and actions on the way forward, which included the development of a Regional Action Plan for Environment Statistics. The ECCAS Secretariat also developed a Concept Note for a Project for the Development of Environment Statistics for the Central African countries that was discussed at the Workshop. All documents for the Workshop are available at: <https://unstats.un.org/unsd/envstats/meetings/2017-Gabon/index.cshtml>.

Though this workshop was only a “one time” activity in the region and not part of a full project, UNSD is hoping that it will result in some countries conducting an assessment of environment statistics using the ESSAT and starting the implementation of the FDES 2013 on their own. Indeed, with the increasing importance of sustainable development in national policies, some participants shared with UNSD the strong demand for environment statistics in their countries. They were therefore keen on using the tools presented during the workshop in their respective countries. UNSD will continue to support these countries, resources permitting through direct national support, or remotely from New York.

**FAO NEWS****(Contributed by Francesco N. Tubiello, Silvia Cerilli and Giulia Conchedda)****Statistical Capacity Development and Expert Forums**

From 3 to 5 October 2017 FAO hosted in Rome the [UNECE Expert Forum for producers and users of climate change-related statistics](#), involving over 80 participants. The Expert Forum discussed how to develop official statistics to respond to the data reporting requirements arising from global agreements, including the United Nations Framework Convention on Climate Change (UNFCCC), the Sendai Framework for Disaster Risk Reduction and the Sustainable Development Goals (SDGs) relating to climate change. The meeting aimed at sharing experience on developing official statistics for climate reporting, focusing this year especially on the underlying data and accounts on agriculture, forestry and land use. From 2 to 3 October 2017 FAO also hosted the meeting of the [Joint Task Force on Environmental Indicators for Eastern Europe, Caucasus and Central Asia](#). FAO contributed to these meetings with expertise related to environmental statistics and indicators and with presentations of FAO on-going activities in support of climate-change statistics. A new FAOSTAT domain on [Temperature Change](#), issued from the collaboration between the FAO Statistics Division and the NASA Goddard Institute for Space Studies, was officially launched in the occasion of the Expert Forum.

FAO contributed to the [Final workshop on environment statistics for the East African Community \(EAC\)](#) jointly organized by UNSD, the National Bureau of Statistics Tanzania and the EAC Secretariat in Arusha, Tanzania (23-27 October 2017). Focusing on the implementation of the Framework for the Development of Environment Statistics (FDES 2013) in the countries of the EAC Region (Burundi, Kenya, Rwanda, Uganda, Tanzania – South Sudan also attended as a new member of EAC), this final Workshop followed and concluded two previous regional Workshops on Environment Statistics, finalized a regional environment statistics compendium and discussed a draft list of regional indicators based on EAC policies.

FAO attended the 23<sup>rd</sup> meeting of the London Group on Environmental Accounting in [San Jose, Costa Rica](#) (17-20 October 2017) to present a methodological paper on Air Emissions Accounts: “*Mapping IPCC greenhouse gas emissions categories to ISIC A in the SEEA AFF*”. Linkages and overlaps with the Carbon Accounting structure in the SEEA Experimental Ecosystem Accounting (EEA) have been explored and included in the London Group Research Agenda.

**Climate Change Relevant Statistics**

Four FAOSTAT Agri-Environmental domains: “[Land use](#)”, “[Fertilizers](#)”, “[Pesticides](#)” and the “[Livestock Patterns](#)” have been updated in July 2017. The update disseminates time series and country agri-environmental indicators, including regional, special groups and global aggregates. The four domains extend to worldwide coverage of the corresponding EUROSTAT and OECD set of indicators.

In August 2017, the “[Land Cover](#)” domain was released. This FAOSTAT domain contains land cover information organized by the land cover classes of the international standard [System for Environmental and Economic Accounting - Central Framework](#) (SEEA-CF). The land cover information is compiled from publicly available Global Land Cover (GLC) maps: a) the International Geosphere-Biosphere Programme (IGBP)-MODIS land cover type (2001-2012) and the European Spatial Agency (ESA) Climate Change Initiative (CCI) annual land cover maps (1992-2015) produced by the *Université catholique de Louvain* (UCL)-Geomatics. The domain represents the first global and multi-temporal SEEA land cover database.

In October 2017 FAO launched a new FAOSTAT domain on “[Temperature Change](#)” it provides data on observed mean surface temperature changes by country, over the period 1961-2016, with annual updates. The data provide information on monthly, seasonal and annual mean temperature anomalies, i.e., temperature changes with respect to a baseline period, 1951-1980. Data are based on the publicly available [GISTEMP data](#), the Global Surface Temperature Change data distributed by the National Aeronautics and Space Administration Goddard Institute for Space Studies (NASA-GISS).

**UN Environment launches the Sustainable Development Policy Brief with actions toward solutions to environmental issues****(Contributed by UN Environment; Science Division; SDG Data and Information Unit)**

During the UN Environment Assembly (UNEA) 3 (3-6 December 2017), the Science Division’s SDG Data and Information unit launched its first in a series of the Sustainable Development Goals Policy Briefs starting with the current 001 2017 issue on Marine Pollution.

Starting with this issue, future Sustainable Development Goals Policy Briefs will highlight an identified hotspot of environmental change. This will be based on evidence derived from the scientific data and information hosted on the online platform ‘Environment Live’ (<http://environmentlive.unep.org/>) and will be complemented by stories collected around the world. The aim of these briefs is

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for our readers (primarily the policy makers) to be informed on their changing environment and the consequences of everyday choices; and to encourage them to think about future directions for policy in the framework of the 2030 Agenda for Sustainable Development.

The current issue on marine pollution highlights deliberate or accidental discharge of untreated wastewater, dumping of solid wastes and other polluted runoff from a variety of land-based activities entering directly into our rivers and coastal waters. This Sustainable Development Goal Policy Brief includes a dynamic infographic on the main contributors to marine pollution that links to relevant data and indicators hosted on Environment Live. It also provides useful links to guidelines and other UN Environment publications on how to act for the achievement of Sustainable Development Goal 14.

For more information see – <https://environmentlive.unep.org/sdgquarterlyreport>.

## REGIONAL NEWS:

### **Environmental Dimension of the 2030 Agenda in the Arab Region**

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

Since more than a decade, ESCWA works closely in partnership with UNSD, the League of Arab States (LAS) and UN Environment on sustainable development issues including provision of adequate tools to monitor and assess the environmental dimension of the 2030 Agenda.

The environmental dimension of the 2030 Agenda is very complex and requires streamlining the environmental dimension of the agenda into national and regional plans and strategies. Furthermore, monitoring and follow-up on the environmental dimension requires collecting environmental data based on specific indicators. National statistical offices of the region face major challenges in collecting environmental data, and require technical support and capacity building to improve statistical frameworks, data sources, and modern infrastructure.

In this context, ESCWA organized the Consultative Meeting on the Implementation Framework for the Environmental Dimension of the 2030 Agenda in the Arab Region from 18 to 21 September 2017 in cooperation with UN Environment and the League of Arab States. The Meeting was held in Cairo, Egypt.

The Meeting was attended by 84 experts and representatives of 20 regional organizations including Environment Ministries in Arab countries in the Joint Committee on Environment and Development in the Arab Region (JCEDAR), representatives of national statistical offices, the United Nations and regional organizations, as well as experts from environmental research institutes.

ESCWA presented the proposed “Implementation Framework for the Environmental Dimension of the 2030 Agenda” developed by ESCWA and its partners in response to the resolution of the Council of Arab Ministers Responsible for the Environment (CAMRE) in 2016, which called “to prepare an implementation plan for the environmental dimension of the 2030 Sustainable Development Agenda” in cooperation with UN Environment and LAS.

Participants reviewed and discussed the draft Framework which proposed means of integrating the environmental dimensions of the 2030 Agenda for Sustainable Development into national development plans and policies in the Arab region. The Meeting also provided an opportunity for participants to exchange perspectives and views on environmental priorities of the 2030 Agenda, and on how to implement the Framework given the existing national statistical systems, and to collect data and follow-up and review on progress achieved in support of informed and integrated policy-making in the Arab region.

Participants then engaged in a dialogue on the proposed future steps and the adequate regional and national institutional frameworks needed in the Arab region to monitor and review the goals and targets that have an environmental and natural resources dimension in line with national and regional priorities and the 2030 Agenda. During the Meeting, participants adopted the “Implementation Framework.” A finalized version of the framework incorporating countries’ feedback will be produced with a precise action focused document, and submitted to JCEDAR.

<https://www.unescwa.org/events/implementation-framework-environmental-2030-agenda-arab>

## OECD NEWS

(Contributed by Myriam Linster, Sarah Sentier and Miguel Cardenas)

## Release of updated green growth indicators

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.

The 2017 edition of the OECD Green Growth Indicators report was published in June, along with a press-release and selected “compare your country” graphics. Green Growth Indicators 2017 updates and extends the green growth indicators presented in the 2014 and 2011 editions. It charts the progress that OECD countries and G20 economies have made since 1990. The 2017 edition places greater emphasis on productivity gains and on the role of policy action, with enriched analysis on environmentally related taxes and subsidies, technology and innovation, and international financial flows. It includes new and improved indicators on innovation and patents, people’s exposure to pollution by fine particulates and environmentally-adjusted productivity growth.

Key messages and selected indicators from the report are presented in a short Highlights brochure. The full report and complete datasets are available in open access on the OECD website: <http://oe.cd/ggi>.

## New data sets derived from earth observation and geospatial sources

The OECD increasingly uses earth observation data for calculating internationally harmonised environmental and green growth indicators without adding to countries’ reporting burden. Work includes the measurement of people’s exposure to air pollution at national and sub-national level, and the measurement of changes and conversions in land cover. Information on land cover conversions helps understand land use dynamics and their policy and market determinants. This information is used in OECD work on green growth and in policy work that explores the interface between land use and the environment (e.g. spatial planning, land use taxation and regulation, coastal zone management, ecosystem services in agriculture, transport, regional development). A Working Paper and related datasets will become available in the second quarter of 2018. Cooperation has been established with the FAO and the Secretariat of the UN Convention to Combat Desertification (UNCCD).

### Improved indicators on the extent of protected areas

A methodology recently developed by the OECD enables the generation of improved indicators on protected areas drawing on the World Database on Protected Areas. The resulting indicators are harmonised across countries and over time, and reflect the extent of protected areas without double-counting overlapping sites. They also provide details about the management objectives (IUCN management categories) pursued in countries. Reference to the source database makes it easy to identify and explain discrepancies between the calculated indicators, national data or other sources. When used in combination with other information about protected areas, these indicators can provide a general indication of countries’ conservation efforts and assist in monitoring progress towards the Aichi Targets of the Convention on Biological Diversity (CBD) and the UN Sustainable Development Goals (SDGs).

A working paper detailing the methodology was recently released along with related datasets covering all OECD and G20 countries and their affiliated territories ([oe.cd.stat](http://www.oecd.org)).

(<http://www.oecd.org/environment/indicators-modelling-outlooks/analysingdataonprotectedareas.htm>).

## International database on Policy INstruments for the Environment (PINE)

The OECD database on Policy Instruments for the Environment (PINE), established in 1996, contains detailed qualitative and quantitative information on more than 3200 policy instruments in 80 countries. It covers six types of instruments relevant to the environment and natural resource management: environmentally related taxes, fees and charges, tradable permits, deposit-refund systems, environmentally motivated subsidies and voluntary approaches. The database is currently being expanded and improved both in terms of country and thematic coverage. The aim is to further develop the network of contributing experts to achieve global coverage and to better capture information on instruments related to biodiversity. ([oe.cd/pine](http://www.oecd.org/pine))

## Global core databases and methodologies on environmental economic accounting

Since 2012, the OECD has 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 databases on air and greenhouse gas emissions by industry (<http://dx.doi.org/10.1787/data-00735-en>) and on sub-soil assets (in monetary and in physical terms). Recently, a methodology for estimating air emission accounts by industry in line with the SEEA by using data from emission inventories and input-output databases has been developed. The methodology is currently being reviewed by the OECD Working Party on Environmental Information. Once finalised, it will be submitted to the UNCEEA and could be used by countries that wish to establish their own emission accounts.

Ongoing work focuses on revising the section on environmental protection expenditure and revenues of the OECD state of the environment questionnaire to ensure coherence with the SEEA and the environmental protection expenditure accounts of the European Union. A feasibility test will be carried out in 2018.

New work will be initiated in 2018 to establish environmentally related tax revenue accounts in line with the SEEA, building on Eurostat's experience and on OECD experience with the Policy Instruments for the Environment (PINE) database (see above).

## Harmonised international methodology to estimate material footprints

In September 2017, the OECD organised a third international expert workshop on demand-based measures of material flows and resource productivity, in cooperation with Eurostat and UN Environment (and the International Resource Panel). A consensus was reached on the type of measurement approach to be used in international work, i.e. a pure input-output approach, and on the need to establish an internationally harmonised and institutionalised statistical infrastructure for estimating material footprints. A roadmap for further developing the measurement method, benchmarking the results obtained with those obtained by countries, and improving the underlying datasets is being developed. The outcomes of this work will contribute to the global monitoring of the SDGs and to OECD work on resource productivity, the circular economy and green growth.

## Improving data on waste and materials

Improving data and indicators on waste and materials has long been on the OECD agenda, and is receiving growing attention with the move from traditional waste management policies to preventive and integrated approaches, with greater emphasis on the life-cycle of materials and products. Data gaps remain in important areas; waste data often lack coherence among countries and over time, and are not sufficiently documented. This raises questions as to the adequacy of the data currently available for effectively supporting national policies and international policy work at the OECD. It limits the analysis of trends and of progress over time that is essential to examine the effects of policy measures. In this context, the OECD participates, together with UNSD, Eurostat and other international partners, in the international Task Force on Waste Statistics, established by the UNECE Conference of European Statisticians (CES) in February 2017. The aim is to develop a conceptual framework on waste statistics that helps harmonise international waste statistics and provide better information for supporting waste-related policies.

## 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) approved in June 2017 the **First Edition of the Road Map on Statistics for Sustainable Development Goals**<sup>1</sup>. The Road Map is developed by a Steering Group co-chaired by Switzerland and the United States. The Road Map provides guidance to national statistical offices on establishing national mechanisms for collaboration, assessing data gaps, developing national indicators, providing data on global SDG indicators, capacity building and communication. Each section contains recommendations to national statistical offices and actions for the Steering Group. The Road Map will be available also in French, Russian and Spanish, and the English version will be published by end 2017.

A number of countries are setting up National Reporting Platforms (NRPs) for providing data on SDG indicators. A UNECE Task Force (chaired by Poland) is preparing a guide and description of NRPs.

<sup>1</sup> [http://www.unece.org/fileadmin/DAM/stats/documents/ece/ces/2017/CES\\_2-Road\\_Map\\_on\\_Statistics\\_for\\_SDGs\\_final.pdf](http://www.unece.org/fileadmin/DAM/stats/documents/ece/ces/2017/CES_2-Road_Map_on_Statistics_for_SDGs_final.pdf)

## Expert Forum for producers and users of climate change-related statistics

On 3-5 October 2017, over 100 climate experts and statisticians gathered in Rome for the **2017 UNECE Expert Forum for producers and users of climate change-related statistics**. FAO hosted the meeting and Norway chaired it. Dr Gavin Schmidt, Director of NASA Goddard Institute for Space Studies opened the Expert Forum and noted that “It is not enough to sit and watch as scientific predictions about climate change come true. Data are fundamental to deciding how to react to large global scale problems. The effort we are doing here to improve data has never been more important.”

The meeting shared most recent experience of countries in developing official statistics for climate reporting. It brought together representatives of statistical offices, environment agencies, ministries and international organizations, including IPCC, UNFCCC, International Energy Agency, European Environment Agency, Eurostat, United Nations Office for Disaster Risk Reduction (UNISDR), UNSD, WMO etc. This year the meeting focused on **data issues in agriculture, forestry and land use**. These issues feature prominently in SDG targets and indicators, and data from the sector are central for greenhouse gas emission inventories. For instance, Finland, Germany, Nepal and Sweden, shared their success stories in improving official statistics for climate change analysis, and Armenia, Kyrgyzstan and Slovenia shared their experience in developing national road maps for climate change-related statistics.

The Expert Forum discussed the implementation of the initial **set of climate change-related indicators**. The Conference of European Statisticians endorsed the Initial Set of Key Climate Change-related Statistics and Indicators using the System of Environmental-Economic Accounting in June 2017. Currently, 17 countries are pilot testing the indicator set. The UNECE Task Force is now working further to make refinements to the initial set of core indicators based on experience gathered in the UNECE region and other regions. It will also develop new methodologies and practical guidelines for implementation. The Expert Forum also discussed the need to extend the core set of indicators with operational and contextual indicators. At the Expert Forum, UNSD, ESCAP and ESCWA shared their experience and further plans in testing the indicator set.

The Expert Forum provided an opportunity to review statistical approaches to **measuring extreme events and disasters** in a number of countries. Armenia, Italy, Mexico and Turkey shared their best practices in informing disaster risk reduction at the Expert Forum. The meeting participants noted that statistics play a crucial role in dealing with disasters, from preparation to recovery and reporting. The need for timely and accurate data is especially significant in light of the increasing frequency and severity of climate change-related extreme weather events. The UNECE Task Force is preparing recommendations on the role of national statistical offices in measuring extreme events and disasters which will be presented to the CES plenary session in 2019.

Participants noted that special development efforts are needed to improve **data and statistics on climate adaptation**. The IPCC Task Group on Data and Scenario Support for Impact and Climate Analysis (TGICA) would like to work together with statisticians in this regard, and UNFCCC has a call for submissions on climate adaptation and resilience statistics that provides a good starting point for further work. As a result, the Expert Forum selected climate adaptation statistics as a priority topic for the 2018 Expert Forum.

## Implementing the System of Environmental-Economic Accounting in the UNECE region

The third Joint OECD/UNECE Seminar on the Implementation of SEEA will be held in Geneva on 21-22 February 2018. The seminar will discuss SEEA implementation and policy applications, inform about SEEA-related activities of international organizations in the region, and present new ways of generating data for SEEA (e.g. by using big data, including geospatial information). The concept note and the registration link can be found on the meeting website <http://www.unece.org/index.php?id=47522>.

In October 2017 the UNECE Statistical Division, in close cooperation with UNSD and Statistics Netherlands, launched a “blended learning” course on SEEA for countries of Eastern Europe, Caucasus and Central Asia (EECCA) and South-Eastern Europe (SEE). The course combines online learning, webinars and a final workshop. The final workshop will be hosted by the National Statistical Committee of the Republic of Belarus (BELSTAT) in Minsk from 15-18 January 2018.

## Environment statistics and indicators

Under the joint auspices of CES and the UNECE Committee on Environmental Policy, the Task Force on Environmental Statistics and Indicators assists the countries of Eastern and South-Eastern Europe, the Caucasus and Central Asia in implementing environmental indicators. The Joint Task Force meets 1-2 times per year to support the strengthening of environmental reporting and making environmental statistics and environmental indicators available and comparable throughout the region.

The 14th meeting of the Joint Task Force was held 2-3 October in Rome (Italy), hosted by FAO. The meeting discussed the possibility to establish a regional environmental information and assessment network of networks to facilitate coordination,

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considered the initial set of core climate-change related indicators and a framework for assessing the progress of the implementation of the Shared Environmental Information System (SEIS) in the region. The meeting also considered revised production templates for biodiversity and energy indicators.

The presentations and background documents can be found on the meeting website <http://www.unece.org/index.php?id=43952>. The next meeting of the Task Force will be held 25-26 October 2018 in Geneva (Switzerland).

## The European Environment Agency indicators on climate change

(Contributed by Hans-Martin Füssel and Roberta Pignatelli, European Environment Agency )

Climate change indicators account for about one third of the indicators currently produced by the European Environment Agency (EEA). These include indicators on greenhouse gas emissions and indicators on climate change and its impacts. They are used extensively to fulfil the EEA's mandate of providing objective, reliable and comparable information on the environment to help European decision-making processes. The EEA has supported the development and implementation of climate change mitigation (aimed at reducing greenhouse gas emissions) and more recently adaptation policies in Europe since its inception and has published a range of relevant reports. Initially the focus was on raising awareness of climate change and on monitoring progress in climate change mitigation, which is still a major focus of EEA reports, while EEA has also published many adaptation-related reports. These reports aim to inform adaptation policies at various governance levels in Europe.

The indicator-based EEA reports on climate change, impacts and vulnerability in Europe have been published every 4 years since 2004<sup>2</sup>. They are based primarily on about 40 quantitative indicators, which are published separately on the EEA website.<sup>3</sup> These indicators assess past trends in and model-based projections for the climate system and various climate-sensitive systems and sectors in Europe.

The current set of adaptation-related EEA indicators focuses on supporting the development of adaptation policies rather than on assessing their effectiveness. Considering climate-related risks generally do not follow country boundaries, information is presented at different spatial aggregation levels. For example, it may be presented without spatial detail (e.g. ocean heat content), for European regional seas (e.g. sea surface temperature), for individual countries (e.g. forest fire incidence), for sub-national administrative units (e.g. incidence of vector-borne diseases) or for regular grids (e.g. length of the growing period), depending on data availability and policy needs. Underlying data are derived from many different sources, including global climate datasets and modelling exercises, European data services and research projects. The emerging Copernicus services, in particular the Copernicus Climate Change Service (C3S)<sup>4</sup> and the Copernicus Marine Environment Monitoring Service<sup>5</sup>, increasingly contribute relevant and quality-controlled data. A few indicators incorporate data from statistical offices, such as gridded population data from Eurostat.

The adaptation-related EEA indicators are updated at least every 4 years, in line with the publication of the EEA climate change, impacts and vulnerability reports. Some of them are updated more frequently, in particular those that are also included in the EEA Core Set of Indicators.<sup>6</sup>

The length of the time series for climate change data and indicators, as well as their geographical coverage and quality have improved over recent years. This is a result of European initiatives, such as European Union (EU) funded research projects and the development of the Copernicus services, and global efforts, such as the Global Climate Observing System. Atmospheric and ocean observations are the most developed. Climate change impact indicators have also improved over recent years at the EU and national levels, and many countries have performed climate change impact, vulnerability and/or risk assessments. In addition, various cities have started to prepare similar assessments.

Such assessments are an important step towards the development and implementation of appropriate adaptation strategies and actions at different governance levels. The evaluation of the EU climate change adaptation strategy by the European Commission, due to be published in 2018, can be an opportunity to enhance the interest in and the use of such assessments for policymaking.

<sup>2</sup> <https://www.eea.europa.eu/publications/climate-change-impacts-and-vulnerability-2016>

<sup>3</sup> [https://www.eea.europa.eu/data-and-maps/indicators/#c5=climate-change-adaptation&c0=10&b\\_start=0](https://www.eea.europa.eu/data-and-maps/indicators/#c5=climate-change-adaptation&c0=10&b_start=0)

<sup>4</sup> <http://climate.copernicus.eu/>

<sup>5</sup> <http://marine.copernicus.eu>

<sup>6</sup> [https://www.eea.europa.eu/data-and-maps/indicators/#b\\_start=0&c10=CSI](https://www.eea.europa.eu/data-and-maps/indicators/#b_start=0&c10=CSI)

## EUROSTAT NEWS

(Contributed by Arturo de la Fuente, Eurostat)

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

### EU SDG indicator set

Eurostat coordinated the development of an European Union (EU) Sustainable Development Goal (SDG) indicator set for the regular monitoring of progress towards the Sustainable Development Goals in an EU context. The indicator set comprises 100 indicators, structured along the 17 SDGs and evenly distributed across the goals. 41 of the 100 indicators are multipurpose, i.e. are used to monitor more than one SDG, which allows underlining the interlinkages. While more than half of the EU SDG indicators are also part of the UN SDG indicator set for global monitoring, the aim of the set is not to exhaustively monitor EU progress towards the 169 targets of the 2030 Agenda. The indicators have been selected for their policy relevance from an EU perspective and most of them are taken from already existing indicator sets used for monitoring long-term EU policies, such as the EU Sustainable Development Indicators, the Europe 2020 headline indicators and the set of impact indicators for Strategic Plan 2016-2020. A first monitoring report based on the EU SDG indicator set will be released on 15 November 2017. For further information see Eurostat's [Sustainable Development Indicators dedicated section](#).

### Environmental statistics

- Water statistics: as regards water statistics, the 2016 OECD/Eurostat Joint Questionnaire on Inland Waters was collected with a reporting deadline of December 2016. Results are published [here](#) under the domain 'water (env\_wat)'.
- Waste statistics: 2015 data on waste streams was published: packaging waste, electrical and electronic equipment, batteries, end-of-life vehicles, transboundary shipments. Also 2015 municipal waste data was published. Data are available [here](#) under the domain 'Waste streams (env\_wasst)'. As regards chemical indicators, the dataset 'Production and consumption of chemicals by hazard class' was published in October 2017 [here](#) under the domain 'Production and consumption of chemicals by hazard class (env\_chmhaz)'.
- Eurostat maintains the [Environmental Data Centre on Natural Resources](#) (EDCNR), in three language versions (English, German and French).
- Forestry statistics: data on production and trade in wood products in 2015 and 2016 were collected through the Joint Forest Sector Questionnaire between June and October 2017 and published under the database folder 'Forestry (for)'. The 2015 forest accounts were partially published in September 2017 and will be finalised by the end of November 2017 under the same database folder.
- Biodiversity indicators: data on Natura 2000 areas were updated to 2016 in [Protected areas for biodiversity: habitats directive](#) (env\_bio1)', while the sufficiency indices were updated to 2014. The latter express the degree to which the European Commission considers each national network of Sites of Community Importance (SCIs) under the Habitats Directive to suffice in terms of number, extent, distribution and representativeness of species and habitats covered. For birds as a special indicator taxon, composite EU indicators for common bird species and the latest national farmland bird indicators were updated to 2014 in database tables env\_bio2 and env\_bio3.

### SEEA Environmental Accounts

- Eurostat launched the 2017 collections of environmental accounts data, including environmental taxes, economy-wide material flow accounts, air emission accounts, environmental goods and services sector accounts ('EGSS'), environmental protection expenditure accounts ('EPEA') and physical energy flow accounts ('PEFA'). These datasets are collected on an annual basis and are mandatory for the EU Member States. Eurostat publishes the results [here](#) under 'Environment (env)' after validating the specific datasets (between November 2017 and April 2018, depending on the data collection). In addition there is a voluntary data collection on environmental subsidies.
- The collection of the European Forest Accounts was launched in July 2017. The set of the tables covers physical and monetary accounts for land, timber and physical and monetary supply and use of wood. The economic aggregates collected continue the existing time series (since 1986) and will be published in December 2017.

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- With a view to assisting the EU Member States Eurostat continued the process of updating and enhancing the handbooks with guidance for compilers of the data. Since October 2016 the following handbooks were published: [EGSS practical guide](#) and [EPEA handbook](#). In the coming months, a revision of the [EW-MFA handbook](#) will be published. Many environmental accounts handbooks and questionnaires are available [here](#).
- Eurostat facilitated training courses on environmental statistics and SEEA for European compilers. Material from past courses is available [here](#). The following courses took place in 2017: waste statistics, water statistics, environmental goods and services sector accounts, environmental protection expenditure accounts, environmental taxes, environmental subsidies and similar transfers, and physical energy flow accounts. The following courses are planned for 2018: physical environmental accounts (encompassing PEFA, MFA and AEA), monetary environmental accounts (encompassing EGSS, EPEA, environmental taxes and subsidies), ecosystem accounts, water statistics and waste statistics.

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

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

Pursuant to its Treaty and adoption of agreements of COMESA's Committee on Statistical Matters (CCSM), the COMESA Secretariat continues supporting countries to implement and strengthen environment statistics in its Member states. The technical support provided through in-country missions and national capacity building has resulted in the implementation of the FDES 2013 and preparations of environment statistics publications in several countries. Zimbabwe<sup>7</sup> and Madagascar<sup>8</sup> have already published their reports. Others such as Zambia and Ethiopia have prepared their bulletins and are awaiting their release, while others, including Egypt and Seychelles, are in the data collection phase.

The further technical support will undertake national stakeholder analysis and capacity assessment, monitor the overall implementation and needs on FDES 2013 in countries; carry out a review of existing work related to environment statistics in the countries; assist Member states to undertake a national data assessment on available components and topics/sub-topics of the FDES 2013; assist Member states with adaptation of the FDES 2013 to the country's needs and priorities and designing a capacity building plan; undertake national capacity building, with emphasis on components for which data are available; assist Member states develop data compilation and collection instruments and explain, in particular, how to compile the data, including from non-conventional data sources (e.g., remote sensing); assist countries develop their metadata; review and analyse existing country environment statistics datasets; assist countries with the analysis of initial data from the national FDES 2013 related data surveys; assist countries in the preparation of periodic publications on the state of the environment statistics; and assist countries with preparation of launch events regarding environment statistics.

Beside these activities, COMESA will update its publication of the regional environment statistics bulletin and oversee the monitoring and evaluation of the institutionalization of environment statistics with a view to ensuring that the CCSM approved implementation time table is adhered to. COMESA also liaises with partners such as UNSD in the FDES 2013 implementation and recently participated in the final workshop on FDES for the Eastern African Community (EAC) region. There are also some environment related activities such as developing a draft work program on the statistical response to one of the COMESA strategic objectives on Strengthening the Blue Economy.

## Capacity Building Programme on Environment Statistics in Africa in Progress

**(Contributed by Xiaoning Gong, United Nations Economic Commission for Africa)**

The "Capacity Building Programme on Environment Statistics in Africa" conducted jointly by the United Nations Economic Commission for Africa (UNECA), UNSD, and UN Environment, is making progress. The Programme is being carried out in three phases. Phase I: the e-training module; Phase II: a face-to-face seminar; and Phase III: for a group of selected pilot countries, national workshops and technical assistance. The programme is currently moving from Phase II to Phase III. The first set of activities under the Programme are being funded under the DA 10th Tranche Programme with implementation through UNECA, UNSD and UN Environment.

<sup>7</sup> [http://www.zimstat.co.zw/sites/default/files/img/FDES\\_2013.pdf](http://www.zimstat.co.zw/sites/default/files/img/FDES_2013.pdf)

<sup>8</sup> <https://unstats.un.org/unsd/environment/Compendia/Madagascar%20Yearbook%20of%20Environmental%20Statistics%20Under%20the%20Framework%20for%20the%20Development%20of%20Environment%20Statistics,%202016.%20French.pdf>

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In June of 2017, more than 200 participants from 37 African countries registered and participated in the June e-training, jointly organized by UNSD and ECA. Among them, 68 participants from 25 countries took part in the final assessment and received certificates of completion: 17 earned certificates of distinction, and 15 earned certificates for first place.

Following the e-training covered and improved expertise for countries on technical subjects of FDES which enabled the face-to-face seminar to be oriented towards more advanced technical subjects such as designing and implementing national action plans; A face-to-face seminar was held from 4 to 8 September in Kenya. The face-to-face seminar has deepened the technical knowledge and skills of the participants in producing, processing, compiling, and disseminating of environment statistics based on the FDES; given a clear vision of the process for mainstreaming of environment statistics in a national context; equipped participants with the capability of design and implementation of a national action plan on environment statistics; and enabled countries to establish a foundation for environment statistics through producing a compendium of environment statistics.

Representatives of Burkina Faso, Cameroon, Equatorial Guinea, Ghana, The Gambia, Malawi, Namibia and Senegal met together with representatives from Kenya, UNECA, UNSD, UN Environment, the Food and Agriculture Organization of the United Nations (FAO), and the African Development Bank (AfDB) to discuss how to improve environment statistics production, analysis, and dissemination in their respective national contexts. The face-to-face seminar, was a good opportunity to discuss how the UN Environment's Indicator Reporting Information System (IRIS) software and can be used to gather and report on the FDES and the subsequent linking of it to Geographic Information Systems (GIS) and environment statistics.

At the end of Phase II, the participating countries benefited from enhanced institutional capacity building. All eight countries involved have committed to participate in Phase III of the capacity building programme involving national workshops and technical assistance; aiming to compile a compendium of environmental statistics as a means to build up a foundation for environmental statistics.

These eight countries will join the group of countries with more developed Environmental Statistics in their countries in Africa; which includes Burundi, Kenya, Rwanda, Tanzania, and Uganda working on FDES, and Kenya and Uganda also working on SEEA; as well as countries including Botswana, Madagascar, Mauritius, South Africa, and Zimbabwe that have compiled a compendium on environment statistics; while Egypt and Tunisia are pilot countries of ESCWA on a similar project.

To start Phase III, the third phase of the FDES capacity building programme, UNECA, UNSD, and UNEP are in the process of discussing work plans with the focal points of the eight pilot countries. The first technical assistance missions to the countries by each of three agencies will start in late January and early February 2018. From now to then and during the first missions, the following activities are planned to carry out: conducting an assessment of the status of environment statistics and data needs; priorities and availability with a focus on database systems and statistical data and metadata exchange; holding consultations among key national stakeholders and agree on end targets for the one-year technical assistance; establish a plan for moving the work forward via an inter-governmental working group on environment data and statistics; conduct a training on environment statistics and data reporting; assigning work for in-between mission period; setting up IRIS database and provide guidance on using IRIS for data storage; and providing targeted technical advisory services in support of Phase III.

## **CARICOM Continues to Strengthen Capacity in Environment Statistics with Work on the SDGs and the Fourth Regional Environment Statistics Report**

**(Contributed by the CARICOM Regional Statistical Programme, CARICOM Secretariat )**

The Caribbean Community (CARICOM) Technical Working Group (TWG) for the Development of Environment Statistics convened its second meeting in March 2017 to contribute to the decision of the Standing Committee of Caribbean Statisticians at its 39<sup>th</sup> session in support of the development of a set of Core Indicators for Monitoring Implementation of the Sustainable Development Goals (SDGs). The need for reconciliation with the SIDS Accelerated Modalities of Action (SAMOA Pathway) is a critical aspect of the approach of developing a core set of SDGs Indicators for CARICOM SIDS, given key challenges with vulnerabilities such as the recent hurricanes that severely impact these countries and impact development inclusive of efforts to develop statistics through capacity-building.

The work on development of the core SDGs focused on the Tier I/II or multiple tier global SDG indicators and this was to be a starting point as recommended by the Thirty-Ninth Meeting of the SCCS, before attempting the entire set of SDG Indicators. In attendance at the TWG Environment were representatives from Antigua and Barbuda, Barbados, Grenada (via skype), Jamaica, Montserrat, St. Kitts and Nevis and Suriname.

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The meeting conducted a review of each environmentally related core indicator (Tiers 1 and 2) for the Sustainable Development Goals and noted the recommendations, data availability, and sources of data. This work would inform the process moving forward with the recently established CARICOM TWG on the SDGs which identified 109 unique SDG indicators as a starting point for CARICOM countries. It is expected that the TWG-Environment and the new TWG-SDGs would work in unison to realise the compilation of the Environment relevant indicators of the SDGs.

The CARICOM Secretariat also released its Fourth Edition of **The CARICOM Environment in Figures** publication in **August 2017**. The publication includes data, concepts and definitions, charts and graphs within each chapter and *a summary of the data gaps for each thematic area*. There were data gaps in all thematic areas excluding **Natural Disasters**. There were no data submissions for the indicators under the theme **Air Emissions**. The specific data gaps among the indicators are included in Annex 1 of the publication. Data for this report were submitted by Member States and Associate Members for most of the themes with the exception of **Waste** and **Water** which were collected by the UNSD under a collaborative arrangement with the CARICOM Secretariat; from other regional and National Organisations including the Caribbean Tourism Organisation (CTO) for data on Tourism and the Caribbean Public Health Agency (CARPHA) website for Environment Health data which assisted in filling the data gaps under these themes.

The CARICOM Secretariat continues to encourage its Member countries to produce and disseminate National Environment Statistics compendia. The 2017 period saw the release of **St. Vincent and the Grenadines' 2012 Compendium of Environmental Statistics** and the completion of its 2014 report. Bermuda is expected to release its annual report for 2017 shortly. These reports speak to the commitment of countries of the region to the development of Environment Statistics. The work of St Vincent and the Grenadines is to be commended.

## ECLAC Activities in Latin America and the Caribbean

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

### Launch of discussions on a regional indicators framework to monitor the SDGs at the 9th Statistical Commission of the Americas

At the request of Member States, ECLAC provided a draft proposal of a **regional framework of indicators** for monitoring the Sustainable Development Goals in Latin America and the Caribbean. First discussions on the draft proposal, which has more than one hundred indicators with an environmental dimension, were on the agenda of the 9th Statistical Commission of the Americas, held on 14-16 November 2017, in Aguascalientes, México, and will continue next year.

### National-level support to environment statistics and indicators in Latin American and Caribbean (LAC) countries

Within the framework of ECLAC's German Cooperation (GIZ/BMZ)-supported Regional Capacity Building Program, ECLAC organized a national capacity-building workshop in Chile in August 2017 on environment SDG indicators, particularly **biodiversity indicators** in partnership with the National Statistical Office and the Ministry of Environment (<https://www.cepal.org/es/cursos/curso-taller-metodologia-construir-sostener-indicadores-biodiversidad-ods>). As a result, 6 new national biodiversity indicators were developed. ECLAC also supported the Ministry of Environment in developing the first-ever draft for a survey module of National Perception on Biodiversity within their National Environment Survey. Additionally, a follow-up workshop was jointly organized on 30 November 2017 to review and discuss the indicators according to their national relevance.

Additionally, specific technical assistance regarding SDG environment indicators was provided to Peru in November 2017. Multilateral inter-institutional meetings were held between the National Statistical Office, the Ministry of Environment and other relevant ministries, fostering opportunities to build new **SDG environment indicators**, based on national priorities, data availability, and methodological issues. As a result, some new relevant indicators were identified to be built in the short-term.

### Regional Meeting of Environment Statistics Experts and Regional Conference on Environment Statistics

ECLAC organized the **first regional Environment Statistics Expert Meeting** in many years. It was held in ECLAC headquarters in September 2017 and provided key recommendations for a strengthened development of environment statistics in the region (<https://www.cepal.org/es/eventos/reunion-expertos-estadisticas-indicadores-ambientales-america-latina-caribe>). A wide range of topics are considered in those recommendations such as SDG environment indicators, climate change indicators as a proposal for a Regional Community of Practice on Environment Statistics. To foster knowledge exchange and experiences between the members of the Regional Community of Practice, an online platform is currently being developed and will be launched in early 2018.

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## REGIONAL NEWS

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As a follow-up to this meeting, a 5-day **Regional Seminar on Environment Statistics** will gather more than 70 participants from all the Latin-American countries in Rio de Janeiro, Brazil, at the Brazilian Institute of Geography and Statistics (IBGE in Portuguese). This conference will focus on SDGs environment indicators, climate change-related statistics and the geospatial dimension of environment statistics. It is to take place on 11-15 December 2017 and is jointly organized by ECLAC and UN-Environment.

All these regional impacts have come from strong partnerships with other Divisions within ECLAC as well as with regional and global UN entities (UN-Environment, UNSD, UNDP and FAO).

### CEPALSTAT

ECLAC's environment statistics team is carrying out the compilation and validation of environment statistics data series to update the CEPALSTAT database with the most recent data ([http://estadisticas.cepal.org/cepalstat/WEB\\_CEPALSTAT/Portada.asp](http://estadisticas.cepal.org/cepalstat/WEB_CEPALSTAT/Portada.asp); [http://estadisticas.cepal.org/cepalstat/WEB\\_CEPALSTAT/Portada.asp?idioma=i](http://estadisticas.cepal.org/cepalstat/WEB_CEPALSTAT/Portada.asp?idioma=i)). The compilation of these data series is going to be used for the 2017 Statistical Yearbook, which will be published at the beginning of next year (2018). The Statistical Yearbook has recently been redesigned to better showcase the economic, social and environmental relevant issues in the Latin American and Caribbean region in. Particular attention has been paid to update the environmental information most relevant according to the 2030 Agenda.

### Environmental Accounts Support

With regard to environmental accounting activities, ECLAC is currently in the final stage of the implementation of the 9th Tranche UN Development Account (DA) project, "*Strengthening statistical capacities for building macroeconomic and sustainable development indicators in Latin America, the Caribbean and Asian-Pacific countries*". Recent activities included tailored technical assistance to the Dominican Republic, Ecuador and Paraguay, a regional one week introductory training on **forest accounting** in Santiago, Chile (4-6 December 2017), and the moderation of the Latin American and the Caribbean segment of the 23<sup>rd</sup> London Group Meeting on Environmental Accounting, which took place in Costa Rica in October 2017. ECLAC also continues to promote experience sharing about environmental accounts in the LAC region through a series of webinars, with four meetings up to date.

### New publications

Two new ECLAC publications will be launched by the end of 2017: one on the regional status of environment statistics and the other on the regional status of environmental accounting.

## ESCAP NEWS

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

### Asia-Pacific Expert Group on Disaster-related Statistics approaching completion of Disaster-related Statistics Framework

The Asia-Pacific Expert Group on Disaster-related Statistics was established in 2014 through ESCAP resolution 70/2 to develop a basic range of disaster-related statistics in Asia and the Pacific. Emanating from policy discussions, the resolution emphasized the importance of disaggregated statistics for assessment of the socioeconomic effects of disasters and strengthening evidence-based policymaking. The Group consists of experts from national statistics offices, national disaster management agencies, and international experts.

After the establishment of the Expert Group, the adoption of the Sendai Framework for Disaster Risk Reduction 2015-2030 (SFDRR) and the 2030 Agenda for Sustainable Development brought additional imperative and global guidance on priorities for the basic range of disaster-related statistics.

The Expert Group has developed the draft Disaster Related Statistics Framework (DRSF), which provides guidance for measurement and a collection of standardized tables for development of a basic range of comparable statistics related to disasters at the national level. It also creates a bridge between disaster risk management information on the one hand and existing standards for socio-economic statistics on the other.

For the development of the DRSF, the Expert Group sought advice and collaborated with many other relevant groups and experts, including (but not limited to) the UNECE Task Force on Measurement of Extreme Events and Disasters, the UN Expert Group on Environment Statistics, the UN Expert Group on Statistical Classifications, and the United Nations Committee of Experts on Global Geospatial Information. Although the DRSF is developed primarily by experts in Asia and the Pacific, it has global relevance and applicability and is increasingly recognized beyond the region as a key new resource for statistics development.

At its 5<sup>th</sup> and most recent meeting, in Incheon, Republic of Korea, 20-22 September 2017, the Expert Group reviewed the draft DRSF and agreed to a work plan to finalize the DRSF with guidelines for implementation by 2018. The draft guidance materials as

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well as results from pilot studies and related working papers are currently undergoing international review through open consultation via the Expert Group's website: <http://communities.unescap.org/asia-pacific-expert-group-disaster-related-statistics/content/drsf>.

***Interested experts and relevant stakeholders are welcome and strongly encouraged to participate in the online DRSF consultation***

### **Resource platform on environment statistics**

ESCAP has launched an online resource platform on environment statistics. The platform contains activities and tools that ESCAP is using to strengthen environment statistics in Asia and the Pacific. It also contains a collection of outputs, including country self-assessments, from these activities.

Also available are self-learning materials covering overview presentations as well as components of:

- the Framework for the Development of Environment Statistics (FDES)
- the System of Environmental-Economic Accounting (SEEA) Central Framework, and
- the SEEA Experimental Ecosystem Accounting.

The purpose of the self-learning materials is to provide background to using available guidance documents and insights into policy applications and data sources.

The platform can be accessed at <http://communities.unescap.org/environment-statistics>.

### **System of Integrated Environmental and Economic Accounting: Online training course**

ESCAP's first online training on the System of Environmental and Accounting (SEEA) is now operational. The training is hosted on ESCAP's regional institute, the Statistical Institute for Asia and the Pacific (SIAP) e-learning platform <http://siap-elearning.org/login/index.php>.

The purpose of the training program is (i) to help participants acquire knowledge and skills to deepen their understanding of the accounting principles and basic data needs for compiling environmental and economic accounts according to the SEEA Central Framework; and (ii) to facilitate experience sharing among countries.

The training covers ten modules expected to be covered over a period of four weeks and these include application of the SEEA central framework to policy, physical flow accounts, asset accounts, environmental activity accounts and environmental indicators. Specific details about the course design and content are accessible through: [http://unsiap.or.jp/programmes/el\\_course\\_information/1710\\_EL\\_SEEA\\_Course%20Information.pdf](http://unsiap.or.jp/programmes/el_course_information/1710_EL_SEEA_Course%20Information.pdf).

This online course has been extended to the Africa region. Currently, there are 280 participants drawn from the ESCAP and ECA regions. ECA is collaborating with ESCAP in the delivery of this training program. This training programme is planned as a regular activity and is expected to be conducted in the second quarter of 2018. The current e-learning will end on 10 November 2017.

### **In-country technical assistance on FDES/SEEA implementation, June-November 2017**

ESCAP continues to provide technical assistance to countries in Asia and the Pacific to strengthen environment statistics in accordance with FDES and SEEA.

#### ***Asia***

- Training mission to the Philippine Statistics Authority (PSA) and interdepartmental stakeholders on FDES in support of updating the Compendium of Philippine Environment Statistics, Manila, the Philippines, 13-15 June 2017;
- Study visit to the PSA on SEEA land and forest accounting for Nepal Central Bureau of Statistics, Manila, the Philippines, 16 June 2017;
- Interdepartmental training on FDES and work planning to improve statistical compendium (Statistik Lingkungan Hidup Indonesia), hosted by BPS Statistics Indonesia, Jakarta, Indonesia, 17-19 July 2017;
- Technical advisory workshop, in collaboration with World Wildlife Fund, to pilot forest accounts, Nay Pyi Taw, Myanmar, 23-25 August 2017;
- Assessment, training, work planning for water and waste accounts, Malé, the Maldives, 17-20 September 2017;
- Assessment and training on environment statistics in collaboration with UN Environment, Kabul, Afghanistan, 30 September to 5 October 2017;

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- Assessment and work planning on SDG statistics for Sustainability Outlook Mongolia, in collaboration with UN Environment, Ulaanbaatar, Mongolia, 1-2 November 2017;
- Assessment and planning of SDG statistics for the implementation of the next five year Government development plan and UNDAF (UN Sustainable Development Partnership Framework, 2019-2023), Thimpu, Bhutan, 2-3 November 2017.

#### *Pacific*

- Technical assistance provided to the Vanuatu National Statistics Office and the Fiji Bureau of Statistics to collate data in preparation for compiling land accounts;
- Technical and training support provided to the Republic of Palau to compile experimental energy and water accounts. In addition, technical support was provided to update and finalise the national environment statistics assessment for Palau;
- Provided technical support to review Samoa's second water accounts.

### **Selected regional events on environment statistics, June-November 2017**

#### ***Inter-regional workshop on strengthening statistical capacities for building macroeconomic and sustainable development indicators in Latin America, the Caribbean and Asia-Pacific countries, Santiago, 10-12 July 2017***

Co-organized with the United Nations Economic Commission for Latin America and the Caribbean (ECLAC), the 3-day workshop was attended by representatives from national statistical offices (NSOs) of Brazil, Colombia, Curaçao, Fiji, Indonesia, Malaysia, Mongolia, Paraguay, Uruguay and Vanuatu. Participants discussed and exchanged their achievements, experiences and lessons learned in the implementation of the System of National Accounts (SNA) as well as the System of Environmental-Economic Accounting (SEEA) where Asia-Pacific countries focused their experience-sharing on the latter. Additionally, the workshop facilitated discussions on future actions in SNA and SEEA implementation in support of the 2030 Agenda for Sustainable Development.

This inter-regional workshop was part of the Development Account Project 9<sup>th</sup> Tranche entitled “strengthening statistical capacities for building macroeconomic and sustainable development indicators in Latin America, the Caribbean and Asia-Pacific countries”.

#### ***Regional expert workshop on land accounting for SDG monitoring and reporting, Bangkok, 25-27 September 2017***

A series of sub-regional workshops on environment statistics that ESCAP organized during the past year ([the Pacific](#), [South-East Asia](#), [South and South-West Asia](#), and [East and North-East Asia](#)) identified land statistics and accounts as one of the common priorities for the region. Participating countries requested technical guidance on how to begin or improve their land accounts. In response to these requests, ESCAP organized the above-mentioned workshop to review the importance of land statistics in coherently supporting several SDGs, and to address country challenges in implementing them. The workshop also highlighted extensions to the Land Accounts (Forest Accounts, Ecosystem Accounts and Ocean Accounts) as means of monitoring and reporting on further SDGs and national planning priorities.

Status, results and challenges in land accounting were presented by fifteen participating countries (China, Fiji, India, Indonesia, Iran, the Maldives, Myanmar, Nepal, the Philippines, the Russian Federation, Sri Lanka, Thailand, Timor-Leste, Vanuatu and Viet Nam) and were addressed in “problem solving labs”. The labs included a tutorial on producing land accounts using GIS software, and two in-depth discussions on technical and institutional challenges as well as how NSOs could support better uptake of land statistics in making national planning decisions.

The workshop concluded that national planning for sustainable development would be enhanced if national statistical offices could strengthen their capacity to participate in the creation, development and application of land-related data and statistics. In many countries, this is hampered by not only the lack of technical and human resources, but also the lack of a strong role by the NSO in coordinating national spatial data.

## Upcoming activities (November 2017-June 2018)

- Assessment and work planning on SDG statistics for Pakistan, Islamabad, Pakistan, 7-10 November 2017.
- Workshop on environment statistics for North and Central Asian countries, Almaty, Kazakhstan, 15-17 November 2017.
- Face to face training on the SEEA central framework at SIAP from 27-29 November 2017 in Chiba, Japan. Details about the general training programme is accessible on <http://unsiap.or.jp/programmes/fos.html>
- Training on climate change-related statistics at SIAP, Chiba, Japan, 27 November – 1 December 2017.
- Ocean Accounting Expert Workshop, Bangkok, Thailand, second quarter 2018.
- Energy statistics and accounting workshop, Bangkok, Thailand, first half of 2018.

## COUNTRY NEWS

### Environment Statistics at the Australian Bureau of Statistics (ABS)

(Contributed by Steven May, Australian Bureau of Statistics)

The ABS first published environmental accounts in 1995, beginning with monetary estimates for a number of environmental assets within scope of the System of National Accounts (SNA) asset boundary. In particular, estimates for subsoil assets, forests and land were developed within the ABS national accounts program and these are now an established feature of the national balance sheet within the [Australian System of National Accounts \(ASNA\)](#) (cat. no. 5204.0). Also during the 1990s the ABS commenced a program of environmental accounts development within its environmental statistics area that, over the following decade, included accounts for water, energy, waste, greenhouse gas emissions, land, ecosystems, fish, minerals, environmental taxes and environmental expenditures. Some of these accounts were irregular while others were one-off or discontinued.

Today the ABS produces annual accounts for [water](#) and [energy](#) and regular accounts for [land](#), as well as an annual publication on [employment in renewable energy activities](#) (cat. no. 4631.0). The ABS also releases an annual compendium publication, [Australian Environmental-Economic Accounts](#) (cat. no. 46455.0), which brings together all ABS environmental accounts into one place to create a broad and cohesive picture of environmental stocks and flows of relevance to the Australian socio-economy. This publication responds to the growing demand for integrated environmental-economic information and reflects a growing maturity within the ABS environmental statistics program.

The environmental statistics program at the ABS continues to drive the development of new (experimental) accounts within the ABS - often in partnership with other agencies – for example the recent publications [Environmental-Economic Accounts for the Great Barrier Reef](#), featuring ecosystem accounts, and a [Discussion Paper: From Nature to the Table: Environmental-Economic Accounting for Agriculture, 2015-16](#) (cat. no. 4632.0.55.001).

The ABS has been working closely with a range of institutions nationally and internationally on the development and implementation of environmental accounting. In Australia, the ABS is working closely with the Department of the Environment and Energy (DoEE) on a national approach for progressing environmental-economic accounting. At the jurisdictional level, the ABS is supporting state and territory governments on the development of pilot accounts, with a view to developing land, ecosystem and other environmental accounts as resources and data permit. The ABS is also contributing to the development of environmental accounting in the catchment management authorities, as well as to research by academics into biodiversity, carbon and ecosystem accounting.

Internationally the ABS has been working with the international statistical community to develop the SEEA, chiefly through the process established by the United Nations Statistical Commission and the United Nations Committee of Experts on Environmental-Economic Accounting (UNCEEAA). The UNCEEAA was previously chaired by the ABS and has representatives from the national statistical offices of other countries as well as international agencies - Food and Agricultural Organization of the United Nations, International Monetary Fund, Organisation for Economic Cooperation and Development, United Nations Statistics Division, and World Bank.

The ABS continues to advance on its long association with SEEA and is committed to promoting the framework as a key mechanism for presenting economic, social and environmental information together to improve policy decision making.

## Environmental Statistics in Burundi

(Contributed by Burundi Institute of Statistics and Economics Studies (ISTEEBU))

Burundi has been heavily involved in environment statistics since UNSD organized the first regional workshop in July 2015, in collaboration with East African Community (EAC), on the implementation of the Framework for the Development of Environment Statistics (FDES 2013). The Burundi Institute of Statistics and Economics Studies (ISTEEBU) published its first environment statistics compendium (2015 Edition) according to the FDES 2013 in October 2016. Subsequently UNSD organized a national workshop in Burundi from 21 to 23 March 2017 and two regional workshops in Tanzania in March and October 2017 which have also assisted ISTEEBU in further advancing its work in environment statistics. In November 2017, Burundi published its second compendium, the 2016 Edition. Both compendiums can be found on <http://isteebu.bi/index.php/publications/annuaire-statistiques/statistiques-environnementales>. Such publications will be produced annually and other indicators which have no data now, for example on waste, emissions and on climate change, will be added progressively. To cover all environmental fields and enhance the quality of data, ISTEEBU has established a multisector Technical Working Group (TWG) whose objective it to collect and provide data to ISTEEBU for compilation.

In the same way as for the publications, with the support of UNSD, Burundi has elaborated a National Strategy for the Development of Environment Statistics in October 2017. This document will be approved by stakeholders on African Statistics Day 2017, normally celebrated on 18 November, but which is planned to be celebrated from 22 to 24 November 2017 in Burundi.

As shown above, with the Final Regional Workshop on Environment Statistics held in Arusha, Tanzania from 23 to 27 October 2017, organized by UNSD/ EAC, and the one-day Meeting on Electronic Waste Statistics that was organized by the United Nations University, in collaboration with UNSD right after the Regional Workshop, Burundi plans to implement the methodology for the integration of environment statistics in national accounts and the preparation of e-waste survey in 2018. The main challengers for Burundi are the lack of technical capacities in environment statistics and the lack of financial means to conduct surveys in the environmental sector. In conclusion, Burundi is committed to working towards sustainable development in general and for promoting environmental sustainability, in particular, via the implementation of FDES 2013.

## Environment Statistics in Jamaica

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

The Statistical Institute of Jamaica (STATIN) produced its first environment statistics report, a state of the environment report, in 2002 based on the pressure-response-state (PSR) framework. Subsequent reports have been based on the general collection of environment data as well as on specific topics such as water, mining and energy.

The latest report on environment statistics from STATIN is entitled *Climate Change Statistics in Jamaica 2017*. The Framework for the Development of Environment Statistics (FDES 2013) was primarily used to present the statistics in the report which also includes other data and graphics pertaining to climate that are relevant to Jamaica. The report briefly looked at the differences between weather, climate and whether the global climate change is really changing. Based on the FDES, other topics covered in more detail were: climate process drivers, evidence, impacts and vulnerability and mitigation & adaptation. The report can be accessed at [www.statinja.gov.jm](http://www.statinja.gov.jm).

STATIN has made efforts to establish environmental accounting with assistance from the Economic Commission for Latin America and the Caribbean (ECLAC). This assistance took the form of technical training in energy accounts. However, this has not been entirely successful as further work needs to be done on fine-tuning the data requirements.

More recently, STATIN has been involved in work on water statistics for the sustainable development goals (SDGs). In early 2017, Jamaica was asked to participate in the Integrated Monitoring of SDG 6 on Water and Sanitation. STATIN participated in several workshops aimed at monitoring specific targets under this goal, namely those focusing on: Target 6.3. Water quality and wastewater; Target 6.4. Water use and scarcity; and Target 6.6. Ecosystems. Under the SDG 6 integrated monitoring approach and using the recommended methodologies, data has been calculated for six of the eleven indicators.

Jamaica was recently represented at the UN-Water Global Workshop for Integrated Monitoring of SDG 6 where participant countries were asked to provide information on their monitoring experience. Topics such as the issues surrounding water and sanitation and how data is used in the development and implementation of policies were discussed. Additional assistance will be given in the future to monitor these indicators, starting with a webinar on indicator 6.4.1: Change in water use efficiency over time to be held in December 2017.

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Since 2013, Jamaica has been involved in a regional public goods project, 'Developing and Strengthening of Official Environment Statistics in Latin America and the Caribbean'. Under the project which was initiated by ECLAC, financed by the Inter-American Development Bank and managed by the National Institute of Statistics and Geography (INEGI) of Mexico, Jamaica, through STATIN and the National Environment and Planning Agency, gained knowledge and developed planning strategies in environment statistics. The activities undertaken and any continuing collaborations will serve to further strengthen environment statistics in the region. This project ended in November 2017.

## Environmental Statistics in Jordan

**(Contributed by Eng. Sona Abuzahra, Statistics Jordan)**

The Environment Statistics Division was established at the Department of Statistics (DOS) of Jordan in 1995. At that time, the annual report of environmental statistics contained available data from administrative records and the results of several surveys conducted to obtain data related to hazardous industries. Continuous improvements were done during this period related to data availability and targeted industrial activities. In 2015, and according to the publication the Framework for the Development of Environment Statistics (FDES 2013), the Environment Statistics Division at DOS in Jordan decided to implement the FDES 2013 given its huge consequence in achievement of our goals. The first environmental statistics report organized according to the FDES 2013 will be finalized in December 2017 and will be published at: <http://www.dos.gov.jo/>.

FDES is a comprehensive approach for environment statistics; contains classification of environmental subjects, possible disaggregation of data, cross-cutting issues and several data sources. In order to implement FDES in our reporting system, assessment of the available data, data sources, level of disaggregation and reorganization of the available data and sectors were established. These improvements reflected on our ability to achieve Sustainable Development Goals (SDGs) at the national level.

At the national level, environmental statistics is of great importance and has an advanced role in the national committees of the Ministry of Environment and with all stakeholders that work on environmental issues. There are different committees that aim to develop national strategies and action plans for desertification, sustainable consumption and production and the first, second and third national communications for climate change. We are currently working on the preparation of the national list of environmental indicators focusing on water resources management, air quality, biodiversity and green economy with the metadata related to each agreed indicator to achieve our National Agenda 2025. Also, Jordan has been chosen as a pilot country in reporting SDG 6 for water and sanitation. Environment statistics cooperation with the Ministry of Water and Irrigation is working under the supervision of the United Nations community to report all water-related indicators.

The future plan for environment statistics in Jordan is to work on water, energy and waste accounts. Despite the limited financial and human resources in the Environment Statistics Division we make a great effort in improving our work and in following international standards.

## Environmental Statistics in Nepal

**(Contributed by Sushil Kumar Sharma, Central Bureau of Statistics, Nepal)**

Environment statistics is a relatively young but multi-disciplinary area and emerging in the field of official statistics in Nepal. From 1980 or so, the government of Nepal has taken initiative to develop an information system on the natural environment to address environmental issues from the line functions of some agencies concerned with environmental aspects. The Central Bureau of Statistics (CBS) first published a Compendium on Environment Statistics in 1994 which provided valuable insights into the importance and usefulness of the subject matter. The second publication of the Compendium in 1998 attempted to analyze available data on various aspects of the environment of Nepal. CBS continued attempts to bring out the environment related statistics by compiling and publishing its publication "Environment Statistics of Nepal", with a view to create an environment database of Nepal on a regular basis. CBS had published the third series of the Compendium of Environment Statistics Nepal in 2015 which contains useful data sets and analysis. This analytical report provides a comprehensive picture of the environmental situation of the country and provides an important instrument for policy integration and informed decision making. It could be an important source of information for the environmentally-related SDG indicators. All the environment related publications are based on the FDES guidelines.

CBS is regularly collecting waste & waste management related data from all Municipalities of Nepal & publishing them in the regular publication "Environment Statistics of Nepal".

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Climate change impacts become highly visible and affect different aspects of human society and ecosystems across the globe. Nepal experienced direct impacts of climate change and is one of the most vulnerable countries in the world. The Government of Nepal devised a number of policy instruments on climate change. Effective implementation of such instruments is a challenge due to various limitations including lack of integrated and reliable data. In this regard, CBS conducted a National Climate Change Impact Survey (NCCIS) aiming to contribute to bridging this gap and avail reliable data and information for regular planning process. The objectives of the survey are understanding and acquiring knowledge on the effect and impact of climate change from social, economic & environmental perspectives; exploring how the respondents are developing or making adaptive capacity to confront the impact of climate change and establishing the linkage of climate change and environmentally related indicators with the SDG (Goal 13) for taking urgent action to combat climate change and its impact. The report of the National Climate Change Impact Survey has been published and disseminated by CBS in June 2017. It contributes to integrate climate change measures into policies, strategies and planning, contributes to projects related to strengthening resilience and adaptive capacity to climate-related disasters, serves as a reference tool on improving education, awareness raising, and human and institutional capacity on climate change adaptation and impact reduction, and contributes to overall climate change related planning and management focusing on women, local and marginalized people.

CBS has taken initiative for the implementation of the SEEA. The SEEA enables coherent comparison of environment statistics with economic statistics. Now, in Nepal there are increasing environmental concerns among the general public, society, policy and decision makers, government etc. As a pilot project Nepal is compiling land accounts with technical support from UNESCAP.

To effectively produce environment statistics, statistical and environmental expertise, institutional development capabilities, and adequate resources are equally necessary. Within this relatively new statistical domain, methodological resources, tools and good practices are being developed and systematized progressively, but in Nepal, due to limited resources and weak technical and institutional capabilities, the country's needs are not able to be met.

The environment related publications of CBS are on the following link: [http://cbs.gov.np/sectoral\\_statistics/Environment](http://cbs.gov.np/sectoral_statistics/Environment).

## Environmental Statistics in Saudi Arabia and other Gulf Cooperation Council countries

(Contributed by Abdullah Albalawi & Hasan Alfifi, General Authority for Statistics in Kingdom of Saudi Arabia)

In 2016, the Central Department of Statistics & Information was reformed and transferred into a public authority called the General Authority for Statistics (GaStat) that enjoys a legal personality, and financial and administrative independence. Thus, GaStat is witnessing a comprehensive transformation process to become a high-performance statistical authority. This movement of transformation is taking place as part of aligning with Saudi Arabia's Vision 2030. GaStat's new organizational structure has a new department in the area of Environment Statistics which did not exist before. In fact, it already has well established long-term collaborative experience with other stakeholders such as the General Authority of Meteorology and Environmental Protection, and the Ministry of Environment, Water & Agriculture to produce the Statistical Yearbook in terms of weather conditions, energy and water, respectively.

At the regional level, the Gulf Cooperation Council Statistical Centre (GCC-STAT) has been taking a leading role to host and arrange several meetings for the GCC environment statistics working group, where the first meeting was held in Muscat, Sultanate of Oman in 2015 <https://gccstat.org/en/center/news/389-environmental-statistics-meeting2015>. The GaStat participated in the third meeting this year which was held in Kuwait in 2017 <https://gccstat.org/en/center/events/meetings/environment-statistics>. These meetings are organized annually to discuss and follow up on the road map for the development of environment statistics during the period 2015 - 2020, and to provide technical support in the field of environment statistics. Furthermore, GCC-STAT organized a regional workshop on water statistics which was held in Muscat in 2015. This workshop aimed to enhance the understanding of international standards on water statistics in the GCC statistical system and promote knowledge exchange and cooperation among producers of water statistics <https://gccstat.org/en/center/news/391-water-statistics-workshop2015>.

At the national level, GaStat conducted the first Economic-Environmental Survey for industrial production establishments in 2017. This survey will be conducted annually, and its main objectives are to identify the sources of water and types of waste in the establishments, to provide data on expenditure and consumption of water and waste in the establishments, to collect the data for compiling water balance tables, and to establish a statistical database that includes environmental indicators in the economic sector. In addition, new indicators that are environmentally-related have been compiled and released at the main webpage: <https://www.stats.gov.sa/en/node/10131>. Moreover, GaStat has highly considered the requests received from the international organizations such as the UNSD/UNEP Questionnaire on Environment Statistics (water and waste).

Lastly and most importantly, the implementation of methodological work in the field of environment statistics, e.g., the Framework for the Development of Environment Statistics (FDES 2013), will help to strengthen the work of environment statistics in Saudi Arabia and of course in the entire Gulf region through the GCC-STAT meetings, given that the Gulf region is at an early stage of development in the establishment of environment statistics systems.

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## Tanzania's Bold Aspirations for a Greener Economy

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

### Introduction

Tanzania's economy is expanding at a commendable rate. Its annual growth stood at 7 percent in 2016, and had maintained a lower annual inflation of 5.2 percent in 2016. The country has also made considerable effort in laying down the foundations for sustainable development by bringing on board the aspects of the environment. A concept of sustainable development calls for a practical approach which maximizes positive outcomes by recognizing the interdependencies between the economy, the environment and society. It is about securing long-term success in all three of these areas through working across sectors to deliver integrated solutions with multiple benefits. In addition, Tanzania is amongst the countries committed to implement SDGs soon after its endorsement by the global community in 2015.

### Institutional and legal framework relevant to the environment

The complexity of environmental problems requires collaborative actions from Government, private sector and the society in general to address them. The Environmental Management Act (EMA) No. 20 of 2004 sets up the Institutional Framework for environmental management in the country. In order to ensure that the agenda for environment enjoys the utmost political will and prerequisite authority, EMA has charged the Vice President Office (VPO) with responsibilities of coordinating environmental issues in Tanzania. The role of law-enforcement for the environmental protection lies with the National Environmental Management Council (NEMC). Also, many Government ministries, departments, agencies and local Government authorities are taking part in activities for environmental management and protection.

### Mainstreaming of environment aspects into national development planning

The need to integrate environment aspects into national development plans, policies, and strategies for sustainable development is underscored in Tanzania's Development Vision 2025. The Vision is being implemented in shorter phases of Five Year Development Plans (FYDPs). For instance, about 10 percent of statistical indicators for monitoring progress of the current FYDP, 2016/17–2020/21 are environment-related.

Other efforts undertaken in mainstreaming environment aspects include; among others, formulation of the National Environmental Policy (1997) which is currently under review; development of the National Environmental Action Plan (NEAP) and consideration of including environment statistics in the next phase of the National Strategy for the Development of Statistics in Tanzania known as the Tanzania Statistical Master Plan (TSMP). In addition, Tanzania has ratified and is implementing various Multilateral Environmental Agreements (MEAs) with the aim of ensuring global and country's environmental sustainability.

### Mandate of National Bureau of Statistics and the development of environment statistics

The global, regional and national development aspirations and commitments are aligned with a responsibility to demonstrate results, and the only way to do that convincingly is by having accessible, high quality, comprehensive and timely data for all indicators. Environment statistics is therefore vital for providing information on how much stress is put on the environment as a result of interactions between humans and the environment.

The government has been putting efforts in strengthening production of official statistics for monitoring implementation of various development programs. These include among others; enactment of the Statistics Act, 2015 which mandates the National Bureau of Statistics (NBS) to coordinate production and dissemination of official statistics within the National Statistics System (NSS) and; establishment of the Environment Statistics and Further Analysis Department at NBS to better coordinate compilation of environment statistics within the NSS.

Despite the high demand for environment statistics and the serious commitment of the Government of Tanzania to mainstream environmental concerns into development programs; this important statistical domain is still considered a relatively new and challenging field compared to other statistics such as economic and social statistics due to insufficient data production and coordination of environment statistics.

### Adoption of international frameworks for environment statistics: FDES 2013 and ESSAT

Another recent development in environment statistics which is worth mentioning is collaboration between NBS and the United Nations Statistics Division (UNSD); in particular, the UNSD Environment Statistics Section. This synergy has been realized through the UNSD Development Account Project named, *“Supporting Member States in developing and strengthening environment statistics and integrated environmental-economic accounting for improved monitoring of sustainable development”* of which Module A focuses on strengthening environment statistics in the EAC Secretariat and its five member states.

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In Tanzania, the UNSD support has been realized through a number of activities including:

- Introduction of the Framework for the Development of Environment Statistics (FDES 2013) and the Environment Statistics Self-Assessment Tool (ESSAT),
- Conducting capacity building workshops to enhance knowledge of the environment experts within the NSS,
- Improved data quality assurance procedures when comparing the recommended methodology in FDES with the quality dimensions used to compile the available statistics,
- Support on environment statistics' prioritization using tier classification,
- Participation in the development of the Environmental Statistics Compendium for the East African Community and;
- Promoting inter-institutional platforms such as establishment of National Technical Working Group (NTWG) on environment statistics. This is a technical forum in which issues related to production of environment statistics are discussed and has representation from Ministries, Department and Agencies (MDAs) responsible for production of environment statistics in the country.

Furthermore, introduction of ESSAT by UNSD has enabled the country to conduct a data gaps assessment to identify available environment statistics, identify data sources, existing gaps and reasons for non-availability. The tools facilitated designing of data capture questionnaire according to FDES 2013, development of National Environment Statistics Action Plan (NESAP, 2017/18) and development of metadata guidelines to be used by data producers for quality assurance, increased transparency in data production and to facilitate data comparison.

On the other hand, the FDES 2013 which organizes environment statistics into three tiers, based on the level of relevance, availability and methodological development of the statistics, has been useful in Tanzania in identifying among others, the basic set of environment statistics in the country and the associated methodologies, identification and reclassification of the environmental concerns highlighted in the National Environmental Policy (NEP, 1997) according to the FDES 2013, and identify environmentally-related SDG indicators which can be monitored using the existing national environmental frameworks. Furthermore, preparation of the first comprehensive FDES-compliant National Environmental Statistics Report scheduled for publication in early 2018 is ongoing. All these initiatives helped to improve coverage of environment indicators for better monitoring and implementation of global, regional and national development programs.

#### **Main challenges faced during the implementation of FDES 2013 and ESSAT**

The following are the main challenges faced during the implementation of the FDES 2013 and ESSAT:-

- Lack or incomplete metadata for some indicators from MDAs,
- Lack or existence of uncoordinated Information Management System within MDAs compilation, and
- Uncoordinated system for e-waste statistics.

#### **Plan of activities from November 2017 to June 2018**

The NBS in collaboration with the NTWG and other key stakeholders is planning to conduct the following activities by end of June, 2018:-

- Finalize data collection and analysis for National Environment Statistics Report,
- Report writing and dissemination of the National Environment Statistics Report,
- Mainstream environment statistics into the National Strategy for the Development of Statistics - the Tanzania Statistical Master Plan (TSMP),
- Integrate specific considerations for newly emerging environment concerns such as e-waste and climate change in the revision of the National Environmental Policy 1997, and
- Conduct the NTWG capacity building workshops on metadata development and data quality assurance framework.

## FORTHCOMING EVENTS

- ◆ Forty-ninth session of the United Nations Statistical Commission (New York, 6-9 March 2018)
- ◆ Two reports will be available at: <https://unstats.un.org/unsd/statcom/>
  - Report of the Secretary-General on Environment Statistics
  - Report of the Secretary-General on Climate Change Statistics
- ◆ Fifth Meeting of the Expert Group on Environment Statistics (New York, May 2018)



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