envstats
News and Notes

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

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FOCUS: How should we streamline climate change, disasters and water statistics?

The UN 2023 Water Conference took place on 22-24 March 2023 in New York and addressed extensively issues related to climate change, disasters and the sustainable development goals. Around this context, UN Water has recently emphasised that:

- 'Water is also at the heart of adaptation to climate change, serving as the crucial link between the climate system, human society and the environment';
- 'Climate change is primarily a water crisis. We feel its impacts through worsening floods, rising sea levels, shrinking ice fields, wildfires and droughts'.
- 'Most disasters are water-related. Floods, landslides, storms, heat waves, wildfires, extreme cold, droughts and waterborne disease outbreaks are all becoming more frequent and more intense, mainly due to climate change.'

During the UN 2023 Water Conference, the work UNSD undertakes to biennially collect water statistics from countries was highlighted at a Side Event 'Water, sanitation, and hygiene as a driver of improved health' (22 March 2023), in particular, as pertains to the use of country data for compilation of SDG indicator 6.3.1: Proportion of wastewater generated which is safely treated, and other themes related to water, sanitation, and hygiene. Further details about the side event are available here.

As the environment statistics pillar continues to lag behind in terms of quality and utility in comparison to the economic and social pillars, UNSD and key partners continue exploring ways to enhance the use of environment and climate change statistics as well as improve the methodological foundation of each. A key issue is to clarify the connections, overlaps and gaps between the related statistical areas of environment, climate change, disasters and water statistics, all of which pursue advances in accordance with international mandates. There are challenges to clearly define and separate duplications among the above. Both the FDES and the Global Set of Climate Change Statistics and Indicators contain subsets of water, disasters and climate change topics and offer assessment tools, e.g. the Environment Statistics Self-Assessment Tool (ESSAT) and the Climate Change Statistics and Indicators Self-Assessment Tool (CISAT) to map and better understand the relationships between the above topics. Yet, there is a need for stronger and more concerted effort towards an agreed set of all environmental definitions and classifications for statistical purposes.

Following the adoption of the Global Set of Climate Change Statistics and Indicators UNSD's main effort was directed to promote adequate implementation support to the countries and, with the help of consultants, developed Implementation Guidelines and the Climate Change Statistics and Indicators Self-Assessment Tool (CISAT). Both need to be reviewed by countries in their effort to initiate national programmes on climate change statistics. The Global Set in its most detailed form, including the metadata, is accessible from Part II of the CISAT.

The above implementation support materials were promoted via several channels, including:

- the Development Account (DA)12 project entitled "Caribbean relevant climate change and disasters indicators for evidence-based sustainable development policies" implemented by the Economic Commission for Latin America and the Caribbean (ECLAC), in collaboration with the Caribbean Community (CARICOM) Secretariat and UNSD. In 2022 and 2023, UNSD took part in national workshops in Belize, Dominica, Grenada, St. Kitts & Nevis, St. Vincent & the Grenadines and also in three subregional events.
- the DA 14 project "Resilient and agile National Statistical Systems to meet post-COVID-19 data needs to recover better". UNSD took part in two global webinars: on 3-4 May for the European, Western Asia [see details on page 11], and Asia-Pacific regions and 10-11 May for the Latin America and the Caribbean sub-regions. [see details on page 5]
- the third Expert Forum for Producers and Users of Disaster-related Statistics 5-7 June 2023 [see details on page 16]
- Common Market for Eastern and Southern Africa (COMESA) Statistical Capacity Building Program Phase 5 included Environmental and Climate Change Statistics [see details on page 13]
- PARIS21 workstream on climate change data ecosystems (CCDEs) [see details on page 8]

Feedback during the above events and ad-hoc communications welcomed the implementation support materials for the

Global Set and highlighted the need to offer support, in particular, to the countries at an early stage of developing climate change statistics programmes. Feedback further suggested that the benefits of such activities will invariably support countries to achieve implementation of the Paris Agreement.

UNSD NEWS:

UNSD/UNEP Data Collection

Now in its eleventh collection round, the UNSD/UNEP Questionnaire on Environment Statistics 2022 (waste and water section) is at the stage of having member states' responses finalised. In August 2022, the Questionnaire was sent to approximately 163 member states with an original deadline in October 2022. More than 70 member states have already provided a response. In collection cycles gone by, it was customary to collect all country responses and then disseminate all data at once, typically as Environmental Indicators and as Country Snapshots. However, what started in the 2020 collection cycle is now being continued for the 2022 cycle which is to periodically disseminate Country Files via the UNSD website. Such a practice endeavours to meet policy demand for SDG indicators and other purposes, and UNSD's dissemination schedule gives consideration to SDG reporting deadlines. The latest batch of Country Files were uploaded in June 2023.

In July 2023, a third and final reminder was sent to member states who are yet to provide an official response. Following this, UNSD plans to close all responses received from member states and to commence disseminating data en masse in the nature of:

- Environmental Indicators (typically time series of individual variables for as many member states possible, time series expressed as a proportion (e.g. hazardous waste recycled upon hazardous waste generated for SDG indicator 12.4.2), and in some cases, latest year of available data for certain variables, usually those for which response rates are comparatively low); and
- Country Snapshots (individual PDFs of member states showing a map with a selection of summarising statistics on water and waste (source from the UNSD/UNEP Questionnaire on Environment Statistics) but also on other themes such as air emissions, land cover, agriculture, etc. (sourced from the outputs of international partners).

Once the whole collection cycle is finalised, UNSD will use various fora such as the Expert Group on Environment Statistics, the UN Statistical Commission, etc. to publicise such results. As has helped in the past, critique from key stakeholders will be welcomed, as will contrasts to the data collection undertaken on similar content by OECD and Eurostat which collects data from UN member states not within scope of the UNSD/UNEP Questionnaire on Environment Statistics.

Countries' responses to the Questionnaire are invaluable for monitoring the progress of the below Sustainable Development Goal indicators:

- ❖ 6.3.1 (Proportion of domestic and industrial wastewater flow 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 freshwater resources);
- ❖ 11.6.1 (Proportion of municipal solid waste collected and managed in controlled facilities out of total municipal waste generated, by cities);
- ❖ 12.3.1 (b) (Food waste index);
- ❖ 12.4.2 (Hazardous waste generated per capita; and proportion of hazardous waste treated, by type of treatment); and
- ❖ 12.5.1 (National recycling rate, tons of material recycled).

Intersecretariat Working Group making advancements in water and wastewater statistics, particularly related to SDG indicator 6.3.1 (proportion of wastewater safely treated)

The mandate for the Intersecretariat Working Group on Environment Statistics (ISWG) dates back to the thirty-fourth session of the United Nations Statistical Commission (1993) which called for a special focus on the development and harmonization of methods, concepts and standards, coordination of data collection, and training. At present, those organisations most active among this Group are OECD, Eurostat, FAO, World Health Organization and UN-HABITAT. The current arrangement whereby UNSD chairs ad hoc meetings is such that collectors of data from member states (OECD, Eurostat, FAO, UNSD) can hold conversation with those organisations whose key interest is to apply the statistics collected to meet policy demands (e.g., WHO and UN-HABITAT, both of whose strongest interest is to provide country-owned data for SDG indicator 6.3.1). Beyond SDG indicator 6.3.1, however, other uses of the data collected by member states are identified and discussed, such as other SDG indicators, coherence to the Framework for the Development of Environment Statistics and the Global Set of Climate Change Statistics and Indicators, and application of statistics toward the System of Environmental-Economic Accounting (Central Framework and Water Accounts).

Issues raised by ISWG members have included technical aspects such as: how best to treat datasets where industrial wastewater may be mixed with household wastewater; how to identify and address cases where it may appear that undercounts of wastewater generated may appear in data reported by countries (as this can be significantly mis-leading when trying to compile estimates of SDG indicator 6.3.1); methods for estimating Environmental Flow Requirements, etc. Further, the ISWG is holding discussions on separate occasions with a specific focus on how to harmonise terms, concepts, definitions, etc. which are applied in international data collections conducted by OECD, Eurostat, FAO, and UNSD/UNEP (respectively, the Joint OECD/Eurostat Questionnaire on the State of the Environment, FAO Aquastat Questionnaire, the UNSD/UNEP Questionnaire on Environment Statistics).

A key output of the ISWG is that consultation between producers and users of statistics on water and wastewater has led to improved validation and quality of datasets reported to organisations such as UNSD by countries. Such country-owned data are feeding into SDG indicator datasets being published periodically. Beyond these purposes, improved data sets are being applied to other frameworks and policy demands.

Updates on the FDES 2013 and the Manual on the Basic Set of Environment Statistics

The Manual of the Basic Set of Environment Statistics was further developed with the assistance of Statistics Netherlands who drafted a methodology sheet on the topic of Freshwater quality. The advancement on this statistical topic was presented at the 9th meeting of the EGES and the methodology sheet has since been peer reviewed with significant expert insight shared by UNEP and further contributions from several member states (Armenia, Brazil, Finland, Jordan). In course, this methodology sheet is expected to be published online as one part to the Manual of the Basic Set of Environment Statistics.

Environment Statistics and Climate Change Statistics Reports and Surveys

Many countries are continuing to compile environment statistics compendia and similar publications which apply the FDES 2013 which UNSD makes available on its website at https://unstats.un.org/unsd/envstats/fdescompendia.cshtml so far in Arabic, English, French, Portuguese and Spanish. More recently, countries (and agencies) have started producing separate climate change statistics publications for which UNSD has established a dedicated website at: https://unstats.un.org/unsd/envstats/climatechange_reports.cshtml

UNSD has compiled over 100 specialized environment statistics and climate change surveys from countries which are available on the website (https://unstats.un.org/unsd/envstats/censuses/) and can be filtered by country, theme and year. Environmentally- or climate change-related censuses are also available. Languages in which surveys or censuses are available include Arabic, English, French, Portuguese and Spanish.

UNSD welcomes further contributions of both country compendia that apply the FDES 2013, other environment

statistics compendia and specialized reports such as on climate change statistics, as well as surveys or censuses on environment statistics or climate change statistics. They can be shared with the Environment Statistics Section (contact: envstats@un.org) where they may then be made available on UNSD's website.

UNSD participates in the ECLAC DA12 project – Final sub-regional workshop of the project 2023Q: "Caribbean SIDS relevant climate change and disasters indicators for evidence-based policies" (Hybrid, Port of Spain and virtual, 10-12 May 2023)

The United Nations Economic Commission for Latin America and the Caribbean (UN-ECLAC) as part of the Development Account 12th Tranche (DA12) project on **Caribbean SIDS relevant climate change and disasters indicators for evidence-based policies,** organized in collaboration with UNSD, the Caribbean Community (CARICOM) and the Organisation of Eastern Caribbean States (OECS) a sub-regional workshop to facilitate exchange of ideas as this project neared its conclusion. This event, which was the final workshop of this project, followed several national and sub-regional workshops organized for beneficiary countries in which UNSD participated in all. UNSD delivered an opening statement remotely and participated physically at the workshop as a resource person and delivered a presentation on UNSD's perspective of the key benefits of the project based on the very close collaboration between UN member states, ECLAC, UNSD and CARICOM.

Every single one of the seven countries who presented upon their work throughout this project made explicit mention of methodological resources which UNSD has provided and which have been endorsed by the UN Statistical Commission. Such resources included the Framework for the Development of Environment Statistics (FDES), the Global Set of Climate Change Statistics and Indicators, the Environment Statistics Self-Assessment Tool (ESSAT), and the Climate Change Statistics and Indicators Self-Assessment Tool (CISAT). Some member states are working to produce an environment statistics or climate change statistics compendium for the first time, while others continue to regularly produce such a compendium. In all cases, the methodologies and assessment tools are serving countries to identity gaps, limitations in methodologies, and to provide insight to identify best data source, and best steps forward.

Key outcomes of the project and workshop included member states' identification of relevant and prioritized climate change and disasters indicators linked to global methodologies such as the Global Set. Following this project's conclusion, member states, UNSD and ECLAC plan to continue communications via informal means to improve member state-compiled compendia, and the application of self-assessment tools, both of which will see further and expanded utilisation of indicators which member states have identified.

Further details concerning this workshop are available here: https://www.cepal.org/en/events/caribbean-sids-relevant-climate-change-and-disasters-indicators-evidence-based-policies-final

INTERNATIONAL NEWS

Updated global database on domestic wastewater treatment for SDG 6.3.1

(Contributed by Rick Johnston and Andrew Shantz, World Health Organization)

SDG Indicator 6.3.1 aims to monitor the proportion of total, industrial, and domestic wastewater that is safely treated at global, regional, and national levels. The World Health Organization (WHO), in its role as a custodian agency for the domestic fraction of the indicator, recently completed a country consultation during which draft 2022 estimates for household wastewater were reviewed and revised. A key data source for the indicator is the UNSD/UNEP Questionnaire on Environment Statistics, which aims to collect wastewater data (among other topics) biennially from all non-OECD, non-EU countries and territories. During the latest update of the domestic wastewater estimates, relevant data from the UNSD/UNEP Environment Statistics database were compiled for 39 countries (as well as from 36 countries covered by Eurostat and 7 countries covered by OECD via the Joint OECD/Eurostat Inland Waters Questionnaire). These data were complemented by other national sources of data such as sector reports and databases, including sources contributed through the country consultation process.

Among the 140 countries and territories for which sufficient data were compiled (representing 89% of the global population), 267 740 million m^3 of household wastewater were estimated to have been generated in 2022. Of this, 154 895 million m^3 (58%) was safely treated (i.e. received secondary or better treatment, or was treated in compliance with local standards). An estimated 57% of all household wastewater was collected at centralized wastewater treatment plants, while another 24% was collected in septic tanks for on-site storage before treatment and disposal. Of the total volume of household wastewater delivered to wastewater treatment plants and septic tanks, approximately 87% was safely treated.

The global wastewater sector would stand to benefit most from improved wastewater collection coverage (particularly by increasing the proportion of wastewater contained in sewers and septic tanks, while eliminating direct discharges to water bodies); and more rigorous national-level monitoring and reporting programmes in most regions. Finally, direct discharges from sewers may be significantly underreported, as these are not commonly measured and/or may be more prevalent among the 92 countries and territories (typically lower income) where safely treated household wastewater could not be estimated due to a lack of data.

The latest domestic wastewater estimates (2022) associated with indicator 6.3.1 can be found on the UN-Water website: https://www.sdg6data.org/en/indicator/6.3.1

Green Climate Fund Strengthens its Capacity to Measure and Track Impact through the development of a Results Handbook

(Contributed by Aiko Ward, Data Management Specialist, Green Climate Fund)

GCF uses a results-based management (RBM) approach to continuously monitor the performance of its projects/programmes and portfolio. RBM is a management strategy that uses monitoring data and evaluations to assess and improve performance and the achievement of desired results. This approach supports the GCF's need to:

1. Assess whether its projects/programmes are on or off track to deliver expected results;
2. Understand why results are (or are not) occurring; and
3. How the design and performance of current and future projects/programmes can be strengthened.

Following the adoption of the integrated results management framework (IRMF) by the GCF Board, the GCF Secretariat developed a (draft) GCF Results Handbook. Targeting GCF's accredited entities and executing entities as its primary audiences, the Handbook aims to provide practical guidance on how to apply the IRMF for GCF-funded projects/programmes throughout their lifecycle from funding proposal development, to planning, monitoring, and reporting activities, through to interim and final evaluations.

The Handbook, once approved by the GCF Board will be applied by a range of GCF stakeholders. It provides clear definitions and measurement methodologies for GCF's priority indicators and monitoring and assessment processes. These elements will support and ensure that GCF-funded projects/programmes apply the same results-based approach and generate consistent, robust data that can be aggregated compared and analyzed for the entire GCF portfolio.

Crucially, all these measures will allow the GCF to track the Fund's contributions to the goals put forward by the UNFCCC and the Paris Agreement.

Mobilizing climate change data ecosystems on the ground
(Contributed by Paz Patiño, Karina Cázarez, Madison Cilk and Ana Lucía Londoño, PARIS21)

PARIS21 supports capacity development for better use and production of statistics throughout the Global South. In a new workstream, PARIS21 has introduced the concept of climate change data ecosystems (CCDEs) and is supporting countries to activate their CCDEs to strengthen the production and use of climate change-related statistics.

A CCDE is a community of interacting state and non-state data actors, the legal and policy environment in which they operate, the available data, and the technologies to create, transform and use climate-related statistics. Along with the CCDE concept, PARIS21 developed the Mobilising Climate Change Data Ecosystems Framework and its tools. Some of the tools are already being implemented in Caribbean SIDS, including Grenada and Belize, and Francophone Africa, with the project in Senegal soon to kick-start later this June 2023.

The Mobilising CCDE Framework promotes a participatory systems approach to climate change data for enhancing collaboration across different data and climate communities through a strategic action plan that will allow to mobilize resources for better production and use of climate change data for national decision-making and international reporting. The Framework builds on and complements efforts from the United Nations Statistics Division (UNSD), particularly the Self-Assessment tool for the Global Set of Climate Change Statistics and Indicators (CISAT) and the Environment Self-Assessment Tool (ESSAT). Information collected through the CISAT and ESSAT fit directly into the PARIS21 CCDE Framework and the three tools can be sequenced to help countries prioritize indicators and develop a plan to address gaps.

During the next semester of 2023, PARIS21 aims to improve the Framework and tools based on country experiences. Initial results from the implementation exercise will be presented at the UNECE Expert for Producers and Users of Climate Change-related Statistics held in Geneva on 28-30 August 2023.

Mobilising a climate change data ecosystem in Belize
PARIS21 initiated the implementation of its Mobilising Climate Change Data Ecosystem (CCDE) Framework and its tools in Belize as part of the National Strategy for the Development of Statistics (NSDS) process.

During the NSDS launch workshop held on 15-19 May 2023, PARIS21, in collaboration with the Statistical Institute of Belize (SIB) and the Ministry of Sustainable Development, Climate Change and Disaster Risk Management, brought together 15 stakeholders from various sectors to map Belize´s CCDE and its characteristics. The mapping exercise

captured the enabling environment for climate change-related data, the state of play of the demand and supply for data, and the key state and non-state actors who could play a role in strengthening the production and use of data for climate action.

A key lesson learned is that a clear understanding of climate change data at the country level is critical to mobilising the right stakeholders. Since climate change-related data covers environmental, social, and economic dimensions, key actors from all three areas should be part of the conversation to identify needs, priorities and mobilise resources.

In the upcoming months, the NSS in Belize, with support from PARIS21, will develop a strategic plan for climate-related statistics that will identify key activities to improve data availability and use in this area within the next five years.

Recent PARIS21 activities on Climate Change Data:
- Local data for global change: the case of climate change. Learn more about this event held at the PARIS21 Spring Meetings 2023.

- [Data communications for advancing climate action](#) – a session led by PARIS21 during the ECLAC Caribbean SIDS regional workshop held on 10 – 12 May 2023
- PARIS21 at the UN World Data Forum 2023 - [Unlocking data ecosystems for more effective and inclusive climate action](#)
- New podcast episodes:
  - [Climate change and sustainable food systems](#) | Sébastien Treyer, Executive Director of IDDRI
  - [Small island states at the frontlines - combating climate change with statistics](#) | Miosotis Rivas Peña, DG ONE Dominican Republic (Episode in Spanish)https://www.youtube.com/watch?v=VVA330igoIE&t=90s

Global advances of E-waste Statistics

(Contributed by Kees Balde, UNITAR-SCYCLE Programme)

Statistical guidelines measuring plastic flows

UNITAR and UNEP are working together on the project *Development of a draft statistical guideline to measure flows of plastic along the lifecycle,* where a globally agreed detailed statistical framework for plastic flows at the national level is under development. The target users of the guideline are global and national statistical offices and other organizations responsible for producing statistics on plastics to inform policies. The guideline will enable national statistical offices and other relevant organizations to calculate high quality, comparable statistics on plastics based on international statistical standards and existing datasets. The project was presented in the side-event of Second Session of the Intergovernmental Negotiating Committee on Plastic Pollution 2. The rounds of consultations with the scientific and global statistical communities about the guideline will start from this summer. We will keep you updated on the progress of the guideline in the future webinars.

Kazakh e-waste monitor 2023

UNITAR and the government of Kazakhstan joined forces in preparing a 2023 e-waste monitor, in which the current statistics, e-waste management, legislation, and a roadmap to improve e-waste management by 2050 is described. The development of e-waste management in Kazakhstan can follow one of two scenarios: 'Business as Usual' or 'Circular Economy'. In the 'Business as Usual' scenario, the cumulative amount of unmanaged e-waste from 2020 to 2050 could reach 8.4 Mt, but the Circular Economy scenario would halve this figure to 4 Mt. The Circular Economy scenario would recover and recycle 3.2 Mt of valuable materials by 2050 and reduce greenhouse gas emissions by about 95%. E-waste management can have a significant economic impact by reducing production costs of primary raw materials, creating income opportunities from recycling valuable materials, reducing disposal costs and fines, avoiding environmental costs, and stimulating economic growth through sustainable resource use. Implementation of the Circular Economy scenario would achieve a positive economic effect of USD $276 million in e-waste management in Kazakhstan until 2050, while the baseline scenario could result in costs of USD $791 million. Thus, the results of the 'Business as Usual' scenario and Circular Economy scenario projections clearly demonstrate the importance of adopting a sustainable e-waste management system and show that implementing measures aimed at improving resource efficiency and proper waste treatment can lead to significant economic, environmental, and social benefits.

Similar reports will be made for Kyrgyzstan in 2023, Uzbekistan and Tajikistan in 2024.

Read for more information on www.ewastemonitor.info

2050 Electronic and Electrical Waste Outlook in West Asia

The joint UNEP-UNITAR **2050 Electronic and Electrical Waste Outlook in West Asia** provides two contrasting future scenarios for e-waste management in Bahrain, Iraq, Jordan, Kuwait, Lebanon, Oman, State of Palestine, Qatar, Saudi Arabia, Syrian Arab Republic, United Arab Emirates, and Yemen. Today, 99.9% of electrical and electronic waste equipment (e-waste) is currently unmanaged or mismanaged. The A transition toward a circular economy approach will have positive impacts on both the reduction of 33 per cent electronic and electrical equipment placed on the market, 14 per cent less e-waste generation and an estimated total of 130 t of gold, 5 t of rare earth metals, 17 Mt of iron and steel, and many other materials could be recycled to 2050. Simultaneously, a larger proportion of hazardous materials and greenhouse gases will be managed in an environmentally sound manner, leading to mitigated emissions of up to 6 t of mercury, 60 t of cadmium, and 53 Mt CO_2 equivalent. It is estimated that roughly 225,000 full-time equivalent jobs would be created for repair of used EEE and collection and pre-treatment of e-waste.

Read for more information on www.ewastemonitor.info

Monitoring framework for the Kunming-Montreal Global Biodiversity Framework
(Contributed by Monique Chiasson, Convention on Biological Diversity)

After several years of negotiations, the resumed fifteenth meeting of the Conference of the Parties (COP-15), held from 7 to 19 December 2022, in Montreal, adopted the Kunming-Montreal Global Biodiversity Framework (GBF) and an associated framework for monitoring progress towards the goals and targets of the GBF.

The monitoring framework is contained in annex I to decision 15/5. It comprises a set of headline indicators which can be used to monitor implementation nationally, and track progress globally and regionally, in addition to component and complementary indicators. In accordance with the decision, an Ad hoc Technical Expert Group (AHTEG) on Indicators has been established until COP-16 to provide advice on the operationalization of the monitoring framework and address critical gaps related to the lack of an existing methodology for certain headline indicators, among other matters. The work of the AHTEG will be primarily conducted remotely. The Group held its first meeting online on 2 May 2023. In addition, an online forum for the monitoring framework has been created to provide an opportunity for discussion and the sharing of views on issues addressed in decision 15/5. Participation in the forum is open to all however participants will need to create a CBD account if they have not already done so. The Conference of the Parties will finish its work on the monitoring framework at its sixteenth meeting (COP-16), to be held in Türkiye in the last part of 2024, and keep it under review thereafter.

The monitoring framework is also closely linked to decision 15/6 on an enhanced multidimensional approach for planning, monitoring, reporting and reviewing implementation, and to Section J of the Kunming-Montreal Global Biodiversity Framework on 'Responsibility and Transparency'. Parties are requested in decision 15/6 to submit, by COP-16, revised and updated national biodiversity strategies and action plans, including national targets, aligned with the Kunming-Montreal GBF. Notably, in Annex I of this decision, Parties are requested to map their national targets to the goals and targets of the GBF and select indicators contained in the monitoring framework that that will be used to monitor implementation. Parties will report on progress achieved in implementing their National Biodiversity Strategies and Action Plans (NBSAP), including national targets, in their seventh national report which is due in February 2026.

UNEP News

Global Community Science Beach Cleanup Guidelines
(Contributed by Dany Ghafari and Sophia Leticia Groll, UNEP)

UNEP, in collaboration with the nonprofit environmental organization Ocean Conservancy, drafted the Global Community Science Beach Cleanup Guidelines. The document provides guidance on how existing community science beach cleanup initiatives such as the International Coastal Cleanup (ICC) or the Marine Litter Watch (MLW) can contribute to measuring progress towards Sustainable Development Goal (SDG) indicator 14.1.1b – Marine Plastic Debris Density. The goal metric SDG indicator 14.1.1b is striving to achieve when measuring marine plastic debris density is average count of plastic items per km2. This will be tracked yearly and extrapolated to the national level based on the total area cleaned for each country.

The guidelines were published in May 2023 and can be accessed online, click **here**.

Four Global Webinars Strengthening the Capacity Building of National Statistical Systems
(Contributed by Ekaterina Poleshchuk, Ruoxi Li, and Ludgarde Coppens, UNEP)

Two *Global Webinars on Strengthening Climate Change and Disaster-Related Statistics: Needs, Priorities, and Action* and two *Global Webinars on Geospatial and Other Data Sources for Environment Statistics: Assessing the Impact of the Economy* on the *Environment* were organized from March to May 2023 to strengthen the capacity building of the national statistical systems. The global webinars are part of the activities of the Statistics and Data Project "Resilient and agile National Statistical Systems to meet post-COVID-19 data needs to recover better" under the 14th tranche of

the United Nations Development Account. The global webinars were organized online by UNEP, UNODC and ESCAP in close collaboration with UNSD, UN Regional Commissions and other partners at global, regional and national levels. Around 400 participants from more than 50 countries attended the webinars. The global webinars aim at strengthening national capacities and increasing the availability and policy use of statistics and indicators on climate change and disasters, as well as statistics derived from geospatial and other data sources to assess the impact of the economy on the environment.

The materials for *Global Webinar on Geospatial and Other Data Sources for Environment Statistics: Assessing the Impact of the Economy* on the *Environment* are accessible online: for Africa, Latin America, and the Caribbean, click **here**; for Asia, Europe, and North Africa, click **here**. The materials for *Global Webinar on Strengthening Climate Change and Disaster-Related Statistics: Needs, Priorities, and Action* are accessible online: for Asia and the Pacific, Europe, and Western Asia, click **here**; for Africa, Latin America and the Caribbean, click **here**.

Measuring Progress: Water-related ecosystems and the SDGs
(Contributed by Therese El Gemayel, UNEP)

UNEP launched, on 16 March 2023, its 3rd edition of the environment SDGs focused report. The report uses a multivariate analysis to understand the relationship between freshwater- and marine-related ecosystems and drivers, pressures, responses and socio-economic and environmental factors with which they are related to and are influenced by. The report also shows the improvement of available data related to the environmental indicators of the SDGs by presenting the progress made in terms of environmental improvement or degradation. The full digital report can be accessed from: Measuring Progress: Water-related ecosystems and the SDGs (unep.org)

Capacity Development activities on selected Environmental SDG indicators
(Contributed by Therese El Gemayel, UNEP)

As part of the EC funded project on enhancing capacity for measuring progress towards the Environment Dimension of the SDGs, UNEP has implemented national activities in Kazakhstan, Jordan and Uganda between May and June 2023. The national activities focused on building the statistical capacities of countries' officials to collect and disseminate data on material flow accounts indicators (SDGs 8.4.1/12.2.1 and 8.4.2/12.2.2), waste indicators (SDGs 12.4.2 and 12.5.1) as well as policy coherence indicator (SDG 17.14.1). UNEP is planning to implement similar activities in three additional countries, namely Ghana, Senegal and India, during July and August 2023. More information can be accessed from: Enhancing capacity for measuring progress towards the Environmental Dimension of the SDGs | WESR (unep.org)

Capacity Development activities on environmental statistics - Botswana
(Contributed by Dany Ghafari, UNEP)

As part of the Global Environment Facility's (GEF) Cross Cutting Capacity Development (CCCD) programme, UNEP in collaboration with the Department of Environmental Affairs (DEA) in the Ministry of Environment, Natural Resources and Tourism of Botswana has conducted a situational analysis of the available environment statistics in Botswana using the FDES ESSAT tool. The Tier I and II identified statistics will form the basis for the development of the Environment Information System for the compilation and dissemination of Environment Statistics in Botswana.

FAO News

Update to the Cropland Nutrient Budget Domain in FAOSTAT
(Contributed by Francesco Tubiello, Giulia Conchedda, Leon Casse and Giorgia de Santis, Environment Statistics of the Statistics Division of the Food and Agriculture Organization of the United Nations)

FAOSTAT publishes Land Use statistics, indicators, and Land Cover data in dedicated domains, providing information at the country, regional, and global levels. The forthcoming 2023 update of the Land Use and Land Cover domains in FAOSTAT will extend the time series to 2021 and will include 2022 estimates of cropland areas.

Since the 1950s, in accordance with the first article of its Constitution, the Food and Agriculture Organization (FAO) has been collecting annual land use data from countries through a standardized Land Use, Irrigation, and Agricultural Practices questionnaire. Every five years, this information is integrated with independent data on forest land area, obtained from the FAO Global Forest Resources Assessment (FAO, 2020). The term "use" implies human intervention or management, including institutional arrangements established for administrative purposes. FAO's land use classification adheres to an international statistical standard (FAO and UNSD, 2020) and aligns with the land classes defined by the Intergovernmental Panel on Climate Change (IPCC), facilitating countries' reporting to the United Nations Framework Convention on Climate Change (UNFCCC).

Since 2017, land cover statistics are published in FAOSTAT following the international land cover classification of the United Nations System of Environmental-Economic Accounting Central Framework (UN SEEA 2012). These data are compiled by aggregating geospatial information at the national level from publicly accessible Global Land Cover mapping products. The land cover classifications are harmonized with the SEEA land cover legend, employing common classifiers from the Land Cover Classification System (Di Gregorio, 2005). This latter update will add 2020 and 2021 land cover statistics from a 10m high-resolution product, the WorldCover of the European Space Agency (ESA).

The data collection efforts for land use statistics were accompanied with an increasing engagement in geospatial work aimed at enhancing the quantity and quality of land use statistics and a better quantification of the uncertainties. Notable improvements in this direction include recent in-depth analysis (Tubiello et al., 2023a) and the development of a global knowledge product (Tubiello et al., 2023b) focusing on cropland area estimates. The analysis estimated the global cropland area at 1500 ± 400 million ha in 2020 with a relative uncertainty of 25% that increased across regions — a value well aligned to the 2021 cropland area of 1580 Mha from the most recent questionnaire of land use.

The Environment Statistics team at FAO actively collaborates with the University of Sydney on groundbreaking analysis. As part of this collaboration, CROPGRIDS, a global spatial product estimating crop types circa 2020, was recently published (Tang et al., 2023). While these resulting products are of significant interest in their own right, they also serve as crucial inputs for ongoing activities aimed at improving and expanding environmental statistics related to fertilizer and pesticide usage in agriculture. The FAOSTAT domains on Fertilizers and Pesticides encompass these statistics and are integral to the core work of the team.
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REGIONAL NEWS

The African Climate Resilient Investment Facility (AFRI-RES)

(Contributed by Dr Linus Mofor, Senior Environmental Affairs Officer (Energy, Infrastructure and Climate Change, ECA & Charlotte Remteng, Consultant, AFRI-RES))

The Africa Climate Resilient Investment Facility (AFRI-RES) is an Africa-based networked resource of technical competence and excellence with the overall objective to strengthen the capacity of African institutions (including national governments, river basin organizations, Regional Economic Communities, power pools, among others) as well as the private sector (project developers and financiers) to plan, design, and implement infrastructure investments that are resilient to climate variability and change in selected sectors. AFRI-RES is a joint initiative of the African Union Commission, the United Nations Economic Commission for Africa, the World Bank, the African Development Bank, and the Nordic Development Fund. A central function of AFRI-RES is to facilitate interaction between policymakers, financiers, project developers, and scientific and engineering experts, to develop and mainstream new practices that deliver climate-resilient infrastructure in Africa.

As the Sustainable Development Goals (SDGs) timeline end draws near, there are still huge investment gaps in key climate change affected sectors such as transport, agriculture, energy, water, ecosystems, and cities. However, investments need assurance that they will perform now, as well as under future climate scenarios. In 2015, a joint report by the World Bank and the African Climate Policy Centre (ACPC) of the United Nations Economic Commission for Africa (ECA) on *Enhancing the Climate Resilience of Africa's Infrastructure*[1] (ECRAI) revealed that under certain climate scenarios, certain water basins in Africa such as the Zambezi could lose up to 60 percent of its hydropower potential. From the report it was therefore clear that climate resilience must be integrated into the trillions of dollars of investments needed to close Africa's huge infrastructure gaps. Doing so requires access to, and uptake of climate information and services, supported by knowledge and data on good practices and guides, as well as communities of practice for shared learning. AFRI-RES was established for that purpose.

AFRI-RES has implemented a long-term in-depth technical online and in-person training on the integration of climate resilience in key sectors through the African Institute for Economic Development and Planning (IDEP), Dakar (https://elearningidep.uneca.org/), as well as building and strengthening expertise in integrating climate resilience in hydropower and roads' projects; Creation of a resilience booster tool (https://resiliencetool.worldbank.org/); Project level technical assistance to over 30 projects across Africa (https://www.worldbank.org/en/programs/africa-climate-business-plan/technical-assistance); Guidelines, standards and good practice notes (https://www.worldbank.org/en/programs/africa-climate-business-plan/guidelines-standards-good-practice-notes).

The AFRI-RES climate knowledge and data portal is the fourth component of the AFRI-RES project. It is an online repository of climate data, tools, and climate information services of relevance to climate-resilient investment planning and design in Africa. It is being developed to include a library of project-level experiences, including validated climate data, models, and scenarios for Africa, as well as analytics and learning and knowledge products to support climate-resilient infrastructure investment.

The portal will also serve as a reference point to providers of relevant climate information and services on Africa. The first phase of the development of the AFRI-RES Portal is at its final stages and the developed system will be migrated to a production server with the domain name http://afri-res-uneca.org by the end of June 2023.

Environment & Climate Change Statistics in the Common Market for Eastern and Southern Africa (COMESA)

(Contributed by COMESA Secretariat)

The Common Market for Eastern and Southern Africa (COMESA) Treaty and specifically Articles 122-126 provide the policy context for sustainable development and cooperation in, among others, environmental and climate change issues. Inadequate progress has been made over the availability of environmental and climate change statistics as also evidenced by high rates of non-completion to self-assessment tools provided by the United Nations Statistics Division

(UNSD) and other stakeholders to monitor the progress made in the implementation of the different international policies related to environment and climate change. To this end, the COMESA Secretariat, under the Statistical Capacity Building Program Phase 5 (SCBV), included environment & climate change statistics as one of its intervention areas. The SCB V provides capacity building and technical assistance to requesting countries. From 28 November to 1 December 2022, COMESA in partnership with the African Development Bank (AfDB), and the United Nations Statistics Division (UNSD) convened a workshop on Environment and Climate Change Statistics for the 37 African Development Fund (ADF) countries in Nairobi, Kenya. This regional workshop focused on the Framework for the Development of Environment Statistics (FDES 2013), on the recently adopted Global Set of Climate Change Statistics and Indicators, and on the use of their self-assessment tools (ESSAT and CISAT (https://unstats.un.org/unsd/envstats/fdes/essat.cshtml and https://unstats.un.org/unsd/envstats/Climate%20Change/cisat.cshtml)).

Following the regional workshop, COMESA provided technical assistance on environment and climate change statistics to Kenya, Burkina Faso and Zimbabwe. As a result of this technical assistance, capacities of national institutions that compile environmental and climate change statistics were strengthened. Coordination of national institutions involved in the collection of environment and climate change statistics was also enhanced. Country stakeholders applied the ESSAT and CISAT and this enabled countries to produce their own ESSAT and CISAT. The provision of technical assistance was also an opportunity for countries to produce the compendia of environment statistics 2022 edition and for Zimbabwe the report on climate change statistics.

Commencement of the Fifth Round of Environment Data Compilation for the CARICOM Region

(Contributed by Faustina Wiggins, Caribbean Community Secretariat (CARICOM))

The Caribbean Community (CARICOM) Secretariat Regional Statistics Programme (RSP) has commenced the **fifth round of environment data collection** aimed at compiling data on environment statistics for dissemination through the publication, the CARICOM Environment in Figures. Previous activities included updating country databases with existing data for the period 2010 to 2020 to be submitted to countries for data verification and updating. Despite competing priorities such as the conduct of the 2020 round of Population and Housing Census in member countries, it is anticipated that there will be a reduction of the existing data gaps in this area. This is as a result of the number of capacity building activities conducted in previous years leading up to this round of data collection coupled with greater interagency collaboration and institutionalized dissemination of environment statistics.

The CARICOM Secretariat recently concluded the CARICOM/ Italian Government project funded by the Italian Agency for Development Cooperation (AICS) during which the Italian National Institute of Statistics (Istat) conducted remote Environment Statistics training workshops for focal points of National Statistics Offices (NSOs). Moreover, The CARICOM Secretariat RSP also intends to conduct a number of activities in 2023 under the 11th European Development Fund (EDF) project, to reduce data gaps in the area of Environment and Climate Change statistics. This intervention will include three in-country technical assistance activities to reduce data gaps and promote inter-agency collaboration, and a regional workshop to address among others, the Environment and Climate Change indicators under the Sustainable Development Goals (SDGs) Framework. It is also expected that the CARICOM Technical Working Group (TWG) for the Development of Environment and Climate Change Statistics will be convened in the latter half of the year to discuss the results of fifth round of data collection and propose improvements.

Simultaneously, CARICOM member countries continue to respond to calls to disseminate environment statistics for policy and decision-making and in recent months, the RSP received Environment Statistics compendia from three (3) member countries – Suriname, Anguilla and Bermuda. While Suriname published its tenth Environment Statistics Publication and Bermuda produce its eleventh issue of the Environmental Statistics Compendium with data for the period 2017-2021, Anguilla disseminated its first issue of the Environmental Statistics Compendium 2015, to strengthen its environmental statistics data compilation as well as to monitor the Sustainable Development Goals (SDGs). These compendia as well as data submitted by the Caribbean Tourism Organisation (CTO) under the theme Tourism, and the United Nations Statistics Division/United Nations Environment Programme (UNSD/UNEP) Questionnaire on Environment Statistics for indicators under the themes, Waste and Water for countries submitting have further enabled the RSP to update its CARICOM Environment and Climate Change databases with recent data.

Moreover, collaboration to improve the quality of environment, climate change and disaster statistics continue to be of great importance. Hence, the CARICOM Secretariat will continue to expand collaboration with regional and international institutions to strengthen capacity in these areas of statistics. The CARICOM Secretariat is therefore pleased to have collaborated with the United Nations Economic Commission for Latin America and the Caribbean (ECLAC), UNSD and other partners, in the execution of CARICOM SIDS Climate Change and Disaster Statistics Project since its commencement in March 2021, contributing to various project activities. The project enabled member countries to receive support to sustain the momentum compiling and disseminating Environment and Climate Change Statistics for the CARICOM Region as required by users in these areas of statistics. Inter-agency working groups were also revitalized and the formalization of these groups is encouraged as a necessary step towards sustaining the compilation of environment, climate change and disaster statistics.

This emphasis on **capacity building**, **dissemination** and **collaboration** underscore the approach to the compilation of environment statistics during this fifth round of data collection to ensure the reduction of data gaps in this area. The forthcoming publication of the fifth CARICOM Environment in Figures Report will ensure timely data on the region's environment is available for data-driven decision-making.

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

Regional Meeting: Exchange of Experiences and Decision-Making for the Implementation of the Sendai Framework in Latin America and the Caribbean, 28 February - 2 March 2023, Uruguay
ECLAC developed two activities, a side event "Statistical Data and Geospatial Information for Disaster Risk Reduction" and a learning lab "Disaster Related Statistics". In the first activity, geospatial information platforms and institutional arrangements were presented that serve as a basis to facilitate the availability of data generated by various institutions, as well as their distribution, exchange and use to ensure that entities involved in Disaster Risk Management can have access to quick and timely quality data for decision making. In the second activity, an Online Course on Disaster Statistics, developed by the Statistical Institute for the Pacific (SIAP), was launched. Their main objective is to develop national capacities in the compilation of disaster-related statistics to improve their management and promote risk-informed sustainable development in countries.
For further information kindly click here:
https://www.cepal.org/es/notas/la-cepal-participa-encuentro-regional-intercambio-experiencias-toma-decisiones-la

National Workshop: Support the development of SDG environmental indicators, 17-21 April 2023, Panama
Technical assistance was provided on SDG environmental indicators with the objective of having a trained inter-institutional technical team and identifying a common conceptual basis on environmental statistical processes (data, basic statistics, indicators, sources, among others) to build, sustain and update the existing set of environmental indicators and build new indicators in the future. The ECLAC support consisted of an online workshop to identify, compile, and calculate some environmental indicators from the SDG agenda with some expert's presentations about the main information challenges on these indicators and sharing other countries experiences. Approximately 70% of the participants registered and received their certificate based on their performance.
For further information kindly click here:
https://www.cepal.org/es/eventos/construccion-indicadores-ambientales-panama

Regional Workshop: Caribbean SIDS relevant climate change and disasters indicators for evidence-based policies, 10-12 May 2023, Trinidad and Tobago
The Statistics Division and the Subregional Headquarters for the Caribbean of the United Nations Economic Commission for Latin America and the Caribbean (ECLAC), in collaboration with United Nations Statistics Division (UNSD), the Caribbean Community (CARICOM) Secretariat, the Organization of Eastern Caribbean States (OECS) Commission and The Partnership in Statistics for Development in the 21st Century (PARIS21) have been working together since 2020 with selected Caribbean countries at the national level to strengthen institutional and statistical capacities to better produce, disseminate and use environment, climate change and disaster indicators. Work at the country level has helped in identifying coordination and data sharing as the most critical areas where exchange of knowledge and experiences and peer learning at the regional level bring the most value for countries. This final regional workshop as part of the Development Account 12th Tranche (DA12) project on Caribbean SIDS relevant climate change and disasters indicators for evidence-based policies was organized to share the experiences of the countries

through the project and a final compilation of the main products of the project.
For further information kindly click here:
https://www.cepal.org/es/eventos/caribbean-sids-relevant-climate-change-and-disasters-indicators-evidence-based-policies

Global Meeting: Third Expert Forum for Producers and Users of Disaster-related Statistics, 5-7 June 2023, Thailand
The Expert Forum is coordinated for statisticians, disaster management experts, geo-scientists, as well as policymakers and other decision-makers that rely on statistics to inform their decisions. This forum was organized to advance in the production and use of disaster-related statistics for risk-informed development, using a platform where users and producers of disaster-related statistics collaborate and share knowledge. ECLAC led the second session "Assessing and mapping risk exposure, vulnerability, and coping capacity" providing a venue to discuss country experiences on how to use emerging trends and innovative technologies such as geospatial information and Earth observations, remote sensing, machine learning, artificial intelligence, and big data for gathering, analyzing, and visualizing disaster-related data.
For further information kindly click here:
https://www.unescap.org/events/2023/third-expert-forum-producers-and-users-disaster-related-statistics#:~:text=The%20third%20Expert%20Forum%20for,see%20the%20meeting%20room%20layout

Global Meeting: Third Inter-Agency and Expert Group on Disaster-related Statistics (IAEG-DRS), 8 June 2023, virtual meeting
This meeting was organized to discuss the governance mechanism of the IAEG-DRS, to share with the members the status on the development of the Global Common Framework on Disaster-related Statistics, and to seek feedback on a proposal for submission of the work of the IAEG-DRS to the UN Statistical Commission. The main conclusions of the recently concluded Third Expert Forum on Disaster-related Statistics were shared and discussed, the needs and actions in terms of stronger partnerships, technical linkages and practical guidance were pointed out. The candidacy of a third member to serve as co-chair of the IAEG was proposed and approved and the United Kingdom will share responsibilities with UNDRR and ESCAP.

ECLAC Regular Data Collection on Environment Statistics: CEPALSTAT and Statistical Yearbook 2022
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. It includes new environment series to better showcase the most relevant issues in the Latin American and Caribbean region. We are developing the third chapter of ECLAC's Statistical Yearbook, aimed at environmental information, which shows a selection of tables and graphs providing a summary of statistical information from the regional perspective.
For further information kindly click here:
https://statistics.cepal.org/portal/cepalstat/index.html?lang=en
https://www.cepal.org/es/publicaciones/48706-anuario-estadistico-america-latina-caribe-2022-statistical-yearbook-latin

Planned activities:
- Next month a Regional Climate Change Profile in CEPALSTAT will be published.
- Technical assistance to Argentina
- Technical assistance to Ecuador
- Technical assistance to Cuba

For further information kindly click here:
https://comunidades.cepal.org/estadisticas-ambientales/es

UNECE News

(Contributed by Michael Nagy and Malgorzata Cwiek, United Nations Economic Commission for Europe)

Past events and ongoing activities

Eighth Joint OECD/UNECE Seminar on SEEA Implementation (Geneva, 13-15 March 2023)

The eighth Joint OECD/UNECE Seminar on the Implementation of the System of Environmental-Economic Accounting (SEEA) was held from 13-15 March 2023 in Geneva.

Experts from 42 countries as well as from many International Organisations, Academia, NGOs and the private sector participated in the meeting. The meeting was prepared by an Organising Committee with members from National Statistical Offices of Australia, Canada, Estonia, Finland (chair), Germany, the Netherlands, Sweden, and the United States. Eurostat, UNEP and UNSD in addition to OECD and UNECE. Ms. Johanna Pakarinen from Statistics Finland chaired the Seminar.

The following gives a short overview of the discussions in the different sessions. For more information, please consult the meeting webpage at https://unece.org/info/Statistics/events/373223, which includes all presentations, background documents and the meeting report.

- **Setting the scene:** Updates were provided by the United Nations Committee of Experts on Environmental-Economic Accounts (UNCEEA), the London Group on Environmental Accounting, the statistics office of the European Union (Eurostat), and the United Nations Environment Programme (UNEP). The session also featured presentations on emerging areas of policy relevance for the SEEA and on the importance of earth observation for SEEA implementation.
- **Towards circular economy measurement:** In this session the UNECE Deputy Executive Secretary introduced activities of UNECE on measuring circular economy as this is a crosscutting topic. Furthermore, an update on guidelines development for measurement of circular economy was provided by OECD and UNECE. The session also included an update on the revised EU Monitoring Framework, a discussion on circular economy in international trade as well as practical examples on measuring Circular Economy presented by Netherlands, Sweden and UNITAR.
- **Implementing SEEA Ecosystem Accounting (SEEA EA):** This session included presentations by Colombia, Estonia, Germany and Spain, as well as on the outcomes of projects of implementation of ecosystem natural capital accounts in Africa and the Guiana Shield. FAO emphasised the importance of national land cover and land use maps which constitute a core input information for national ecosystem accounting.
- **Forest accounts:** The co-chairs of the Forest Ecosystem Accounting Working Group set the scene for the session with introductory presentations on opportunities and challenges for forest accounting. FAO informed on related experiences for current international commitment and policy frameworks for forest. Eurostat provided an update on forest accounting for the European Union. The session concluded with the presentation of the French and Finish experiences.
- **Organisational and institutional arrangements for SEEA implementation:** The Seminar heard about the development of a new strategy for statistics for environmental-economic decisions in the United States (presented by Jed Kolko, the Under Secretary of Commerce for Economic Affairs). Finland gave the example from the long and rich history of environmental-economic accounts production. UNSD presented the development of an international SEEA Implementation Guide.
- **Environmental taxes and subsidies, including harmful subsidies:** National experiences were shared by Canada, Luxembourg and Sweden. In addition, Eurostat, UNEP and the OECD presented the work of their respective organisation. Eurostat focused in its presentation on the modules of environmental taxes and environmental subsidies and similar transfers. UNEP and OECD presented work on the methodology and data collection of fossil fuel subsidies.
- **Integration of accounts for analytical purposes:** OECD presented ideas for increased integration of SEEA data for their work on global databases. Ireland presented its Climate Action Plan and discussed how choosing suitable indicators can be useful to monitor progress towards climate action targets and the ensuing effects on economic sectors. Sweden presented its data on environmental pressures from Sweden's exports and compared them with equivalent foreign products. Netherlands showed its carbon accounts which currently comprise geo-carbon, bio-carbon, carbon in the economy and carbon in the atmosphere.

- **Water accounts and related indicators:** OECD explained the efforts in aligning questionnaires and definitions with international stakeholders such as Eurostat and UNSD, and discussed the relationships between collection of data via joint international water statistics questionnaires and compilation of SEEA-water accounts. Austria presented the EU4Environment project component Water and Data in Eastern Partner Countries (Armenia, Azerbaijan, Georgia, Moldova and Ukraine). National case studies were presented from Armenia and Netherlands.

The event also featured a poster session where the following was presented:
- Building a geographic information systems-based methodology for calculating rooftop solar photovoltaic potential for the formation of energy communities and its energy accounts;
- AfrikENCA: Valuation of ecosystems in Africa;
- Ecosystem Extent - Accounting Implementation in Italy.

The next seminar is planned to be held 18-20 March 2024 in Geneva.

Workshop "Building Resilience through Disaster-risk-related Statistics and Indicators: A Workshop on operationalizing the ESCAP DRSF" (Bangkok, 8 June 2023)

The UNECE Task Force on Measuring Hazardous Events and Disasters organised this workshop as an associate event of the "Third Expert Forum for Producers and Users of Disaster-related Statistics and associate events" which was held from 5-9 June 2023 in Bangkok. The objectives of the workshop were a) to familiarise countries around the world with the idea of developing national indicator sets on disaster-risk in accordance with the DRSF (Disaster-related Statistics Framework); and b) to get feedback from workshop participants on the suitability of the preliminary list of core disaster-risk related indicators which was developed by the UNECE Task Force on Measuring Hazardous Events and Disasters.

About 40 participants representing NSOs, Disaster-risk Management Authorities and International Organisations participated in the workshop. Countries represented included Armenia, Bangladesh, Bhutan, Fiji, Georgia, Italy, Lao PDR, Malaysia, Maldives, Mongolia, Nepal, Pakistan, Palau, Philippines, Rwanda, Sri Lanka, Tonga and Vietnam.

The workshop started with presentations by Italy and Vietnam on their experiences in using indicators for measuring disaster-risk, and was followed by breakout sessions in which participants discussed the usefulness of the UNECE indicators from their point of view and what type of guidance could be useful for their implementation. The feedback received from the breakout sessions will be taken into account by the UNECE Task Force in their further work to refine the list of indicators and to draft implementation guidelines.

Task Force on the Role of NSOs in Achieving National Climate Objectives
Since February 2022, a UNECE Task Force has been working on a Guidance on the Role of NSOs in Achieving National Climate Objectives, under the framework of the Conference of European Statisticians.

The Task Force is analysing concrete ways in which NSOs can contribute and showcase what the statistical system already offers to support climate action, focusing in particular on the role of NSOs in:
- Reporting under the Paris Agreement
- Meeting information needs of national policymaking in terms of climate mitigation, adaptation and just transition
- Informing the broad public about climate-related issues

The guidance document will aim to be practical, including explanations and recommendations, and a portfolio of examples of statistical products, collaboration and coordination experiences, case studies, and descriptions of institutional arrangements. The draft will be circulated to the participants of the 2023 UNECE Expert Forum. Any country or organization interested in the work of the Task Force can contact the UNECE secretariat (cwiek@un.org).

Upcoming Events

The 2023 Expert Forum for Producers and Users of Climate Change-Related Statistics (28-30 August 2023, Geneva)

The 11th UNECE Expert Forum for Producers and Users of Climate Change-Related Statistics will be held on 28-30 August 2023 in Geneva, Switzerland as an in-person meeting. Simultaneous interpretation in English, French and Russian will be provided for most of the meeting. The main objective of the annual Expert Fora is to provide a platform for sharing experiences, discussing concepts and measurement issues, and identifying areas for practical guidance.

The 2023 Expert Forum will, among others:
- Provide a platform for dialogue between producers and users of climate change-related statistics
- Facilitate sharing of knowledge and experience in developing new climate change-related statistics and improving the usefulness of the existing data
- Show good practices in producing, disseminating and using climate change-related statistics
- Review and provide feedback on the draft *Guidance on the role of national statistical offices in achieving national climate objectives* developed by a dedicated UNECE Task Force
- Support implementation of the *CES Recommendations on Climate Change-Related Statistics (2014)* and the *CES Set of Core Climate Change-related Indicators and Statistics Using the System of Environmental-Economic Accounting* (2020)
- Identify priorities for future work.

The Expert Forum will include the following sessions:
- Producing, disseminating and communicating climate change-related statistics and indicators for policymakers and the public
- Informing climate change mitigation policies
- Informing climate change adaptation policies
- Data needed to support a just transition
- Climate finance and the economic aspects of climate change

Each session will aim to discuss best practices, existing challenges and recommendations on how to improve statistics and data for climate policy and analysis in a particular area. The concept note, registration link and more information can be found on the meeting webpage: https://unece.org/statistics/events/EFCCRS2023. **Participants are kindly asked to register by 9 August 2023.**

The Expert Meeting is organized by the UNECE Steering Group on Climate Change-Related Statistics, chaired by Statistics Netherlands. In preparation for the Expert Forum, the Steering Group has developed a questionnaire, "Climate Change Related-Statistics in Practice 2023", and invited all countries to share their recent achievements and plans. The collected information will be used to prepare a background document for the Expert Forum and share best practices within the expert community. The 2021 and 2022 results of the questionnaire are available under the links: Climate Change-Related Statistics in Practice 2021 and Climate Change-Related Statistics in Practice 2022.

20th Session of the Joint Task Force on Environmental Statistics and Indicators (16-17 October 2023 in Geneva)

The UNECE Joint Task Force on Environmental Statistics and Indicators assists the countries of Eastern and South-Eastern Europe, the Caucasus and Central Asia in their efforts to:
a.   Apply the Shared Environmental Information System principles and methodologies for the United Nations Economic Commission for Europe (ECE) core environmental indicators and data production in line with international statistical standards;
b.   Analyse and communicate environmental data;
c.   Develop capacity to implement the System of Environmental-Economic Accounting;
d.   Develop capacity for the compilation and integration of environmental data in support of measuring progress in the context of sustainable development and green economy initiatives.

The Joint Task Force is a unique body that brings regularly together experts from National Statistical Offices with Ministries of Environment (or Environment Agencies) to exchange knowledge and experience on the above issues. It is open to environmental experts and statisticians from all ECE member States.

One important objective of the upcoming meeting is the finalisation of the review of the UNECE Guidelines for the Application of Environmental Indicators. The agenda of the meeting is currently in preparation and will be soon available at https://unece.org/info/events/event/380021.

Recent Eurostat activities
(Contributed by Arturo de la Fuente, Eurostat)

An overview of Eurostat activities on environmental statistics, environmental accounts and sustainable development indicators can be found at: http://ec.europa.eu/eurostat/web/environment/overview. The following is a summary of developments in the last six months.

Sustainable Development Goals (SDGs) and other policy monitoring frameworks
Eurostat has a dedicated website for SDG indicators. The latest Eurostat SDG communication package was published on 24 May 2023, including the full monitoring report on progress towards the SDGs in the EU context - edition 2023, the statistical annex to the SDG voluntary review, the digital publication 'SDGs & me' and visualisation tools to compare countries. The 2023 report includes a special chapter about Covid and another one about spillovers and footprints. This year for the first time the SDG report is published together with the macro economic package 'European Semester', which reinforces the SDGs mainstreaming into the economic policymaking.

Eurostat supports the methodological development of several tier III indicators in the UN list of SDG indicators for global monitoring, closely cooperating with the relevant custodian agencies. Eurostat participates in the working groups of the Inter-agency and Expert Group on SDG indicators (IAEG-SDGs) on "Geo-spatial Information" and on "SDMX", and follows the work of the IAEG-SDGs as an observer.

Environmental statistics
The main entry points for Eurostat environmental statistics are the dedicated sections in its website for environment, waste statistics and climate change related statistics. On 15 May Eurostat issued an improved EU monitoring framework circular economy in this dedicated website. The improved monitoring framework has on new dimension on global sustainability and resilience, and new indicators about material footprint, resource productivity, consumption footprint, greenhouse gas emissions from production activities and material dependency.

The results of the 2021 OECD/Eurostat Joint Questionnaire on municipal waste are published in this online article. The data collections on waste streams (packaging waste, waste electric and electronic equipment, end of life vehicles and batteries) were completed in September-October 2022 and the data are published here. The 2023 data collections have been launched. Also updated were the online articles on electrical and electronic equipment, waste packaging and batteries. The results of the 2022 data collection on waste statistics according to Regulation (EC) 2150/2002 are published here (data for 2020) and in the online articles here and here.

The results of the data collection on inland waters, including regional information, are published in this online article (data for 2020). The results of forestry statistics are available in this article (data for 2020). Data on the production and trade in wood products collected with the Joint Forest Sector Questionnaire were published. Both physical and monetary forest accounting data are published. An overview of data published on forestry and forests by Eurostat can be found in this link.

SEEA environmental accounts
Eurostat runs data collections of SEEA-based environmental accounts, and the results are published as follows: air emission accounts (2020 data), material flow accounts (2021 data), environmental taxes (2020 data), environmental sector (2019 data), environmental protection expenditure (2019 data) and physical energy flow accounts (2020 data). All these data collections are annual and mandatory for EU Member States. Since November 2021 Eurostat also produces quarterly estimates of greenhouse gases based on SEEA, and with a timeliness of 4 ½ months. Eurostat also publishes air emission footprints and two datasets with material footprints (aggregate and detailed). Besides the articles

linked above, and other articles accessible from them, Eurostat publishes the data results in the Eurostat online database, as well as other material (see dedicated section on environmental statistics).

Eurostat published the final report of the project integrated system of natural capital and ecosystem series accounting (KIP INCA) in collaboration with other EU partners. The report introduces ecosystem accounting and presents ecosystem extent accounts, initial ecosystem condition accounts and ecosystem services accounts for the European Union. The report shows practical examples of possible uses of ecosystem services accounts and existing policy applications. The full list of published INCA output can be found in the methodology section under 'Ecosystem accounts'. Eurostat is preparing legislation to make compilation of ecosystem accounts mandatory in the European Union.

Eurostat also facilitated training courses on environmental statistics and SEEA for European compilers. Material from past courses is available here. Because of the coronavirus lockdown and travel restrictions many training courses are being transformed into online courses. Recent and upcoming courses are: waste statistics (19-20 April), physical environmental accounts (30 May – 2 June), monetary environmental accounts (webinars: 5, 12, 19, 21 April; classroom course 6-7 June), waster statistics (12-14 June), introduction to ecosystem accounts (7-8 November). Those courses are free of charge and also open to participants from outside the European Union, provided free places are available. Eurostat also organises online workshops on 12,13 and 20 June where European countries will present results of pilot projects on environmental statistical and accounts co-financed with Eurostat grants.

Recent developments in EEA indicators and their use to support policymaking

(Contributed by Roberta Pignatelli, European Environment Agency)

The quality of environmental indicators concerns both their statistical quality and their scientific/policy relevance. The EEA is investing on both fronts.

Statistical quality is the subject of a Service Level Agreement (SLA) between the Statistical Authority of the European Union (DG ESTAT) and the EEA, which was signed in November 2022, entered into force on 1 January 2023 and will last 4 years. With this agreement, the EEA intends to support Eurostat with the development and implementation of data, statistics and indicators, enhanced delivery methods for data, statistics and indicators, and analyses that can serve the EU environmental and sustainable development policies. Eurostat can re-publish this data and indicators on its website, e.g. as part of scoreboards of indicators for monitoring policymaking.

The EEA provides scientific evidence and technical knowledge to support Europe's environment and climate policies. The work to be carried out under this SLA fits very well into the on-going support by the EEA for policy monitoring, in the fields of natural capital, SDG monitoring and circular economy.

This agreement is a good example of institutional cooperation between statisticians and environmental experts, which is essential for producing good environmental statistics. Furthermore, it is conceptually based on the definitions provided by the FDES regarding data, statistics and indicators: this facilitates the identification of different work streams and provides the basis for clarity and better management in many other areas of work.

As regards the policy relevance of the EEA indicators, it appears to be growing steadily, thanks to the use of many EEA indicators for monitoring European policies. For instance, the EEA continues to provide several data, statistics and indicators to Eurostat for the monitoring of the EU SDGs and other EU policies. The EEA has been also tasked by the European Commission to annually take stock of the progress towards the 8th Environment Action Programme (8th EAP) objectives on the basis of a set of 28 headline indicators. The indicators were selected by the European Commission after consultation with stakeholders, the Member States and the EEA, and they represent key aspects of the 8th EAP.

The 8th Environment Action Programme is the Union's legally agreed overarching framework for action on EU environment policy until 2030. The programme reiterates the EU's long-term vision to 2050 of living well, within planetary boundaries and sets out priority objectives for 2030 and the conditions needed to achieve these. It builds on the European Green Deal and aims to speed up the green transition and to protect, restore and improve the state of the environment.

The EEA will assess progress towards 8th EAP objectives in annual reports published every December. The first report will be available in December 2023. The headline indicators are available on a dedicated page in the EEA website. All EEA indicator are instead available here: https://www.eea.europa.eu/ims .

There is still a long way to go to achieve a true synergy between thematic and statistical aspects in the production and use of environmental statistics for policy making, but it can be said that we are moving faster and faster towards this goal: the right balance between the two components just has to be maintained at every step of the way.

Environment / climate change statistics in the Pacific region

(Contributed by Alison Culpin, Andrea Borlizzi, Monica Madrid - Statistics for Development Division of The Pacific Community)

The Pacific Community (SPC) Statistics for Development Division (SDD) has made positive progress in developing their climate change and natural disasters survey module. This module is designed to support Pacific countries monitor climate change impacts at the household level. The survey module comprises a core module and an accompanying sourcebook. The general objective of the core module is to gather nationally relevant and internationally comparable socio-economic data over time through a short set of fixed questions to be regularly included in existing household surveys and census questionnaires. The sourcebook, on the other hand, aims to guide Pacific countries in generating comprehensive statistics beyond the socio-economic impacts of natural disasters, and covers multiple dimensions and sectors, including fisheries.

A series of stakeholder consultations has taken place over the last five months– focused on information needs and countries/sectors' priorities. In particular, we sought feedback from other SPC divisions and relevant development partner stakeholders (UNICEF, the World Bank, etc.) to understand if the modules cover the most relevant topics for the Pacific countries and how data on climate change and natural disasters impacts should be collected at the household level.

The proposed questionnaires were presented at the PACSTAT Regional Conference on HIES methods, held on the 27th of March in Fiji, and in the 10th (core module) and 11th (sourcebook) meetings of the Pacific Statistics Methods Board (PSMB) held in New Zealand, and Australia respectively.

SPC-SDD also participated in the IX International Conference of Agricultural Statistics - ICAS IX, which took place in Washington DC on 17-19 May, 2023. The theme of this conference was: 'Harnessing Data to Inform an Equitable and Sustainable Agri-Food Systems Transformation'. SDD presented the climate change and natural disaster survey module at the 'Farming and Climate Change Adaptation' session. The survey module was well received by the Agricultural Statistics community and Pacific countries were encouraged to implement it in their regular statistical programs.

The core module, along with the corresponding enumerators' manual, will be field tested in the HIES survey of Kiribati in June 2023. Another test is planned for Nauru in the following months. The Sourcebook will be accompanied by a policy brief to enable Pacific countries to advocate for its implementation with their relevant ministries and agencies.

For more information please see: https://sdd.spc.int/innovation-sdd/statistical-innovation-and-capacity-building-pacific-islands-project-pacstat

ESCAP News

ESCAP's activities and plans on environment statistics
(Contributed by Statistics Division, ESCAP)

There has been an increasing recognition that effective environmental and sustainable development policies and actions require the understanding of a complex relationship between the environment and ecosystems, the society, and the economy. This complex relationship should be grounded in an integrated set of information that cuts across traditional domains of official statistics. Thus, ESCAP's technical and normative work related to environment statistics is oriented towards multi-domain statistics to inform sustainable development policies and actions. The thematic areas of regional priority include climate change and disaster related statistics, the System of Environmental-Economic Accounting (SEEA), and ocean accounting.

ESCAP's work on climate change and disaster related statistics spans normative development, international knowledge and experience sharing, as well as regional and in-country capacity building activities. As Co-Chairs of the Inter-Agency and Expert Group (IAEG) on Disaster-related Statistics, ESCAP and UNDRR together with IAEG members spearhead the development of a *common statistical framework for disaster-related statistics*. The framework, mandated by the United Nations Statistical Commission (UNSC), will take into consideration existing guidance and practices as well as regionally agreed-upon statistical frameworks such as the *Disaster-Related Statistics Framework (DRSF)* in its development. A draft common statistical framework is expected to be submitted for the discussion and decision by UNSC in 2026. Further, ESCAP is a contributing member of a *Task Force on the role of national statistical offices in achieving national climate objectives* led by UNECE. The Task Force is established to develop a guidance document (expected to be ready in 2024) on concrete ways national statistical offices can contribute to achieving national climate objectives, and to showcase what the statistical system already offers to support climate action.

ESCAP also provides platforms for global dialogue towards improving climate change and disaster related statistics. This includes, for instance, the *Global Webinars on Strengthening Climate Change and Disaster-Related Statistics: Needs, Priorities, and Action*, and the recently concluded *3rd Global Expert Forum for Producers and Users of Disaster-related Statistics* on 5-9 June 2023 hosted by ESCAP in Bangkok, Thailand.

The 3rd Global Expert Forum for Producers and Users of Disaster-related Statistics brought together representatives from the statistical and disaster communities, academia, private sector and non-governmental organizations for a week of events to exchange ideas and discuss how countries utilize disaster-related statistics to monitor disaster risk reduction commitments and support risk-informed development, as well as to share experiences in producing such statistics by identifying best practices and challenges.

Within the Asia-Pacific region, emphasis has been placed on regional collaboration and capacity strengthening to advance the production and use of climate change and disaster related statistics. The *Technical Working Group on Disaster-related Statistics in Asia and the Pacific (TWG-DRS)* in accordance with its five-year strategic plan is conducting a review of DRSF tables to examine country practices in disaster-related statistics production. Asia-Pacific experiences, challenges and potential solutions from the review will inform the development of a series of practical guidance documents that complement the DRSF. Additionally, ESCAP provides capacity building support to Asia-Pacific countries – at present, work is ongoing in *Bangladesh, Mongolia and Nepal* – to produce policy-oriented climate change and disaster related statistics.

Another area of regional focus is SEEA implementation and ocean accounting where ESCAP provides training and technical support to standardized and integrated statistics and accounts. The Statistical Institute for Asia and the Pacific (SIAP) – ESCAP's statistical training arm – delivers thematic training on SEEA, including the recently concluded *regional training workshop on SEEA Ecosystem Accounting* held in Manila, the Philippines. ESCAP's Statistics Division provides in-country technical assistance to produce SEEA and ocean accounts of high policy importance. Ongoing and planned technical assistance includes *forest accounts in Fiji, water and energy accounts in Samoa*, as well as *ocean accounts in the Maldives, Palau and Samoa*. ESCAP Co-Chairs Area D on Implementation and Statistical Capacity Building of the Committee on SEEA, Co-Chairs the *Global Ocean Accounts Partnership* and is a member of the *SEEA Working Group on Oceans* to advance the development of SEEA Ocean.

For further information and resources, please visit:

ESCAP Statistics Division:
https://www.unescap.org/our-work/statistics
ESCAP Statistical Institute for Asia and the Pacific (SIAP):
https://www.unsiap.or.jp/
Resources Platform on Environment Statistics:
https://stat-confluence.escap.un.org/display/RPOES
Technical Working Group on Disaster-related Statistics in Asia and the Pacific:
https://stat-confluence.escap.un.org/pages/viewpage.action?pageId=11141432
Disaster-Related Statistics Framework (DRSF):
https://stat-confluence.escap.un.org/display/TWG/DRSF%3A+Disaster-related+Statistics+Framework

SIAP and UNSD organize in-person regional workshop on SEEA and Climate Change
(Contributed by the Statistical Institute for Asia and the Pacific, ESCAP)

UNSD and SIAP, in collaboration with the Philippines Statistical Authority (PSA), organized an in-person regional workshop on SEEA Ecosystem Accounting in Manila, the Philippines. The workshop provided an opportunity for participants to increase their technical knowledge of SEEA EA, the recently adopted international statistical standard. Through exercises, country examples and discussions, participants learned more about ecosystem extent, condition, and services accounts. Discussions were also held around the policy relevance of ecosystem accounts and how SEEA EA can support measuring progress towards achieving the targets of national policies and international agreements including the Sustainable Development Goals, the Kunming-Montreal Global Biodiversity Framework and the Paris Agreement. More information can be found at https://seea.un.org/events/AP-regional-training-seea-ea-philippines

SEEA and Disaster Related Statistical Framework (DRSF) courses at SIAP in 2023
(Contributed by the Statistical Institute for Asia and the Pacific, ESCAP)

SIAP continues to support countries as they scale up the implementation of SEEA. In the first half of the year, over 900 participants took part in courses on climate change and water accounts. During the second half of 2023, SIAP will hold a facilitated course on SEEA Ecosystem Accounting (3rd quarter) and Disaster Related Statistical Framework (DRSF) course during the 4th quarter. Please visit the SIAP's e-learning platform (https://siap-elearning.org/) where you can find more information on the upcoming facilitated courses. Many self-paced courses on the SEEA and DRSF, including courses relevant to climate change, are also available on the SIAP e-learning platform; all SIAP courses are free and open to all.

DA14 Global Webinars on Strengthening Climate Change and Disaster-Related Statistics (see article above by UNEP)
(Contributed by Statistics Division, ESCAP)

As highlighted above, global webinars on *Strengthening Climate Change and Disaster-Related Statistics: Needs, Priorities, and Action* and *Geospatial and Other Data Sources for Environment Statistics: Assessing the Impact of the Economy* on the *Environment,* organized by UNEP, ESCAP and UNODC in collaboration with UNSD and the other UN Regional Commissions, were held during May 2023. These webinars aimed to enhance awareness and understanding of these topics, as well as support the sharing of experiences, challenges and good practices between countries.

Each webinar was held twice in different time zones, to support the participation of a global audience. The materials for the webinar on climate change and disaster-related statistics for countries from Asia and the Pacific, Europe and Western Asia are available here: https://www.unescap.org/events/2023/global-webinar-strengthening-climate-change-and-disaster-related-statistics-needs. The materials for the webinar on assessing the impact of the economy on the environment through the use of geospatial and other data for these regions are available here: https://wesr.unep.org/article/second-global-webinars-geospatial-and-other-data-sources-environment-statistics.

Associate Event on Assessing Asia-Pacific Challenges, Needs and Opportunities in Advancing Climate Change and Disaster-Related Statistics at the third Expert Forum for Producers and Users of Disaster-related Statistics
(Contributed by Statistics Division, ESCAP)

On 9 June 2023, ESCAP hosted an associate event on *Assessing Asia-Pacific challenges, needs and opportunities in advancing climate change and disaster-related statistics*. This event was organized as part of the 14th tranche of the United Nations Development Account (DA14) Project "*Resilient and agile National Statistical Systems to meet post-COVID-19 data needs to recover better*", which aims to help enhance the resilience and agility of the national statistical systems to respond to emerging economic, social and environmental data needs. Through a series of interactive sessions, this event sought to increase awareness of the different types of climate-induced disasters and the range of data required to prevent and reduce risk associated with such events, as well as support countries in Asia and the Pacific in prioritising developments to statistics relating to climate induced disasters, taking into account the needs of policy and decision makers. Materials from the event are available here: https://www.unescap.org/events/2023/third-expert-forum-producers-and-users-disaster-related-statistics

Partnership Innovation for Inclusive Ocean Data at the 2023 UN World Data Forum
(Contributed by Statistics Division, ESCAP)

ESCAP, in collaboration with the Global Ocean Accounts Partnership and other partners, organized a side event entitled "***Partnership Innovation for Inclusive Ocean Data***" at the UN World Data Forum held in Hangzhou, China from 24 April 2023 – 27 April 2023. The focus was on innovative partnerships centered around ocean data, with presentations highlighting successful collaborations from across the globe. These examples showcased the significant benefits derived from partnerships in advancing ocean data management. Moreover, the discussions delved into the challenges faced by these partnerships and the solutions employed to overcome them.
One notable case study exemplified a comprehensive whole-of-government approach to ocean data management. By integrating various government agencies, this approach demonstrated the advantages and hurdles involved in making informed decisions for effective ocean management.

The session also explored methods for fostering inter-agency cooperation in ocean data management. Furthermore, the session focused on enhancing capabilities in developing contexts for ocean science and data communities. Key themes were identified to harness collective expertise from these communities and facilitate knowledge sharing, capacity building, and collaborative projects. More information about the Global Ocean Accounts Partnership can be found here: https://www.oceanaccounts.org/

Ocean Accounts in Samoa
(Contributed by Statistics Division, ESCAP)

ESCAP in collaboration with the Government of Samoa, organized a training workshop on Ocean and Ecosystem accounts in Apia, Samoa on 15 June 2023. The focus of the workshop was to accelerate an Ocean Account pilot that started in the end of 2022 as part of the UN Joint SDG Fund project "Building Forward Better by Safeguarding Natural Capital and Ecosystem Services". The workshop gathered national and regional counterparts and provided guidance and training on the Ocean Accounting Framework and in particular ecosystem extent, condition, and services accounts. During the workshop discussions were also held around stakeholders and existing data sources. Moreover, preliminary results from the pilot mangrove extent account and previous experiences from compiling SEEA Water and Energy were shared. The workshop enhanced the understanding of and capability to use Ocean and SEEA accounting in Samoa as well as highlighted the importance of data sharing, coordination and planning for developing environmental and ocean related statistics.

Forestry Accounts in Fiji
(Contributed by Statistics Division, ESCAP)

On the 16th of June 2023 ESCAP, Fiji Bureau of Statistical (FBOS) and Fiji Ministry of Forestry held a first meeting to discuss the possibility of developing Forestry Accounts to understand the full benefit of the country's forests. Discussions were held on existing data sources and methodologies, some preliminary results, as well as possible ways forward. A thorough analysis will be conducted the coming months to see how Forestry Accounts can be developed and utilized in Fiji.

COUNTRY NEWS

Anguilla releases its first environment statistics compendium
(Contributed by Lori-Rae Alleyne-Franklin, Anguilla Statistics Department)

The Anguilla Statistics Department (ASD) is pleased to release its first issue of the Environmental Statistics Compendium 2015, which directly supports the mandate of the Department to collect, compile, analyse, abstract and publish statistical information relative to commercial, industrial, social, economic and general activities and conditions of the people who are the inhabitants of Anguilla.

There is an array of statistics and information that directly or indirectly guide our daily decision-making process in Anguillan society. Environmental statistics is one such set of information, as it makes the connection between human well-being and the use of natural resources. The measuring and monitoring of environmental data is the foundation to understanding our progress towards the 2030 Sustainable Development Goals (SDGs). However, there have been significant challenges especially for developing countries like Anguilla in coordinating resources to track, measure and monitor the use of environmental resources. The presentation of this inaugural Environmental Statistics Compendium signals progress in this core statistical sub-field, but also highlights the technical and operational challenges faced in collecting, compiling and synthesizing environmental data for Anguilla.

In 2008, the ASD drafted an action plan to produce the first Environmental Statistics Compendium for release in 2009, however, resources and change in focus significantly delayed this publication. It was envisioned that this publication would present quality and comprehensive environmental data that provided a complete statistical picture of the state of the nation for local, regional and international purposes. Stemming from the drive to monitor Goal 7 of the Millennium Development Goals (MDGs), which focused on moving developing countries towards environmental sustainability, the ASD progressively prioritized an assessment of the environmental situation in the country.

The specific objectives that guided this exercise were to:
- Collate and produce first compendium of environmental statistics by June 2009.
- Publish first compendium of environmental statistics by June 2009.
- Collect, collate and analyse data and information on Population and Households; Tourism; Environmental Health; Natural Disasters; Energy and Minerals; Land Use and Agriculture; Coastal and Marine Resources; Biodiversity; Forest; Air; Waste and Water as they relate to the environment.
- Collect, collate and analyse data and information that informs decisions on the management of environmental resources.
- Provide technical support, where needed, to the producers of environmental data to ensure that the production of high quality data is achieved and maintained.
- Monitor and assess the processes used to produce environmental data by producers and recommend improvements where necessary.
- Communicate to the producers, as well as users, the importance of having good, high quality and comprehensive environmental data.
- Organization by March 2009 procedures from the initial collection of data for the first compendium.

Though the primary goal of releasing the first Environmental Statistics Compendium was not achieved in 2009, what resulted from the work done during this time forms the foundation of the present publication. The major achievements of the 2008 - 2009 efforts saw renewed coordination of the Anguilla Interagency Working Environment Group AIWEG, and a contextual understanding of the data collection and reporting mechanisms that exist in Anguilla's statistical system in respect to environmental indicators. It was also realized that there was not necessarily a complete lack of environmental data but limitations in the country's capacities to adequately transform data within different ministries, departments and agencies on a consistent basis to satisfy the needs of the statistical system. It is by virtue of these understandings and achievements that the first Environmental Compendium which reports on data from 2011 - 2015 is now presented.

The 2011 - 2015 period is an important statistical marker as it provides data on the last period of the MDGs and therefore gives a sense of the issues affecting Anguilla's environment leading into the post-2015 development era. This

information signals the establishment and development of environment statistics in Anguilla. It also marks the start of an incremental process to produce a comprehensive set of environment statistics to support evidence-based policymaking in the country. The ASD therefore aims for the next Environmental Compendium to cover the first five years of the SDGs (2016 - 2020). With the assistance of our valued internal and external stakeholders, we will continue working towards the production of useful and responsive environmental statistics on a consistent basis to meet the demands of a wide array of users.

The publication illustrates the compilation of existing data, sourced from various stakeholders – the AIWEG. The release of this report also supports the efforts of both CARICOM and the United Nations Statistics Division (UNSD) in response to the need of strengthening environmental statistics as well as monitoring the SDGs. The publication can be found at the following link: http://statistics.gov.ai/StatisticsDept/Publication

Environment Statistics and Accounts in Burkina Faso
(Contributed by Placide Some, National Institute for Statistics and Demography, Burkina Faso)

The production of environment and climate change statistics really began in 2009 through the National Institute for Statistics and Demography/Statistics Sweden (INSD/SCB) support with the production the first compendium of environment statistics. This activity received technical and financial support from Statistics Sweden. Based on the statistical yearbook and other sources, a more synthetic and analytical scoreboard was produced in 2010. It is essentially intended for decision-makers. These first documents were produced according to the DPSIR model by the Ministry in charge of the environment with the technical support of the INSD. Currently, these documents are the only ones regularly produced and published without interruption.

Alongside these documents, the Ministry in charge of the environment has produced a Strategy for the Development of Environment Statistics which needs to be updated and some activities of which are implemented depending on the availability of funding.

In addition, the INSD has embarked on the production of greenhouse gas inventories, according to the five traditional sectors (Energy, Industrial Processes, Agriculture, LULUCF and Waste). To this end, two publications were produced in 2010 and 2014 on data, covering the period from 1999 to 2021. They were used to produce the DCN on Climate Change by the SP/CNDD, Climate Change focal point of the UNFCCC.

In 2021, with the support of UNEP and the GEF, the country produced its first biennial update report (PRBA) under the UNFCCC under the aegis of the SP/CNDD.

Since 2019, the INSD has been a member of the Technical Committee of the GGGI project, the main objectives of which are to set up an institutionally stable MRV system, for the production and regular dissemination of GHG inventories, NAMAs, and financing. The activities carried out made it possible to train several national executives on the GHGI, to stabilize the data sources for the GHGI, and to develop a platform for the dissemination of the results of the GHGI according to the four sectors (Energy, Industrial Processes, AFOLU, and Waste.

Currently, to respond to the increasingly important needs for data on the environment and climate change, the INSD has undertaken, in partnership with the Ministry in charge of the environment, the production of a compendium which would be a bank of unifying data for statistical indicators relating to the theme and responding to several existing frameworks. For this, it requested and obtained the financial support from COMESA through the provision of two experts in environment and climate change statistics for supporting the country in the four activities planned for this purpose: (i) Update the available data, (ii) Data collection, (iii) processing, production of indicators on environment and climate, and (iv) Validation and publication of the compendium data.

Advances on climate change statistics in Peru
(Contributed by the National Institute of Statistics and Informatics, Peru)

Climate Change is a serious problem that affects humanity. At the beginning of 2023, high temperatures, heavy rains

and overflows caused by tropical storm Yaku have been recorded in northern Peru, therefore it is important to carry out activities, such as producing the statistics on these climate anomalies, the information needs and how to generate it in a relevant, timely and reliable way, so that the authorities make the best decisions on environmental policies and, consequently, avoid further deterioration.

The National Institute of Statistics and Informatics (INEI) is the governing body of the National Statistical System (NSS) in Peru and its functions include:
- coordinating and/or executing censuses, statistics, and population;
- conducting surveys, and compiling indicators and indices;
- compiling national and regional accounts; and
- coordinating activities on statistical domains.

The production of environmental statistics is the responsibility of the Ministry of the Environment (MINAM), which formulates, plans, directs, executes, and evaluates the National Environmental Policy. It directs the National Environmental Impact Assessment and Management Systems and has, among other instruments, the National Environmental Information System (SINIA). The approval of the Climate Change Framework Law and its regulations play an important role in the comprehensive management of climate issues.

Since 1996, INEI has been preparing the Environmental Statistics Yearbook, an important tool in the coordination and integration of environment statistics produced under the National Statistical System and includes Climate Change statistics generated by the Ministry of the Environment.; Furthermore, since 2004, a Monthly Technical Report on Environment Statistics was produced, which provides warning signs for monitoring policies in this area.

In preparing the Environmental Yearbook, the Framework for the Development of Environmental Statistics (FDES) is used, with the aim of organizing and harmonizing the available statistics. Originally, the coordination of the Yearbook oversaw the Social Statistics department of INEI. In July 2012, the Yearbook and the Monthly Report of Environmental Statistics became part of the work of the National Account department, in charge of the implementation of the System Environmental and Economic Accounting (SEEA).

In this context, the Inter-Institutional Committee on Statistics and Environmental and Economic Accounts was created in 2016. It comprised 32 institutions linked to environmental issues, and its main functions were to prepare Environmental Accounts and develop an integrated information system of statistics and indicators, as well as environmental indicators related to the Sustainable Development Goals. This Committee, organized by sub-working groups, guided the development of Forest Accounts; Water Accounts, and Environmental Protection Expenditures.

In 2021, the United Nations Statistics Division (UNSD) carried out a global consultation in order to build an understanding of the status of the climate and environment statistics of the countries. An institutional questionnaire and the draft Global Set (with 134 indicators classified into: drivers, impacts, vulnerability, mitigation and adaptation) were sent to INEI. INEI and MINAM completed the questionnaire on topics within their competence and the results were sent to UNSD.

At the beginning of 2022, the INEI, at the 53rd session of the United Nations Statistical Commission, requested support to strengthen national technical capacities in the development of environmental and climate change statistics.; In this regard, UNSD in collaboration with the Economic Commission for Latin America and the Caribbean (ECLAC), INEI and the Ministry of the Environment, conducted the "National Workshop on Environmental and Climate Change Statistics ", from December 13 to 15, 2022 which was held in Lima. The event brought together 50 environmental specialists who participated in practical training on prioritized Climate Change issues and the application of a pilot test of the CISAT which was updated by the UNSD with 158 indicators. The workshop participants agreed on a set of recommendations to strengthen the production and use of environment and climate change statistics in the country.

The head of INEI proposed creating a subcommittee on Climate Change statistics within the Inter-institutional Committee on Statistics and Environmental and Economic Accounts for the implementation of the recommendations of the Workshop. Meetings were held with MINAM to establish the members of the Subcommittee as well as the actions to be carried out for the review and evaluation of the statistics and indicators of the Global Set to prepare a unique national set, according to the needs, concerns, priorities and individual resources of the country.

Another important activity to strengthen the technical capacities and expertise of INEI on the subject of climate change, is supported via the Capacity Development Program of the International Monetary Fund (IMF) and Swiss Cooperation. This activity will provide tools, resources and the technical capacity necessary to produce statistics on the environment and climate change that are also useful for financial and macroeconomic policies. INEI has previously completed a survey and coordinated with some institutions, to prepare a mission that will take place from 10 to 14 July 2023.

Serbia's experience with the survey on 'Protection against Water Damaging Effects in 2022' and the overall situation with environment and climate statistics
(Contributed by the Statistical Office of the Republic of Serbia)

In the area of environmental statistics in the Statistical Office of the Republic of Serbia (SORS), water statistics are of great importance. Official water statistics are very important for decision makers and subsequently for all other users. Constant activities on improvement and harmonization of methodology, cooperation and regular reporting to international organizations (Eurostat, OECD, UN, WHO, FAO, UNEP) enabled SORS to do calculation and publication of a significant number of indicators. Almost all global Sustainable Development Goal indicators for goal 6 for the Republic of Serbia are available in the UN database as well as in the SDG portal of SORS.

The Ministry of Environmental Protection is responsible for reporting under the United Nations Framework Convention on Climate Change (UNFCCC) and the Serbian Environmental Protection Agency for the Inventory of GHG emissions. The SORS has no direct responsibilities in the reporting process according to the UNFCCC. However, SORS as the official producer of statistics provides data from regular annual surveys of energy statistics with an energy balance, industry statistics, agriculture, transport, and water statistics for calculations of the GHG Inventory. SORS has excellent cooperation with the Ministry of Environmental Protection and the Serbian Environmental Protection Agency and these institutions demonstrated an excellent consultation process regarding the Global Set of Climate Change Statistics and Indicators.

The Statistical office of the Republic of Serbia has been conducting four surveys of water statistics on annual bases, in accordance with Eurostat/OECD methodology, which is coherent with that used in the UNSD/UNEP Questionnaire on Environment Statistics (water section). Besides that, for 2022, SORS also conducted a survey on the Protection against damaging water effects which is important in the context of adaptation to climate change for reducing the risk of the harmful effects of floods and taking adequate measures. Climate change leads to an increased frequency of extreme weather events. Floods are becoming more pronounced, and for successful risk reduction, it is important to have available data and take measures, especially at the river basin level. The obtained data from the Survey on the Protection against Water Damaging Effects helps data users to see the situation and circumstances under which damaging water effects are controlled and watercourses are managed. The data from the survey are classified into four topics: Flood protection and rivers management; Land drainage; Land erosion protection and torrent control; Consumption of fuels, lubricants and construction machinery. Reporting units for this survey are business entities whose activity accords to the Classification of Activities (in line with Statistical classification of economic activities in the European Community NACE Rev.2) which defines the following divisions: Civil engineering, Specialized construction activities, Services to buildings and landscape activities , as well as other legal entities, accredited by local self-government, dealing with water resources, protection against damaging water effects, construction and maintenance of waterworks structures and environment. Obtained indicators include area protected from floods, utilized agricultural area protected from floods and eroded land. These indicators, taken from this survey, are particularly important for adaptation and will contribute to define some of the tier 3 indicators in the Global Set. Climate, soil and water are increasingly considered as a

connected system, so all available information about the observed and expected changes in soil degradation, surface and underground water caused by climate change is needed for successful adaptation measures.

Environmental statistics within the SORS is young compared to other areas of statistics. Beyond water statistics, the statistics of waste, hazardous chemicals and environmental-economic accounts have been developed rapidly in the last ten years in order to meet reporting needs according to EU Regulations. Eurostat's support and assistance, both in the form of grants within the Instrument for Pre-accession Assistance (IPA) project and in terms of methodological support from experts, was extremely important for the achievement of all goals. As the last achieved results, SORS made calculation for Raw Material Equivalents (RME), which will enable Serbia to calculate an important indicator on material footprint within the ongoing Eurostat grant for the improvement of the environmental-economic accounts. The implemented environmental-economic accounts, especially Air Emissions accounts (AEA) and Physical energy flow accounts (PEFA), also indicators of sustainable development and energy statistics provide a good basis for starting activities related to climate change indicators that SORS will surely include in its programme as soon as possible.

Climate Change Statistics in Suriname
(Contributed by Anjali De Abreu-Kisoensingh, General Bureau of Statistics (GBS))

This year Suriname marked their 20th anniversary (2002-2022) of compiling environment statistics. For the 10th compendium[1], the FDES 2013, the CARICOM core set of indicators, the SDG and the Global Set of Climate Change Statistics and Indicators were used as the main frameworks.

GBS is a member of the Expert Group on Environment Statistics (EGES) and has since 2020 actively contributed to the UNSD Global Set of Climate Change Statistics and Indicators framework that was adopted by the Statistical Commission in March 2022. The Climate Change Statistics and Indicators Self-Assessment Tool (CISAT) and the Implementation Guidelines were used for checking the data availability and providing key points to the implementation of the Global Set. The results showed that GBS contained data for a majority of the list of 158 climate change statistics. Before the end of this year, GBS will publish their first Climate Change Statistics report both in Dutch and English, using the Global Set as the main framework.

Although Suriname is experiencing financial challenges since 2015, with limited funds available, it was still able to host an Environment Statistics workshop in August 2022, launch the 10th compendium in December 2022 and will launch the first Climate Change Statistics report with financial support of UNDP through the Global Climate Change Alliance (GCCA+ project).

The Environment Statistics compendium was an important tool for the coordination of the climate change statistics needed for the calculation of the Greenhouse Gas (GHG) estimates for Suriname's Third National Communication report that was launched in April 2022[2] and for the analysis of SDG 13 "Climate Action" in Suriname's first Voluntary National Review (VNR) report[3]. Another important contribution of the compendium is the use of the climate change statistics for the Monitoring, Reporting and Verification (MRV) tool for Suriname's Climate Change Knowledge database, also known as the "Dondru" database (means Thunder in Surinamese). With the MRV tool Suriname can assess and track national climate change indicators as well as implement mitigation actions in order to reach the national climate change goals[4].

The CARICOM Secretariat nominated GBS as a Center of Excellence with regard to environment statistics. With funding from CARICOM, GBS will provide technical assistance to a selected group of CARICOM member countries in order to help them with compiling environment and climate change statistics.

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[1] https://statistics-suriname.org/wp-content/uploads/2022/12/GBS_10th-Environment-Statpub_15dec2022-1.pdf
[2] https://unfccc.int/sites/default/files/resource/SURINAME%20NC3_2023_FINAL.pdf
[3] https://statistics-suriname.org/wp-content/uploads/2022/08/VNR-2022-Suriname-Report.pdf
[4] https://dondru.sr/mrv

Furthermore, GBS will continue to participate actively in the EGES meeting, publish environment and climate change statistics reports and provide technical assistance to stakeholders and countries, if needed.

Tanzania's Experience on Integration of Climate Change Questions into Population and Housing Census Questionnaires
(Contributed by Ruth Minja, Tanzania National Bureau of Statistics)

Introduction
Interaction between climate change and human development has attracted significant global attention. In Tanzania, like in many developing economies, climate change is also taking serious consideration in policy and development planning. For this reason, the mandate for reporting on issues regarding climate change in Tanzania has been vested under the Vice President's Office (VPO). The VPO is second in the line of command just below the Presidency in the Governance structure in Tanzania. Vesting climate change issues in the VPO ensures, such issues are accorded almost the highest political will and support in the functioning of the Government machinery.

The need to articulate climate change aspects in policy and development planning has, in consequence led to unprecedented demand of climate change data. In response to growing demand for data, the National Bureau of Statistics (NBS) has been championing efforts to enhance availability of climate change data in Tanzania, and also enhancing the use of statistical evidence in environmental policy formulation, particularly in decision making on issues regarding climate change.

Bolstering Production of Climate Change Data in National Statistical System
In addressing demand for climate change data in policy processes, the NBS has been taking deliberate efforts to enhance production of such data in the national statistical ecosystem. Some of such efforts have been in the form of, namely: - Establishing Environment Statistics Department at NBS to better coordinate compilation of environment and climate change statistics in the NSS; Adopting UN Framework for Development of Environment Statistics (FDES); and Environmental Statistics Self- Assessment Tool (ESSAT) in production of environment statistics; and Establishing National Technical Working Group (NTWG) for environment and climate change statistics. The NTWG draws its members from key agencies which are producers and/or users of climate change statistics. Another action to mainstream production of climate change data has been the Integration of climate change statistics in the National Statistics Development Strategy (NSDS).

Experience on Integration of Climate Change Questions into Population and Housing Census Questionnaires
The United Republic of Tanzania is making concerted efforts to enhance availability and access of climate change statistics to respond to an unprecedented demand for climate change data to facilitate reporting, policy formulation, monitoring and evaluation of development programmes. The Tanzania National Bureau of Statistics (NBS) participated in the development of the Global Set of Climate Change Statistics and Indicators and, in response to the Global Consultation of 2021, produced a thorough self-assessment which revealed that 91 of the 134 indicators of the draft Global Set were relevant and data availability is expected to improve over time.

One of the initiatives taken by the NBS is the harnessing of opportunities to fill data gaps via traditional statistical data sources to collect climate change information needed for national climate policies and international reporting to UNFCCC. Tanzania for the first-time managed to integrate climate change questions and more environment questions into the 2022 Population and Housing Census (PHC) which was held in August 2022. The Census includes three questionnaires namely: Main questionnaire; Buildings questionnaire; and Community questionnaire. Environmental and climate-related questions are included in all three of them (https://sensa.nbs.go.tz/).

Apart from the traditional environment questions in the Census questionnaire, which focus on sanitation, sources of drinking water and sources of energy for household use in cooking and lighting, the 2022 Tanzania's PHC questionnaire captured information related to methods used by households to dispose of waste, type of institutions responsible for collection of waste generated by households, whether households sort kitchen waste into categories such as plastic, glass, metal and electronic waste, and the main method that is used by households to dispose of e-Waste. In addition, information related to knowledge of climate change and perceptions of communities regarding the impacts of climate change were collected at the community level.

The results from the PHC will contribute to the data supply for the National Communication to UNFCCC by Tanzania. The data from the PHC would contribute to an updated report on climate change statistics, the first one (The National Climate Change Statistics Report, 2019) having been published in January 2020 (National_ Climate_Change_Report_2019.pdf (nbs.go.tz)). Since PHCs are carried out for the entire national population, they have an advantage of yielding comprehensive national-level status of particular environment phenomenon of interest. In a nutshell, of the 158 indicators of the Global Set, 33 indicators (20.9%), from all five areas, but mostly in vulnerability, can benefit from the Population and Housing Census either directly or indirectly. In addition, approximately 11 indicators of the Global Set related to education, public perception, awareness, adaptation activities, which are mostly at Tier 3 at present, would benefit tremendously from the inclusion of climate questions in the PHC.
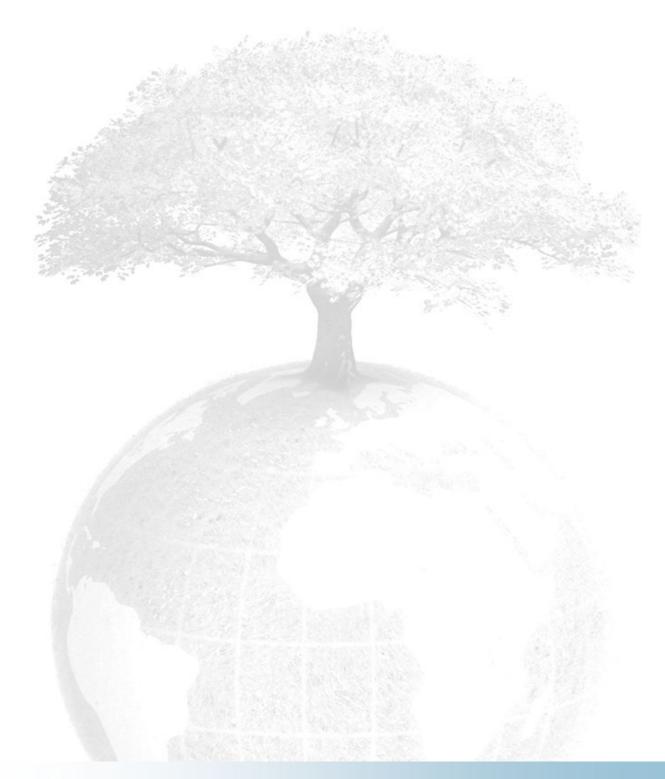
Besides the 2022 PHC, NBS as the national coordinator for official statistics in the country, compiles and submits data related to energy, agriculture, land use, forestry and waste to the Vice President's Office (National Focal Point to UNFCCC) to support preparations of reports and reporting to UNFCCC.

Conclusion

Incorporation questions on climate change in the PHC has been pivotal step in enhancing availability of data and information related to climate change in Tanzania, especially households' and community's behavioral response in adaptation and mitigation of climate change effects. Other countries in similar stage to Tanzania in statistical development can consider leveraging the PHCs to produce climate change data. Despite limitations in PHCs data, especially in terms of how much detailed information can be collected, climate change questions in the PHC have proved usefulness and relevance in many policy applications and decision making to combat effects of climate change in Tanzania. In this regard, mining climate change data from PHCs provides another interesting frontier to explore in the journey of statistical development of the developing countries.

FORTHCOMING EVENTS

➢ Tenth meeting of the Expert Group on Environment Statistics (EGES),
   October 2023

➢ 55th session of the United Nations Statistical Commission
   (in person, New York from 27 February to 1 March 2024)
   https://unstats.un.org/UNSDWebsite/statcom