



# envstats

## News and Notes

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

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## FOCUS: Implementation of the Global Set of Climate Change Statistics and Indicators

Following the 2022 adoption of the Global Set of Climate Change Statistics and Indicators at the 53<sup>rd</sup> Session of the Statistical Commission, UNSD has continued to collaborate with the United Nations Framework Convention on Climate Change (UNFCCC) to ensure the consistent and strengthened implementation of the Global Set in countries. This will assist member states' national statistical offices in collaboration with national climate policy authorities to be able, inter alia, to:

- develop national climate change statistical programmes;
- strengthen the capacity to monitor climate change impacts, adaptation and mitigation actions;
- increase involvement in climate change related data collection and submission of indicators to UNFCCC for supporting the implementation of the Paris Agreement; and
- produce and disseminate climate change statistics via dedicated reports, websites and other means.

To support countries, UNSD with the help of consultants developed **Implementation Guidelines** and the **Climate Change Statistics and Indicators Self-Assessment Tool** (CISAT), which were disseminated and discussed at length at the [9<sup>th</sup> meeting of the Expert Group on Environment Statistics](#) (25-28 October 2022). Experts provided valuable advice to assist towards the finalization of these implementation support materials and their use by countries. The CISAT was piloted in a number of countries from the Caribbean, African and South American regions.

The CISAT is essential since it will assist any country to complete an assessment of the needed and available resources as a first step towards developing a national programme on climate change statistics. It is recommended that NSOs undertake this first step in close collaboration with the national climate policy authority and other stakeholders. The key questions to be considered as part of the self-assessment enquire about the relevance, data availability and methodological soundness of each indicator/statistic included in the Global Set. The self-assessment structure was drafted as similar as possible to the FDES-ESSAT to enable continuity and ease of transfer of the outputs between the two tools.

The guidelines for the implementation of the Global Set aim to help countries improve the monitoring of climate change, its impacts and response actions by better informing the national climate policy authorities about the benefits of official statistics and by guiding the NSO to better engage in the area of climate change. The guidelines refer to the relevant frameworks, methods, guidelines, handbooks, etc. which will assist the closer engagement on both sides. The guidelines specify the key steps needed to set up national processes to produce climate change statistics in response to national policies while striving to improve the comparability of data internationally. This will also promote the links between statistics and policy-making, and thus contribute to better monitor the evolution of climate change, as well as the way countries progress toward its mitigation and adapt to its adverse effects.

The lessons from the piloting, feedback from experts and recommendations from the 9<sup>th</sup> EGES meeting were applied to revise both the CISAT and the Implementation Guidelines. The revision of the CISAT was discussed and agreed with PARIS21 to serve as self-assessment for both the CISAT and the Climate Change Data Ecosystem Assessment Framework (CCDE AF), the latter being developed by PARIS21 (see article by PARIS21 below).

The guidelines were thoroughly updated, including a stronger focus on the roles of NSO, national focal points to UNFCCC and other key stakeholders, and was therefore submitted for a second review from which, feedback was provided by: Australia, Costa Rica, Colombia, Statistics Sweden, Mexico, Finland, Lithuania, the Dominican Republic, Brazil, the United Kingdom and the Pacific Community (SPC). There was also an intensive consultation with the secretariat of UNFCCC to iron out any issues with GHG emissions and data for reporting obligations and for further inputs related to a better understanding of the Measurement Reporting and Verification (MRV) / Transparency processes. The experts were also invited to register for a second group discussion on the guidelines that took place on 8 December 2022 which was attended by about twenty experts. Following this discussion the final draft was prepared and will be made available soon.

These draft implementation tools were recently applied in a national mission and workshop to initiate the development of a national programme of climate change statistics and indicators in Peru (Lima, 12-16 December 2022) (see article below under UNSD news) and in a workshop on environment and climate change statistics for the Common Market for Eastern and Southern Africa (COMESA) (Nairobi, Kenya, 28 November to 1 December 2022) (see article by COMESA below).

The development of implementation support materials is being carried out in parallel with methodological development for the Tier 3 indicators in the Global Set of Climate Change Statistics and Indicators. The areas of adaptation and vulnerability contain a higher share of Tier 3 indicators which require novel methodological development, and also a higher share of statistics required to compile these indicators which source data from censuses and surveys. Therefore, national statistical offices (NSOs) have a potential to lead work in these areas due to their expertise in surveys and censuses and the amount of data required via these data collection instruments. UNSD is following up and supporting several initiatives, including the Pacific Community's development of a survey module on climate change and disasters for the Pacific Islands. The survey is designed to address climate change indicators and statistics of the Global Set of Climate Change Statistics and Indicators, the Framework for the Development of Environment Statistics, the Sendai Framework and the Sustainable Development Goals and aims to provide data at a disaggregated level (see article by the Pacific Community below).

UNSD is supporting the new ECE Task Force on the Role of National Statistical Offices in Achieving National Climate Objectives. The work of the Task Force is organized in four parallel groups to expedite the process and carried out mostly in a virtual manner. Key areas include reporting under the Paris Agreement, mitigation and adaptation policies and informing the broad public. The outputs of these groups will be compiled in a guidance document, illustrating how NSOs can contribute to achieving national climate objectives – identify concrete ways in which NSOs be involved and showcase what the statistical system already offers to support climate action (see article by ECE below).

UNSD has been collaborating with ongoing initiatives on methodological development of climate change indicators, including the Organisation for Economic Cooperation and Development (OECD) International Programme for Action on Climate which aims to support countries in their efforts to progress towards net zero and a more resilient economy by 2050.

While exploring the possibilities to systematically pursue updates and further methodological development, the topics of health and gender were prioritised, since both contain indicators/statistics at Tier 3 in the Global Set of Climate Change Statistics and Indicators. The UK ONS has undertaken a four-year project aiming to develop standards for official statistics on climate and health interactions. The project would contribute to reporting more comparable and reliable statistics internationally, with focus on the evidence and the impacts on health from climate change. The intention is to produce a series of metrics that would have clear unified definitions, in a way that was both similar and complementary to the Global Set. An online platform will be created and expected to be hosted by the UNSD Global Platform.

The work on gender will contribute to Statistical Commission Decision 51/115, b on adopting and integrating a gender perspective into all the agenda items of the Commission. UN Women was engaged to contribute to this area based on their experience on environment and gender indicators, many of which are expected to be informed via a Gender-Environment Survey, with a special module on climate change and disasters. A presentation on the Global Set and its relation to gender statistics was delivered at the 16<sup>th</sup> meeting of the Inter-Agency and Expert Group on Gender Statistics (IAEG-GS) held from 12-14 December 2022.

Other topics where the structure of the Global Set of Climate Change Statistics and Indicators has been deemed helpful to support further methodological development include disasters. As emphasised by the United Nations Office for Disaster Risk Reduction, the Global Set of Climate Change Statistics and Indicators can assist countries in identifying indicators and statistics that support monitoring of the Sendai Framework.

Moreover, in the area of adaptation indicators, UNSD was invited to contribute to the third workshop under the Glasgow–Sharm el-Sheikh work programme on the global goal on adaptation. Methodological advances as well as challenges pertaining to the international comparability of indicators in this area were discussed. The workshop summary (<https://unfccc.int/documents/621283>) included an Annex with examples of global, regional, national and local indicators needed to monitor progress towards the global goal on adaption in which reference to the Global Set of Climate Change Statistics and Indicators is provided.



## UNSD/UNEP Data Collection

The UNSD/UNEP Questionnaire 2022 on Environment Statistics was sent out in August 2022 to 169 countries and territories, excluding OECD and European Union members (for which comparable data are collected as part of the OECD/Eurostat Joint Questionnaire on the State of the Environment). The [Questionnaire](#) was sent to both National Statistical Offices and Ministries of Environment and asked for coordination within the country. To date, about 50 countries have responded to the Questionnaire. UNSD is validating the data and is contacting countries for further information as necessary. A reminder was sent in November 2022 to all countries that have not yet replied.

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).

UNSD heeds the message from stakeholders at both international and national level that there is strong preference for data produced by countries rather than by independent or third parties outside of the country. To this end, the Questionnaire, its content, and the modification of its content, continue to receive attention. After validation of all responses, the complete results from the 2022 round of data collection will be disseminated on the UNSD website.

Indicator tables compiled from the data from the last completed Questionnaire collection round, complemented by data from OECD and Eurostat, are available through the [UNSD Environmental Indicators](#) webpage and the [Country Snapshots](#) webpage. The final validated data and footnotes received from each respondent country will be uploaded to the [Country Files](#) webpage. UNSD appreciates countries' continuing support on the improvement of timely and reliable global environment statistics.

## Progress on SDG indicator 6.3.1, wastewater data and UNSD/UNEP Questionnaire on Environment Statistics

UNSD has continued to hold regular meetings with various stakeholders at international level who work on wastewater statistics. Namely, the Organisation for Economic Cooperation and Development (OECD), Eurostat, Food and Agriculture Organization of the United Nations (FAO), UN-HABITAT and the World Health Organization (WHO) meet on an almost monthly basis to exchange information. Where possible, collaboration in one another's capacity development activities is undertaken, as is participation at high level meetings such as the Expert Group on Environment Statistics (EGES).

Throughout 2022, and bearing in mind that the UNSD/UNEP Questionnaire on Environment Statistics set a deadline of 7 October for country responses, UNSD is continuing to endeavour to publish individual country data sets as soon as it is considered validated and finalised. This effort is made to help reduce time lag in publication of data (e.g. individual country data sets can, in some cases, be published within one month of UNSD receiving them; in other cases, the time lag may still be a few months). As has always been and continues to be the case, UNSD will publish tabulations of data sets for all member states providing data to it, and the Joint OECD/Eurostat Questionnaire on the State of the Environment, ex post the data collection (e.g. typically with a time lag of about two years or more).

With the reduced time lag in publication of data sets, those co-custodian to SDG indicator 6.3.1 (which pertains to proportion of wastewater safely treated) may increase use of country-owned data in their estimation and modelling techniques. In turn, this process is designed to encourage countries to submit their best data to the UNSD/UNEP

Questionnaire on Environment Statistics as early as possible, and to then see that data being used for compilation of SDG indicator 6.3.1.

Another benefit from these continued collaborative meetings was that Armenia and Italy could both be identified as suitable countries to present to the Expert Group on Environment Statistics (EGES) in October 2022. Both countries gave good examples of challenges in water and wastewater statistics (e.g. aggregating data from municipal treatment authorities to national level; measuring reused and desalinated water, etc.) which gives insight to other countries in attendance who may encounter the same or similar challenges.

The three organisations involved in these meetings who collect data at international level (Eurostat, OECD, UNSD) continue to closely collaborate concerning their 2022 data collection cycle. UNSD, as usual, shall disseminate all UN member states data together following the completion of the 2022 data collection cycle.

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

The final French Word version of the Framework for the Development of Environment Statistics (FDES 2013) that was translated by the African Development Bank (AfDB) has been made available on UNSD's website at <https://unstats.un.org/unsd/envstats/fdes.cshtml>

It should be noted that it has been submitted for copy preparation and proof reading at the United Nations and could be slightly modified once published.

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 is expected to be finalized and published soon. UNSD also underlined the remaining topics and issues related to the Tier 3 statistics in the FDES. Some of these remaining topics may need to be grouped in a separate methodology sheet as some contain very few statistics, e.g. on soil pollution, noise, ozone depleting substances, other substances, chemical substances with few Tier 3 statistics. Several topics in particular in Component 6 contain a rather large number of Tier 3 statistics and the needed methodology should be developed in conjunction with those included in the Global Set.

In addition, the draft of the methodology sheet on Geological and Geographical Information and Statistics was updated and the new version is expected to be published soon.

## 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](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](mailto:envstats@un.org)) where they may then be made available on UNSD's website.



## **National mission and workshop to initiate the development of a national programme of climate change statistics and indicators in Peru (Lima, 12-16 December 2022)**

UNSD in collaboration with the Economic Commission for Latin America and the Caribbean (ECLAC), the National Institute of Statistics and Information (INEI) and the Ministry of Environment (MINAM) of Peru, organized a five-day national mission including a three-day workshop to initiate the development of a national programme of climate change statistics and indicators in Peru. The mission is part of an RPTC activity proposal entitled ‘Support to countries to initiate the development of national programmes of climate change statistics and indicators. The main goal of the national workshop was to increase the technical capacity for climate change and environment statistics in the country, by bringing the stakeholders together to provide hands-on training on priority topics related to climate change. For this purpose, the Global Set of Climate Change Statistics and Indicators, recently adopted by the 53rd Session of the United Nations Statistical Commission and the recently drafted implementation support tools, were applied in the country.

The workshop was attended by about 40 participants from 24 national institutions (18 of which were engaged by INEI and MINAM last year, to contribute to the Global Consultation on the draft Global Set). The workshop established that Peru has a very strong basis for the strengthening of a National Statistics System covering comprehensively the data requirements for the Enhanced Transparency Framework (ETF) of the Paris Agreement and other national and international commitments related to climate and environment.

## **UNSD participates in the ECLAC DA12 project – National workshops on “Generating climate change and disasters indicators for policy decision-making”: Dominica, Grenada and Belize, and sub-regional workshops in Chile and Trinidad and Tobago organized by ECLAC [see article below by ECLAC]**

UNSD participated in three of the DA12 national workshops on Generating climate change and disasters indicators for policy decision-making for Dominica (19-21 July 2022), Grenada (17-19 October 2022 and Belize (9-11 November 2022). Participation was virtual for Dominica while for Grenada and Belize it was both virtual and in person. UNSD also participated virtually and in-person in two sub-regional events, “Strengthening environment, climate change and disaster information in the Caribbean” (23-24 August 2022), and “Addressing coordination and data sharing challenges for better environment, climate change and disaster indicators” (22-24 November 2022). These workshops were organized by ECLAC as part of the DA12 project entitled “Caribbean relevant climate change and disasters indicators for evidence-based sustainable development policies” managed by ECLAC, in close collaboration with the Caribbean Community Secretariat and UNSD.

At each of the national workshops, UNSD delivered a statement in the inaugural session and gave presentations on: the FDES and the Global Set of Climate Change and Indicators and its tools such as the Climate Change Statistics and Indicators Self-Assessment Tool (CISAT). These frameworks and tools were significantly referenced at the workshops. UNSD also served as resource persons and participated actively in discussions, many of which at the national level focused on the Division’s outputs in environment statistics, such as the FDES, the CISAT, and the Global Set of Climate Change Statistics and Indicators. At the subregional events UNSD also delivered statements in the inaugural sessions, made presentations and contributed to the discussions and recommendations to support countries on the way forward. It was cited that future initiatives will continue to build on past interventions undertaken by UNSD and sustained in the region.

## **UNSD participates in the Workshop on Environment and Climate Change Statistics for the African Development Fund Countries (hybrid, Nairobi, Kenya 28 November - 1 December 2022) [see article below by COMESA]**

The Common Market for Eastern and Southern Africa (COMESA) Secretariat organized a Workshop on Environment Statistics and Climate Change Statistics for 37 African Fund Countries, in collaboration with UNSD and the African Development Bank, that took place in Nairobi, Kenya, from 28 November to 1 December 2022. Several other international and inter-governmental organizations participated in the Workshop, including the United Nations

Framework Convention on Climate Change (UNFCCC). The workshop brought together stakeholders from National Statistical Offices and Ministries of Environment (including some national reporting authorities to UNFCCC) in order to strengthen the user-producer dialogue, collaboration and data exchange at the national level. Delivered in a hybrid manner, the workshop significantly referenced the implementation support material on environment and climate change statistics (such as the Framework for the Development of Environment Statistics (FDES 2013), the Environment Statistics Self-Assessment Tool (ESSAT), the Global Set of Climate Change Statistics and Indicators (Global Set), the Climate Change Indicators Self-Assessment Tools (CISAT) and the Implementation Guidelines developed by UNSD. A UNSD staff member participated in person, provided an opening statement and delivered several presentations, and another staff member of the Section participated virtually and delivered some presentations.

## **Nineteenth Session of the Joint Task Force on Environmental Statistics and Indicators, Geneva and virtual, 3-4 November 2022**

As is normal per the long-standing and close collaboration that the United Nations Economic Commission for Europe (UNECE) and UNSD share on environment statistics, a staff member of UNSD presented an update on Global Work in Environment and Climate Change Statistics. The presentation included a focus on the adoption of the Global Set of Climate Change Statistics and Indicators by the United Nations Statistical Commission, the subsequent application of implementation materials, and what this may mean for countries. UNSD stressed the value of countries' contributions to the advancement and improvement of the work, for example, via their participation in the Global Consultation on Climate Change Statistics and Indicators, and their presence at fora such as the Expert Group on Environment Statistics. Questions from countries demonstrated work already undertaken by NSO and stakeholders to assess availability of climate change statistics via application of Self-Assessment Tools made available by UNSD. Further questions related to regular data collection and how best to apply classifications to SDG indicators reported via the UNSD/UNEP Questionnaire on Environment Statistics.

UNSD's participation at such a task force helps to continue communications with the UNECE regional commission and a number of member states on a variety of topics which can help inform the direction of UNSD's work programme on methodological research (e.g. prioritisation of work related to the global set of climate change statistics and indicators, and also on data collection (e.g. whereby countries may ask questions and inform on efforts related to the UNSD/UNEP Questionnaire on Environment Statistics).

Reference to the work of the Joint Task Force is available at: <https://unece.org/statistics/events/nineteenth-session-joint-task-force-environmental-statistics-and-indicators>



# INTERNATIONAL NEWS

## Consultation on draft 2023 estimates for SDG Indicator 6.3.1 (safely treated wastewater, domestic fraction)

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

The World Health Organization (WHO) in its role as an SDG custodian agency is consulting government authorities on the proportion of domestic wastewater safely treated, which is a component of Sustainable Development Goal (SDG) indicator 6.3.1. WHO has produced draft estimates for domestic wastewater generation and treatment using available officially reported data, including from the UNSD/UNEP Environment Statistics questionnaire on water. The draft estimates have been shared with national SDG focal points and other stakeholders as part of a consultation which started on 30 November 2022 and runs through 31 January 2023. Following the consultation, final estimates will be available on the global SDG indicator database in March 2023, and WHO will partner with UN-Habitat (the custodian for total and industrial wastewater components of SDG Indicator 6.3.1) to publish a global report on wastewater treatment in 2024. For inquiries about the consultation contact Rick Johnston at WHO ([johnstonr@who.int](mailto:johnstonr@who.int)).

## Advocacy and awareness raising actions to improve wastewater management and statistics collection in the context of the SDG indicator 6.3.1

(Contributed by Graham Alabaster and Florian Thevenon, UN-Habitat)

The United Nations Human Settlements Programme (UN-Habitat), the World Health Organization (WHO) and the United Nations Statistics Division (UNSD) are the co-custodian agencies for SDG indicator 6.3.1 which is monitoring the proportion of total, industrial, and domestic wastewater flows safely treated. Total and industrial wastewater statistics generated by economic activities and households, as well as the wastewater flows treated, are extracted from the UNSD/United Nations Environment Programme (UNEP) Questionnaire on Environment Statistics, and the Organisation for Economic Co-Operation and Development (OECD)/Eurostat Joint Questionnaire on Inland Waters. It is however important to note that the baseline record published in the global progress report on the SDG indicator 6.3.1<sup>1</sup>, showed that in 2015, there was no official information available about the proportion of wastewater treated for 80% of the world population, and for 95% of the world population regarding the proportion of industrial wastewater treated.

In order to build advocacy momentum around the SDG 6.3.1, and on the noteworthy benefits of improving wastewater management and monitoring for a range of essential development sectors (e.g., water, environment, health, economy), as well as for decision-making in investment and policy development, UN-Habitat co-organized in 2020-2022 five series of regional webinars in Latin America, Caribbean, Africa, Arab Region and Asia. These series of webinars involved more than 100 countries and were followed by a high-level webinar presenting the outcomes and key recommendations to national policy makers, as well as by a data collection exercise to identify technical focal points to support national wastewater monitoring and SDG 6.3.1 reporting. These webinars were co-organised with regional water associations, research institutions and international organisations, and opened to water utilities, line ministries, water operators and regulators, academia, civil society, private sector, and international development partners. The presentations and the discussions focused on three main themes which are wastewater data monitoring and management, governance and policies, and financing and investment. Five podcast interviews with the regional implementing partners were also registered to raise public awareness on improving wastewater management and monitoring in Africa, Asia, Caribbean, Latin America, and the Arab Region<sup>2</sup>.

In 2023, UN-Habitat will continue to collaborate with the aforementioned regional partners to raise policy advocacy and public awareness on wastewater data monitoring and reporting in dedicated international fora and webinars (e.g., 7th International Faecal Sludge Management Conference in Abidjan in February 2023). Together with the other UN agencies part of the UN-Water Integrated Monitoring Initiative for SDG 6 (IMI-SDG6), UN-Habitat will also engage intensive

<sup>1</sup> UN Habitat and WHO, 2021. Progress on Wastewater Treatment: Global status and acceleration needs for SDG indicator 6.3.1. <https://www.unwater.org/publications/progress-on-wastewater-treatment-631-2021-update/>

<sup>2</sup> Podcast interviews available: on [callin](#), [spotify](#), or [apple](#)

technical support, strategic advice and capacity development to a selection of countries facing challenges to report on the SDG 6 indicators. UN-Habitat will also support IMI-SDG 6 outreach activities taking place around the UN 2023 Water Conference – formally known as the 2023 Conference for the Midterm Comprehensive Review of Implementation of the UN Decade for Action on Water and Sanitation (2018-2028) – that will take place at UN Headquarters in New York, 22-24 March 2023. Some countries snapshots will be for instance developed to draw attention to successful actions, for inspiration and learning, while also serving as examples of how SDG 6 data can help accelerate progress in sustainable and equitable water resources management. Finally, UN-Habitat will update the SDG indicator 6.3.1 database in March 2023, and partner with WHO (the custodian for domestic wastewater component of SDG Indicator 6.3.1) to publish an updated global report on the SDG indicator 6.3.1 in 2024.

## Reassessment of greenhouse gas emission reduction estimates of GCF Portfolio

(Contributed by Aiko Ward, Green Climate Fund)

Green Climate Fund (GCF) continues to strengthen its ability to measure climate change mitigation impacts across the portfolio. A reassessment of ex-ante (target) greenhouse gas (GHG) emission reduction estimates for 63 out of 99 mitigation and cross-cutting GCF projects currently under implementation (64 per cent of the target portfolio under implementation) was carried out with a view to strengthening GCF's confidence in its mitigation impact data and ultimately improving the climate impact measurement capacity among GCF stakeholders. The reassessment was undertaken in accordance with a set of internationally accepted standards, methodologies, and emissions factors in GHG accounting, as well as the GCF operational modalities. While the reassessment resulted in the reduction of ex-ante estimate of the GCF mitigation impact by 16 per cent on average, the exercise increased GCF's confidence in its impact data and brought awareness among the GCF stakeholders on the importance of using rigorous measurement methodologies. Following the completion of the reassessment, the GCF discussed the findings with its Accredited Entities for the respective projects to revise the estimated targets and are currently working with them to apply the corresponding measurement methodologies to track, update, and report the "actual" ex-post results achieved against the revised targets. To help track the reductions achieved over the lifetime of the projects, the GCF has also developed an annual emission reduction monitoring model based on the reassessment exercise.

## Mobilizing climate change data ecosystems for better climate action

(Contributed by Cathy Krüger, Élisabeth Narminio and Karina Miroslava Cazarez, PARIS21)

PARIS21 is developing a Climate Change Data Ecosystem Assessment Framework (CCDE AF) that will help countries put in place an action plan to mobilize resources and develop their capacities to enable policymakers, government agencies, climate experts, the private sector, and other actors to work across data silos and use data to address climate adaptation measures effectively.

Being complementary with other partners' initiatives, such as the Global Set and the CISAT developed by UNSD, is at the core of the CCDE AF. The AF can for instance help countries prioritize their indicators from the range proposed within the Global Set, mobilize resources for the development of relevant statistics, and identify potential areas for engagement with critical stakeholders for climate change data beyond the traditional national statistical systems, such as civil society organizations, academia, and the private sector.

The CCDE AF is premised on a three-step process. The first step serves to identify countries' national CCDE, which involves prioritizing their national climate change problems, the data required to address them and the key stakeholders to mobilize resources for such data. In the second step, the AF guides countries in identifying what capacity development actions are required to unlock the use of climate change data for decision-making. The third step consists in elaborating a climate change data action plan with concrete goals, activities and costs that countries can use to advocate for resources for climate change data within the government and with their development partners.

PARIS21, in collaboration with the Center of Open Data Enterprise and Open Data Watch, will launch a pilot of the CCDE AF in Africa and in the Caribbean early 2023.



## Recent PARIS21 activities on Climate Change Data:

- Listen to the most recent [PARIS21 podcast](#) on the hidden linkages between gender data, women's land rights and climate change resilience.
- PARIS21 brought together experts and decision-makers in a virtual discussion at the [COP27 – OECD Virtual Pavilion](#) to explore how a proliferation of climate change data can contribute to just and equitable climate action.
- PARIS21 presented its CCDE AF and how countries can link it to their National Strategy for the Development of Statistics (NSDS) at the [COMESA Workshop](#) on Environment and Climate Change Statistics for the African Development Fund Countries.
- During the [PARIS21 Fall Meetings](#) (9-10 November 2022), PARIS21 and its partners identified better communication and data literacy as critical challenges preventing the production, dissemination and use of data for climate action.
- Learn about the key challenges and emerging practices in the Caribbean region to activate climate change data discussed at the [ECLAC-PARIS21 regional seminar](#) on strengthening environment, climate change and disaster information in the Caribbean.

## Global advances of E-waste Statistics

(Contributed by Kees Balde, Vanessa Forti, and Giulia Iattoni, UNITAR-SCYCLE Programme)

The United Nations Institute for Training and Research (UNITAR)-SCYCLE Programme is a leading Programme on statistics and policy making of e-waste and other ubiquitous goods. UNITAR-SCYCLE is a co-custodian for SDG indicators related to e-waste. The SCYCLE programme was previously under the United Nations University, and now fully migrated entirely to UNITAR starting from 01/01/2022.

### Global Transboundary Flows Monitor for e-waste.

The Sustainable Cycles (SCYCLE) Programme has published in June 2022 a novel statistical report: The Global Transboundary Flows Monitor. Quantifying these shipments is difficult as the statistical codes for this are lacking. But with novel methods, this study estimates that 5.1 Mt (just below 10 percent of the total amount of global e-waste, 53.6 Mt) crossed country borders in 2019. To better understand the implication of transboundary movement, this study categorizes transboundary movement of e-waste into *controlled* and *uncontrolled* movements and also considers both the receiving and sending regions. Of the 5.1 Mt:

- **1.8 Mt of the transboundary movement is shipped in a controlled manner.** This refers to movement of material that is reported as hazardous waste (according to the Basel Convention's control regime) or to material that is shipped as separated printed circuit boards (which are fractions of high value) to a few specialised end-processors.
- **3.3 Mt of the transboundary movement is shipped in an uncontrolled manner,** as used-EEE or e-waste.2) Most e-waste movements are currently not controlled, which may favour illegal movements and dumping of e-waste in countries with no e-waste management infrastructure.

For more information read: [www.ewastemonitor.info](http://www.ewastemonitor.info)

### Regional e-waste monitor for the Western Balkans

Within the framework of the Global E-Waste Statistics Partnership, SCYCLE is partnering with the International Telecommunication Union (ITU) - Office for Europe and the United Nations Environment Programme (UNEP) - Europe Office and Vienna Programme Office to realize a Regional E-Waste Monitor for the Western Balkans. Beneficiary countries of the project are Albania, Bosnia and Herzegovina, North Macedonia, Montenegro and Serbia.

The project aims to train on how to make and collect e-waste statistics, assess e-waste quantities, as well as the e-waste management practices and the e-waste legislation landscape in the Western Balkans to produce the first Regional E-waste Monitor Report in the region.

The project kicked-off in March this year, and in May SCYCLE organized a training workshop on e-waste statistics attended by more than 20 government representatives from the focus countries. The project will continue until June 2023, and the publication of a final Monitor with a comprehensive overview on e-waste statistics, legislation and management in the region is foreseen for 2023 with a launch event and awareness webinars.

### **Novel e-waste household and business statistics in East Africa**

In September 2022, UNITAR and ITU supported the collection of household and business statistics in East Africa and further supported the countries in producing data on e-waste statistics. Pilot surveys were conducted in Kenya and Burundi using the CATI approach (telephone interviews) with the aim to obtain information on the possession rates of EEE in households and businesses in both countries as well as the discarding behaviour for e-waste.

Preliminary results show that 98% of the surveyed households in Kenya own at least one mobile phone, 85% own at least one Flat Display Panel TV, 62% owns at least one laptop, 58% at least a small household equipment and 51% at least one fridge. As for other items, the possession rate drops below 50%. Of the listed items, on average 12% are not functional at the time of the survey. Most of the products that have been discarded by the consumer in the past 24 months have been sold to a refurbished or repair shop, this is the case for items such as mobile phones, Flat Display Panel TVs, and laptops, while other items such as personal care equipment have been mostly disposed of in the mixed municipal solid waste bin.

UNITAR, in partnership with the International Communication Union (ITU) and the Eastern Africa Community Organization (EACO) will publish a report in the first trimester of 2023 with the results of the surveys and the statistical work.

### **Advisory Services through Training, National Forums and National Publications in Kazakhstan, Uzbekistan, Tajikistan and Kyrgyzstan**

On 13 and 14 October 2022, UNITAR-SCYCLE trained stakeholders from Kazakhstan, Uzbekistan, Tajikistan and Kyrgyzstan on a novel tool developed to combine official statistics, projections and collection targets from 2020 to 2050. The aim of the tool is to support decision making with the latest statistics and impacts on e-waste. Through this tool, users can calculate the environmental impact of various hazardous substances and costs of unmanaged waste, and the costs to source separate e-waste and expected volumes and economic revenues from compliantly managed e-waste.

On 22 and 23 November 2022, UNITAR-SCYCLE conducted a national forum in Astana Kazakhstan, where the current statistics, projections, challenges and opportunities of e-waste management in Kazakhstan were discussed. For this project, the e-waste statistics framework applied for the SDG monitoring has been methodologically extended to make projections into the future. In 2020, Kazakhstan produced 180 kt of e-waste, of which 8.8% is separately collected and recycled. This is projected to grow to 420 kt of e-waste in 2050. The national forum was attended by stakeholders ranging from ministry of ecology, national statistics, producers, recyclers, NGOs and academia. The planned publication date for the National Monitor is the summer of 2023.

A similar trajectory is planned for 2023 in Uzbekistan and Tajikistan and in 2024 for Kyrgyzstan.

For more information read: [www.ewastemonitor.info](http://www.ewastemonitor.info)

### **Plastic waste Statistics**

UNITAR-SCYCLE, in commission for the UNEP Basel Rotterdam Stockholm Secretariat, has developed a methodology to develop a first level inventory for making plastic waste generation inventory at national level. The method is accompanied with an Excel toolkit that allows countries to download trade and domestic production statistics and convert those with average weights, lifespans and material compositions into plastic waste generation datasets. The tool has been piloted in Suriname and Sri Lanka.



## Launch of EW-MFA Online Training Materials on Domestic Extraction

(Contributed by Sophia Leticia Groll, UNEP)

Economy-Wide Material Flow Accounts (EW-MFA) and indicators based thereon provide a very comprehensive overview of natural resource extraction, trade in natural resources, waste disposal and emissions. They enable the tracking of environmental pressures resulting from the use of natural resources and illustrate the environmental impact of a country's economy. EW-MFAs are used to calculate SDG indicators 8.4.1/12.2.1 *Material footprint, material footprint per capita, and material footprint per GDP* and 8.4.2/12.2.2 *Domestic material consumption, domestic material consumption per capita, and domestic material consumption per GDP*.

As the first part of a three-phase UNEP project, online training materials on domestic extraction accounts were developed in cooperation with the Commonwealth Scientific and Industrial Research Organisation (CSIRO) and launched on the [UNEP eLearning](#) platform. All material categories of domestic extraction are included, namely biomass, metal ores, non-metallic minerals and fossil fuels. The training materials will support national statistical offices in their efforts to compile data on EW-MFA and can be used together with the [Global Manual on Economy-Wide Material Flow Accounting](#) and a user-friendly data compiler with tools for calculating some material categories (upcoming at the beginning of 2023).

The second phase of the project will focus on traded material, the output side of material flow accounts, and the material balance, net additions to stock and the recycling and use of secondary materials in the manufacturing and construction sectors. In the third phase, UNEP will organize trainings on EW-MFAs for all regions.

## Measuring Progress series, 3rd edition, March 2023

(Contributed by Therese El Gemayel, UNEP)

UNEP's Measuring Progress series focuses on analysing the environmental dimension of the SDGs by presenting the progress made in terms of data availability and their environmental improvement or degradation on the one hand, and the exploration of statistical analyses that identify the interlinkages, at indicator level, among the three dimensions of the SDGs on the other hand. UNEP is currently developing the 3rd edition that 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 is expected to be launched in March 2023.

## E-learning course on Environmental SDG Indicators, Russian version

(Contributed by Therese El Gemayel, UNEP)

UNEP has launched the Russian version of the UNEP-UNSIAP-UNITAR e-learning course on Environmental SDG Indicators. This e-learning course is a self-paced course with 10 individual modules developed by the United Nations Environment Programme (UNEP), the United Nations Statistical Institute for Asia and the Pacific (UNSIAP), and the United Nations Institute for Training and Research (UNITAR). This course provides an overview of the importance of monitoring the environmental dimension of development, the linkage with existing statistical frameworks (FDES and SEEA), and how to use environment statistics in decision making. The modules also provide a brief overview of all 25 SDG indicators under UNEP custodianship. The course link is [here](#).

## DA14 project on Statistics and Data

(Contributed by Ekaterina Poleshchuk, UNEP)

In September 2022, the five UN Regional Commissions (UNECA, UNECE, UNECLAC, UNESCAP, UNESCWA), the UN Environment Programme (UNEP), the UN Office on Drugs and Crime (UNODC), and the UN Statistics Division of the Department for Economic and Social Affairs (UNSD) launched 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 Project implementation period is until October 2025.

The DA14 project on Statistics and Data is structured around two levels of interventions. The first level addresses cross-cutting issues and deals with the infrastructure underlying the statistical production. The second level consists of four workstreams and is targeting a restricted number of statistical domains, two of which cover environmental issues: (a) climate change and disaster-related statistics (facilitated by UNESCAP and UNEP); (b) impact of the economy on the environment (facilitated by UNODC and UNEP).

The Project covers 50 beneficiary countries and will be implemented through global, regional and national events, including webinars and workshops, as well as the development of guidelines, training materials and e-learning courses. In the coming months, the international implementing entities will contact these countries with detailed information about the planning activities.

## FAO News

### Update to the Cropland Nutrient Budget Domain in FAOSTAT

(Contributed by Francesco Tubiello and Nathan Wanner, Environmental Statistics Team of the Statistics Division of the Food and Agriculture Organization of the United Nations, and Achim Dobermann from the International Fertilizer Association)

Cropland nutrient budgets are an important indicator of nutrient flows that can signal an excess or insufficiency on cropland. The three main nutrients for plant growth are nitrogen (N), phosphorous (P), and potassium (K). Excess nutrient loads on cropland represent environmental risks such as nitrate leaching, erosion or runoff into water bodies, ammonia volatilization (NH<sub>3</sub>) or emissions of nitrous oxide and NO<sub>x</sub>. Nutrient deficits indicate soil nutrient mining, which may also result in lower crop yield. While the data published in 2021 covered only nitrogen (to which much priority has been given as both a stimulant and pollutant in nutrient management programmes), new to the 2022 update is that all three main nutrients are included in the analysis. Differences in trends and levels for phosphorous and potassium give indications where alternative pathways for more balanced nutrient management may be required. The 2022 update also includes a number of methodological improvements and it provides estimates of both nutrient budgets and nutrient use efficiencies on cropland.

The 2022 update of the cropland nutrient budget is a joint effort of the Food and Agriculture Organization of the United Nations (FAO) with the International Fertilizer Association (IFA) by Nathan Wanner and Francesco Tubiello, with contributions from Griffiths Obli-Layrea (FAO Statistics Division), Achim Dobermann, Armelle Gruere, Patrick Heffer (International Fertilizer Association), Xin Zhang, Srishti Vishwakarma, Kevin Jackson (University of Maryland), Cameron Ludemann, Martin van Ittersum (Wageningen University & Research), Rasmus Einarsson (Swedish University of Agricultural Sciences), Luis Lassaletta (CEIGRAM-Universidad Politécnica de Madrid), Pauline Chivenge (African Plant Nutrition Institute) and Patricio Grassini (University of Nebraska). Olivier Lavagne d'Ortigue and Chiara Gnetti provided editorial support, as well as data support together with Amanda Gordon and staff of the Environmental Statistics Team. A link to the analytical brief accompanying the dissemination of the domain can be found [here](#).

At the global level, the cropland nutrient surplus in 2020 was 85 million tonnes (Mt) of N, 7 Mt of P, and 12 Mt of K distributed over cropland at rates of 54 kg N per ha (compared to a desired maximum N surplus of 80 kg per ha per year [EU Nitrogen Expert Panel, 2015]), 4 kg P per ha, and 7 kg K per ha. There was a substantial, 3.4-fold increase in the total cropland nitrogen budget, compared with the 1960s, while the phosphorous cropland budget remained nearly neutral since the 1990s and the potassium budget declined by 36 percent over the same period. The differences in the trends for



the three nutrient budgets may be the result of a more focused attention on nitrogen as the limiting nutrient for crop production compared to phosphorous and potassium. The increases for nitrogen can mainly be attributed to a growth in the use of synthetic fertilizers, which multiplied by 5.7 from 18 Mt in the 1960s to 102 Mt in the 2010s, and a substantially lower increase in crop removal (with a 3.1-fold increase from 31 Mt in the 1960s to 97 Mt in the 2010s). For phosphorous, a 3.0-fold increase in synthetic fertilizers use offset a similar increase in crop removal (from 6 Mt to 19 Mt). The reduction in the potassium cropland budget is due to a larger increase in crop removal (from 14 Mt to 43 Mt) compared to that of synthetic fertilizer (from 9 Mt to 29 Mt).

Further improvements to the domain will include an extension of the nutrient budget to all agricultural land as well as further work on the underlying data required for estimating nutrient inputs and outputs, particularly elements such as fertilizer use by crops, manure, and crop nutrient removal.

## REGIONAL NEWS

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

(Contributed by Ngawo Banda, Anand Sookun, Gerard Barutwanayo)

The Common Market for Eastern and Southern Africa (COMESA), under the Statistical Capacity Building Program Phase 5 (SCBV), has embarked on Environment & Climate Change Statistics Statistical Capacity Building Phase 5 budget line under the Statistics Unit.

There is widespread recognition and consensus that the National Statistical Systems (NSSs) in Africa are weak and under-resourced. This makes it difficult for Regional Member Countries (RMCs) to undertake censuses and surveys as and when due, as required by international best practice for optimal evidence-based policy dialogue. These weak National Statistical Offices (NSOs), and particularly those in Transitional States, have further deteriorated since the onset of COVID-19. The pandemic has not only disrupted field operations for data collection in previously planned surveys and censuses that have had to be postponed, but it has also reduced allocated budgets as scarce financial resources were shifted to saving lives, protecting livelihoods and reviving economies.

The SCB-5 project is crucial for maintaining the momentum built on past gains whilst shielding against possible reversal of the gains made across the continent in recent years. Typical of any phenomenon that has an impact on economic and social systems, monitoring those impacts requires a responsive statistical system.

Data on environment and climate change are few and face major challenges such as:

- Their cross-cutting nature and hence diverse expertise which official statistical systems lack
- Need for adoption of the statistical frameworks such as the FDES for environment statistics and the Global Set of Climate Change Statistics and Indicators
- Need for harmonization

Given that environment and climate change statistics fall under the ambit of environment statistics, they have been included in the United Nations' Framework for the Development of Environment Statistics (FDES 2013) and the recent Global Set of Climate Change Indicators and Statistics. The implementation of the FDES and the Global Set will help countries address the increasing demand for integrated information in support of integrated policies in the follow-up to Rio+20 and the post-2015 development agenda through the strengthening of environment statistics.

Among the activities under this project, were national assessments undertaken with 37 countries funded by the African Development Fund (ADF). The assessment was based on the Environment Statistics Self-Assessment Tool (ESSAT) and

the Climate Change Statistics and Indicators Self-Assessment Tool (CISAT). A simplified version of these tools was designed as an online questionnaire that was administered to countries. Additionally, 34 out of 37 ADF Eligible member states responded to the Global Consultation on the draft Global Set of Climate Change Statistics and Indicators.

COMESA, in partnership with the African Development Bank (AfDB) and the United Nations Statistics Division (UNSD) delivered a training Workshop on Environment and Climate Change Statistics in Nairobi, Kenya from 28 November to 1 December 2022. At the workshop 35 out of 37 ADF countries participated and overall there were more than 60 participants from the ADF countries. Others in attendance were training institutions, others Regional Economic institutions and United Nations Organizations, including the United Nations Framework Convention on Climate Change (UNFCCC) that has closely collaborated with UNSD on the development of the Global Set. The hybrid meeting also had virtual presentations from Suriname, the Caribbean Community (CARICOM) Secretariat and Mauritius who shared their experiences with participants.

In brief the workshop focused on the following:

- ✓ Reviewed the status and needs of environment and climate change statistics
- ✓ Introduced and demonstrated to participants the use of FDES 2013 and its tools
- ✓ Reviewed the Global Set of Climate Change Statistics and Indicators
- ✓ Introduced and demonstrated to participants the use of ESSAT and the CISAT
- ✓ Demonstrated the current work on climate change statistics
- ✓ Demonstrated data collection and processing of environment and climate change statistics

The key outputs expected following the regional workshop are:

- ✓ Strengthening national institutions that compile environmental and climate change statistics
- ✓ Enhanced coordination of national institutions involved in the collection of environment and climate change statistics
- ✓ Household and industry survey data collection instruments augmented with environment and climate change status and impact related issues
- ✓ Publication of national statistical reports on environment and climate change statistics.

A series of recommendations were formulated from the regional workshop and the next steps are to provide technical assistance to countries via field missions and virtual meetings to enable countries compile environment and climate change statistics in line with the FDES and the Global Set.

In view of the recommendations that were made, COMESA is currently conducting virtual meetings with ADF member states to deliberate on the recommendations and chart the way forward on a case-by-case basis.

## **Statistical Capacity Building for the CARICOM Region - the CARICOM/Government of Italy Project**

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

The compilation of environment, climate change and disaster statistics has been enhanced in the Caribbean Community (CARICOM) through a collaborative project with the Republic of Italy, which was implemented during the period 2019-2022. The project, “Capacity Building in Statistics”, was funded by the Italian Agency for Development Cooperation (AICS) and implemented by experts from the Italian National Institute of Statistics (Istat). Its main objective was to provide the Regional Statistics Programme of the CARICOM Secretariat and the Statistical Offices of the Member States with a range of complete and reliable data in three fields - Agriculture, Gender and Environment.

The area of Environment Statistics was identified for support, given the vulnerabilities of CARICOM countries as Small Island Developing States (SIDS) that require special consideration relative to achieving sustainable development. The SIDS Accelerated Modalities of Action – the SAMOA Pathway document arising out of the Third International Conference on SIDS in Samoa during September 2014 identified concrete and urgent actions to address the vulnerabilities faced by SIDS. For most SIDS, the main development challenge is vulnerability to external shocks. The



paramount development goal of these countries therefore is resilience-building, a multi-faceted set of objectives ranging from climate adaptation to economic diversification. SIDS urgently need access to external financial and/or technical support in their resilience-building efforts.

Under this Capacity Building in Statistics project, technical support and capacity-building activities over the past few years took the form of Environment and Climate Change statistics in-country technical assessments in selected countries and online training workshops. The online training workshops included a session on the Environment Sustainable Development Goals Framework during November 2020 and another on the Frameworks for climate change and extreme events in December 2021. Most of the participants at the training workshops were from the National Statistics Offices and a few from the Ministry of Environment. In-country technical assessments were conducted for Jamaica and Suriname in 2019 to analyse the set of Environmental indicators produced in the countries, to identify needs and gaps to be filled and systematize the data collection approaches.

At the conclusion of this project, a final face-to-face-workshop was convened from 8-11 November to discuss project results under each component of the project and provide recommendations on the way forward. The project strongly highlighted the need for a multidisciplinary approach, as there are many dimensions involved in this area of statistics, which would require different expertise. National Statistics Offices (NSOs) were called on to strengthen their role in areas such as regular production and dissemination of statistical information in the area of climate change to meet information needs and bridge data gaps as their contribution in achieving climate goals were pivotal to Sustainable Development.

Another recommendation of the project was that cooperation, coordination with all data producers in the country and the statistical community needed to be enhanced. Sharing of experiences and increasing statistical information in these areas are crucial for improving statistical systems. Further, it was recognised that although frameworks and statistical references and methodologies were being used, there was need for more improvements. Consequently, it would be beneficial in this regard to promote the use of the Global Set of Climate Change Statistics and Indicators. CARICOM NSOs were further called on to strengthen statistical production and dissemination and increase knowledge and awareness at all levels on how to respond to the consequences of climate change, and to develop actions for Sustainable Development. It is also necessary that Governments increase resources for statistics and for NSOs to consider the opportunities presented by new data sources such as administrative records and big data and further the production of additional data and indicators.

In conclusion, the achievements and recommendation of the Capacity Building in Statistics project has encouraged the Regional Statistics programme to continue to strengthen capacity in NSOs of member countries in collaboration with regional and international partners. The positive feedback at the final workshop has also stimulated interest in a second phase in order to continue the work providing high quality, reliable, comparable data needed for policy analysis and decisions in the CARICOM region.

## **ECLAC Activities in Latin America and the Caribbean**

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

### **National workshops: “Generating environment, climate change and disasters indicators for policy decision-making in several countries of the Caribbean”**

The ECLAC’s Statistics Division and the Subregional Office for the Caribbean, in support of the United Nations Development Account Tranche 12 programme are implementing the project entitled “Caribbean relevant climate change and disasters indicators for evidence-based sustainable development policies”, in close collaboration with UNSD, the Caribbean Community (CARICOM) Secretariat and the Organization of Eastern Caribbean States (OECS) Commission. As part of this project's activities, ECLAC has organized five national workshops for Caribbean countries to better understand how data are used, how they could lead to better data sharing practices, which indicators are missing information and how to improve data processing using technological resources, among others. The availability of environmental and climate change data is the main gap in decision making in the countries of the region.

ECLAC contributes to strengthening of eight Caribbean countries by promoting the generation and use of internationally comparable, accurate and timely statistical information in the region to develop new environment, climate change and disaster indicators using national data to enhance implementation of the SDGs, the SAMOA Pathway, the Paris Agreement, the Escazú Agreement, the Sendai Framework, and the Revised St. George's Declaration (SGD 2040).

Saint Kitts and Nevis	Saint Vincent and The Grenadines	Dominica
22-24 June 2022	27-29 June 2022	19-21 July 2022
 <p>National face-to-face Workshop: "Generating climate change and disasters indicators for policy decision-making in Saint Kitts and Nevis" (22-24 June)</p>	 <p>National workshop: Generating climate change and disasters indicators for policy decision-making (27-29 June 2022)</p>	 <p>National workshop: "Generating climate change and disasters indicators for policy decision-making in Dominica" (19-21 July 2022)</p>

Grenada	Belize
17-19 October 2022	9-11 November 2022
 <p>National workshop: "Generating environment, climate change and disasters indicators for use in policy decisionmaking in Grenada" (17-19 October 2022)</p>	 <p>"Generating climate change and disaster indicators for policy decisionmaking in Belize" 9-11 November 2022</p>

### Subregional event: "Strengthening environment, climate change and disaster information in the Caribbean" (23-24 August 2022)



The ECLAC's Statistics Division and the Subregional Office for the Caribbean and The Partnership in Statistics for Development in the 21st Century (PARIS21) synergized efforts, in support of the program for tranche 12 of the United Nations Development Account and a close collaboration with UNSD, the Caribbean Community (CARICOM) Secretariat and the Organisation of Eastern Caribbean States (OECS) Commission, to prepare this event for the exchange of ideas and experiences among all Caribbean countries on the state of the art in the environment, climate change, and disaster information at the national and regional levels, using internationally accepted tools and frameworks.

Among its strategic result areas, PARIS21 aims to develop a systemic approach to climate change data, as described in the document "Envisioning a climate change data ecosystem - A path to coordinated climate action", to improve climate change data for more effective climate information and action. In this vein, PARIS21 hopes to build on these efforts and advance the development of a CCDE assessment framework that will help countries achieve a strategy for integrating coherent climate change data into policy action.

With the confirmed participation (face to face and virtual) of representatives from fourteen Caribbean countries, the



objectives of the meeting were to:

- Understand better the critical climate change data capacity development areas that enable a coherent and sustained functioning of a climate change data ecosystem in low-resource and low-capacity contexts
- Identify emerging good practices in the Caribbean region and promote knowledge sharing
- Showcase new innovative tools developed by ECLAC to promote sustained technical capacity building for climate change and environment indicators

For more information:

<https://comunidades.cepal.org/estadisticas-ambientales/en/groups/event/strengthening-environment-climate-change-and-disaster-information-caribbean>

<https://www.cepal.org/en/events/subregional-seminar-strengthening-environment-climate-change-and-disaster-information>

<https://paris21.org/news-center/events/un-eclac-paris21-strengthening-environment-climate-change-and-disaster>

### Launch of the e-learning course on Disaster-Related Statistics Framework (31 Oct 2022)



The ECLAC's Statistics Division and the Subregional Office in collaboration with the UN Economic and Social Commission for Asia and the Pacific (ESCAP), and the UN Statistical Institute for Asia and The Pacific (SIAP), in support of the program for tranche 12 of the United Nations Development Account, have organized this event to provide new tools to support Latin American and Caribbean countries in building and improving capacities to address the growing needs for disaster and disaster risk reduction statistics that promote policy coherence in the implementation of the SDGs, the SAMOA

Pathway, the Paris Agreement, and the Sendai Framework.

This event was attended by participants from twenty-three Latin America and the Caribbean countries and ten countries out of that region, included four non-American countries.

With events such as this one, ECLAC seeks to:

- Increase capacity of Latin American and the Caribbean States and particularly Small Island Developing States (SIDS) to produce selected, relevant, and prioritized indicators and metrics to monitor disasters.
- Improve information to strengthen resilience to disasters in the Latin American and Caribbean region, systematizing technical documentation and tools to be used for in-country implementation.
- Improve the capacity of the countries to formulate, implement and monitor national disaster risk reduction policies using evidence-based data from statistics and indicators within the frameworks of the SDGs and the SIDS agenda, and simultaneously increase their ability to review and follow up on their implementation of these global mandates.



<https://comunidades.cepal.org/estadisticas-ambientales/en/groups/news/launch-e-learning-course-disaster-related-statistics-framework-drsf>

<https://www.cepal.org/en/events/launch-learning-course-disaster-related-statistics-framework-drsf>

Link to get in the course in three languages (open to all, no cost and self-paced):

English: <https://siap-elearning.org/course/view.php?id=123>

French: <https://siap-elearning.org/course/view.php?id=173>



Spanish: <https://siap-elearning.org/course/view.php?id=172>

### Regional workshop: “Addressing coordination and data sharing challenges for better environment, climate change and disaster indicators” (22-24 November 2022)



The ECLAC’s Statistics Division and the Subregional Office for the Caribbean, in support of the program for tranche 12 of the United Nations Development Account, in collaboration with UNSD, the Caribbean Community (CARICOM) Secretariat, and the Organisation of Eastern Caribbean States (OECS) Commission. This regional workshop was organized to facilitate exchange of ideas and enhance learning among project beneficiary and non-beneficiary countries. With the participation of nine countries, it brought together stakeholders from National Statistical Offices, Ministries of Environment, and emergency and disaster management authorities of the members and associate

members of the Caribbean Development and Cooperation Committee (CDCC) to share experiences and knowledge and promote peer learning on strengthening the statistical areas of environment, climate change and disasters in their organizations and promoting the use of data in decision making.

The main results of the workshop were to:

- Enrich conversation among the participants to discuss specific challenges on coordination and data sharing processes of environment, climate change and disaster statistics and share knowledge, experiences, and success stories in addressing these challenges
- Show advances of ECLAC’s regional resilience platform and receive feedback from the participants
- Identify the most pressing national needs in the areas of environment, climate change and disaster data that could be addressed by ECLAC toward the ending phase of the DA12 project

<https://comunidades.cepal.org/estadisticas-ambientales/en/groups/event/regional-workshop-addressing-coordination-and-data-sharing-challenges-better>

<https://www.cepal.org/en/events/addressing-coordination-and-data-sharing-challenges-better-environment-climate-change-and>

### ECLAC Regular Data Collection on Environment Statistics: CEPALSTAT, SDG Gateway and Statistical Yearbook 2022

ECLAC’s environment statistics team continues to compile and validate environment statistics, climate change and disasters 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, in particular exports of renewable and non-renewable natural resources, and share of primary exports in total exports.

<https://statistics.cepal.org/portal/cepalstat/>

<https://agenda2030lac.org/es>

### Planned activities:

- Taller para la generación de indicadores de ocurrencia, impacto y resiliencia para la gestión integral de riesgos de desastres para la Ciudad de México, 19-21 December 2022.
- Regional Workshop, May 2023.



## Past events and ongoing activities

### **19th meeting of the Joint Task Force on Environmental Statistics and Indicators (Geneva, hybrid meeting, 3-4 November 2022)**

The annual meeting of the UNECE Joint Task Force on Environmental Statistics and Indicators (JTFESI) was held as a hybrid meeting in Geneva from 3-4 November 2022.

JTFESI was established jointly by the United Nations Economic Commission for Europe (UNECE) Committee on Environmental Policy and the Conference of European Statisticians to support countries of Eastern and South-Eastern Europe, the Caucasus and Central Asia to produce, share and use environmental information following international standards and guidelines, including the Framework for the Development of Environment Statistics (FDES) and the System of Environmental-Economic Accounting (SEEA). The aim of the work is to strengthen environmental reporting and make environmental statistics available and comparable throughout the pan-European region in the long term.

This annual meeting was attended by 67 environmental experts and statisticians from 26 countries and 7 international organizations.

Amongst other issues the JTFESI discussed a proposed conversion into a standing body after 2023 with a broadened mandate and scope and geographical coverage, named the “Joint Working Group on Environmental Statistics and Indicators”. This new Joint Working Group would serve as a useful platform for experts from national statistical offices and ministries of environment for all UNECE member States, and additional member States of the Conference of European Statisticians.

Progress in the review of the “[UNECE Guidelines for the Application of Environmental Indicators](#)” was discussed. JTFESI started this review procedure in 2019 with the aim to support countries in their efforts to better inform global policies with environment statistics and indicators, link them with statistical frameworks (such as FDES) and increase the user-friendliness of the metadata. The UNECE Guidelines now follow the structure of the FDES, and members of the JTFESI agreed to complete this work in the course of 2023.

The meeting also included a session in which data needs, statistics and indicators to manage environment-related human health issues were discussed. Presentations were given by WHO Europe, UNEP and UNDRR.

Furthermore, countries presented progress made in producing and sharing environmental information, and informed about capacity development needs, including Georgia, North Macedonia, Republic of Moldova, Serbia, Tajikistan and Ukraine.

All presentations and background documents of the meeting can be found at <https://unece.org/info/Statistics/events/367607>.

### **10th UNECE Expert Forum for Producers and Users of Climate Change-related Statistics (29-30 September 2022)**

The 10th UNECE Expert Forum for Producers and Users of Climate Change-Related Statistics took place on 29-30 September 2022 in Geneva, Switzerland as a hybrid meeting. 125 participants from 38 countries and 18 international organization participated in the meeting. 26 speakers contributed presentations or papers.

The Expert Forum was organized by the UNECE Steering Group on Climate Change-Related Statistics, chaired by Statistics Netherlands. In preparation for the Expert Forum, the Steering Group sent out a questionnaire “Climate Change

Related-Statistics in Practice 2022” and invited all countries and organizations to share their recent achievements and plans. The results are summarized in a report: [Climate Change-Related Statistics in Practice 2022](#).

The 2022 Expert Forum:

- Facilitated sharing of knowledge and experience on developing new climate change-related statistics and improving the usefulness of the existing data
- Discussed the progress of the new UNECE Task Force on the role of national statistical offices in achieving national climate objectives
- Shared developments regarding statistics and indicators related to climate change adaptation, vulnerability and resilience
- Explored innovative approaches to improving climate change-related statistics by using new data sources, increasing timeliness and frequency, and linking climate change with socioeconomic development

The meeting report, submitted papers, case studies and presentations can be found on the meeting webpage: <https://unece.org/statistics/events/EFCCRS2022>.

Based on the discussions, the Expert Forum agreed on the following further action:

- Climate Change-Related Statistics in Practice questionnaire to be conducted annually and its results are reported to the future Expert Fora
- The Steering Group to review the CES indicator on green areas in cities and consider whether a recommended methodology could be agreed
- More case studies of measuring climate change adaptation to be collected, ideally at least one from each country using the [template](#)
- The Steering Group to organize a focused webinar to share knowledge about the use of administrative microdata for climate change-related statistics among interested countries

**The 2023 Expert Forum for Producers and Users of Climate Change-Related statistics is planned to take place on 28-29 August 2023 in Geneva as an in-person meeting.** Countries or organizations interested in any of the above activities can contact the UNECE secretariat ([cwiek@un.org](mailto:cwiek@un.org)).

### **Task Force on the Role of NSOs in Achieving National Climate Objectives**

In February 2022, a new [Task Force on the Role of NSOs in Achieving National Climate Objectives](#) was established under the framework of the Conference of European Statisticians.

The Task Force is developing guidance on the role of national statistical offices in achieving national climate objectives by analysing concrete ways in which NSOs can contribute and showcase what the statistical system already offers to support climate action.

The Task Force is focusing on the role of NSOs in:

- Reporting under the Paris Agreement (A)
- Meeting information needs of national policymaking in terms of climate adaptation (B) and mitigation (C)
- Informing the broad public about climate-related issues (D)

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. Any country or organization interested in the work of the Task Force can contact the UNECE secretariat ([cwiek@un.org](mailto:cwiek@un.org)).

### **Upcoming Events**

#### **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) will be organised as an in-person event in Geneva (Switzerland) from 13-15 March 2023 with English – Russian



interpretation.

Members of the Organising Committee are from the National Statistical Offices of Australia, Canada (co-chair), Estonia, Finland (co-chair), Germany, the Netherlands, Sweden, and the United States. Eurostat, UNEP and UNSD are represented in the Organising Committee in addition to OECD and UNECE.

The planned substantive sessions are the following:

- **Towards circular economy measurement:** This session will provide an update of the work of the Conference of European Statisticians' (CES) Task Force on Measuring Circular Economy and related work at the OECD. Countries will be invited to present national examples on measuring circular economy with SEEA, including material footprint measures.
- **Implementing SEEA Ecosystem Accounting (SEEA EA):** Countries will be invited to present their national experiences on how information produced with SEEA EA support informing one or more policies related to the triple planetary crisis (climate change, pollution, biodiversity loss).
- **Forest accounts:** This topic hasn't been addressed in earlier seminars. It provides countries and international organisations with a platform to share experiences in producing forest accounts and using them to inform policies.
- **Water accounts and related indicators:** This session will address national experiences in turning water statistics into water accounts and informing related policies.
- **Environmental taxes and subsidies, including harmful subsidies:** Countries will be invited to share case studies on environmental taxes and subsidies measurements.
- **Integration of accounts for analytical purposes:** This session seeks examples where development of multiple SEEA accounts creates opportunities to establish links between databases and data sources towards a system of accounts that can be compiled, verified, and combined into efficient production of indicators for monitoring environmental-economic policies.
- **Organisational and institutional arrangements for SEEA implementation:** Exchanges of experiences with official implementation of SEEA after 10 years since the Central Framework was adopted as a statistical standard. The session will discuss strategic planning, building mechanisms, compilation and dissemination of accounts as well as mechanisms for institutionalising the SEEA.

The event will also feature experience-sharing via poster presentation to allow more participants of the seminar to present their work on SEEA in a more informal setting.

Participants who are interested to give presentations to any of the sessions or would like to submit a proposal for the poster session are invited to contact Daniel Clarke ([daniel.clarke@oecd.org](mailto:daniel.clarke@oecd.org)) or Michael Nagy ([michael.nagy@un.org](mailto:michael.nagy@un.org)) by 7 January 2023 at the latest.

Participants should register at <https://indico.un.org/event/1002063/> by 28 February 2023.

Documents for the seminar will be available on the Seminar's webpage <https://unece.org/info/Statistics/events/373223>

## 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 23 May 2022, including the full [monitoring report on progress towards the SDGs in the EU context - edition 2022](#), [the brochure with key findings](#) as well as the [digital publication 'SDGs & me'](#). The 2022 report includes a special chapter about Covid and another one about spillovers and footprints.

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](#). Eurostat also maintains the European Commission monitoring framework for the circular economy in this [dedicated website](#).

The Eurostat waste statistics data are available [here](#). The results of the 2022 data collection on waste statistics according to Regulation (EC) 2150/2002 are published (new data for 2020) and there are online articles [here](#) and [here](#). The results of the 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. The online article on [waste packaging](#) were published in October and those on [electrical and electronic equipment](#) in November. The article on [batteries](#) is due for update next spring.

The results of the 2021 data collection on inland waters, including regional information, are published [here](#). There is enhanced methodological coordination with OECD, FAO and UNSD to better serve the information needs of SDG 6 – Ensure availability and sustainable management of water and sanitation for all. The results of forestry statistics are available [in this article](#). 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](#) for the reference year 2020 are published. An overview of data published on forestry and forests by Eurostat can be accessed on this [link](#).

### SEEA environmental accounts

An overview of SEEA environmental accounts is available [here](#). Eurostat runs several data collections on air emissions, including greenhouse gases and pollutants (explained [here](#)), material flow accounts (explained [here](#)), environmental taxes (explained [here](#)), environmental sector (explained [here](#)), expenditure on environmental protection (explained [here](#)) and energy flows (explained [here](#)). All these data collections are annual and mandatory for EU Member States. Eurostat also publishes quarterly estimates of greenhouse gases 4 ½ months after the reference quarter. Eurostat publishes all those data results in the [Eurostat online database](#), as well as articles (see [Statistics Explained pages](#)) and other material (see [dedicated section on environmental statistics](#)). Eurostat also publishes [air emission footprints](#) and two datasets with material footprints ([aggregate and detailed](#)). Eurostat [proposes three more European environmental accounts on forests, ecosystems and environmental subsidies](#). This proposal is being discussed in the European Parliament and the Council.

Eurostat co-ordinates an experimental project on an integrated system of national capital and ecosystem series accounting (INCA) in collaboration with other EU partners. The final report of the project is available [here](#) and data results are available [here](#). Several other methodological reports are available in the [methodology section under 'Ecosystem accounts'](#).

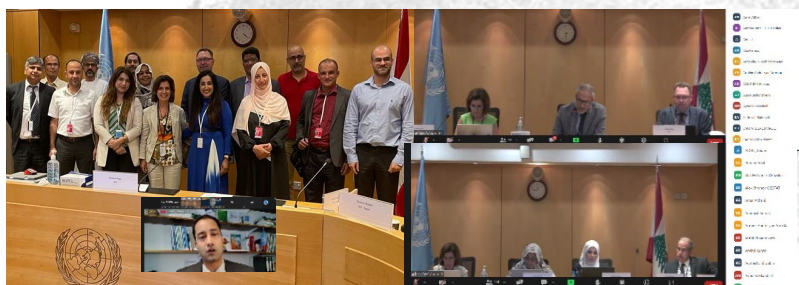


Eurostat facilitated training courses on environmental statistics and SEEA for European compilers on the following subjects: physical environmental accounts, water statistics and accounts, monetary environmental accounts, indicator systems (SDGs etc.), and ecosystem accounting. Material from past courses is available [here](#). Courses scheduled for 2023 are: waste statistics (April 2023), physical environmental accounts (June), monetary environmental accounts (June), water statistics (June). Full catalogue of courses available [here](#).

## ESCWA News

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

### The [Second Expert Forum for Producers and Users of Disaster-related Statistics](#) (Hybrid) 6-8 September 2022 from 12:00 to 4:00 PM Beirut Time, ESCWA-UN House, Beirut, Lebanon



The second Expert Forum was hosted by UNESCWA in Beirut 2022 in collaboration with UNDRR, UNESCAP, UNECE and UNSD, and in line with ESCWA's commitment to support its member countries to respond to various disasters and their social and economic impacts, and to strengthen cooperation with the league of Arab States (LAS) and provide support to the Arab Coordination Mechanism on DRR as reported in

its fourth meeting and the First Arab Ministerial Meeting for DRR both held in May 2022. ESCWA also coordinates with the regional and sub-regional partners, UNDRR regional office in Cairo, GCC-Stat, the Arab Institute for Training and Research in Statistics (AITRS), the Organization of Islamic Countries (OIC), and donors such as the Islamic Development Bank (ISDB).

The importance of setting up mechanisms to ensure collaboration and coordination of work on disaster-related statistics across disciplines and organisations has been recognized on national and international level, including the United Nations Statistical Commission (UNSC), the Conference of European Statisticians (CES) and the ESCAP Committee on Statistics (CST). Therefore, UNSD, the regional commissions (UNECE, ESCAP, ECLAC and ESCWA), and the UNDRR office in Bonn worked together, and with other partners and countries, through the Inter-Agency and Expert Group (IAEG) on Disaster-related Statistics (IAEG), set up as per the decision (50/116) of the UN Statistical Commission at its 50th Session in 2019 and co-chaired by ESCAP and UNDRR. The main objective is to advance a common statistical framework on disaster-related statistics involving a network across the expert communities to sustain cooperation, coordination and fundraising for enhancing statistics related to hazardous events and disasters and to regularly organize expert fora for this end.

The IAEG base its work on existing guidance, including those developed by groups operating in different regions of the World: the Disaster-related Statistics Framework (DRSF) approved by the CST in 2018, approved Recommendations on the Role of Official Statistics in Measuring Hazardous Events and Disasters by the CES in 2019.

The main objective of this Forum was to continue strengthen and expand the global community of practice of producers and users of disaster-related statistics. The first Expert Forum convened in 2021 was an important milestone to connect different expert communities including policy makers, analysts, disaster-risk managers, researchers, and statisticians using or producing disaster-related information. More specifically the Forum contributed to the following:

- a) Offering a convening platform for users and producers to exchange knowledge and learn lessons from the last two years on pandemics, climate change, or conflict on how statistics and data were used for better informing and managing disasters
- b) Informing about current and future normative work of international expert groups;
- c) Following-up on important areas of work identified in the first forum and identify and recommend new areas for the IAEG research agenda.

The Forum included the following sessions:

- Session 1. Advancing Official Statistics for Informing Disaster Risk Reduction
- Session 2. Lessons Learned on Using Data to Save Lives During Pandemics
- Session 3. Integrating climate and disaster risk data to build resilience
- Session 4. Downscaling data at local level for Disaster Risk Reduction and Resilience Strategies
- Session 5. Arab Region and Data Gaps in Disaster-Conflict Nexus
- Session 6: Innovations in Data Tools for Risk Information and Communication
- Session 7. Way forward for Informing disaster-risk reduction policy with official statistics

Participation included experts from NSOs, disaster-risk management authorities and other related governmental agencies, international organisations, academia, NGOs and the private sector, on technology tools contributing to data and information on disaster risk reduction. Key recommendations from the Forum were agreed upon and are available at: <https://www.unescwa.org/events/producers-and-users-disaster-related-statistics>

## **Advancing climate change monitoring in the Pacific Small Island Developing States through household surveys**

(Contributed by Alison Culpin, Pacific Community)

No country is immune to the impacts of climate change, much less the Pacific Small Island Developing States (PSIDS). The Intergovernmental Panel on Climate Change's most recent report indicates that climate change will likely increase the frequency and intensity of natural disasters in the Pacific region as well as the population exposed to coastal inundation. The Pacific's high vulnerability could result in widespread food and water insecurity, increased health risks, lack of access to social services and even forced displacements.

Little information exists, however, on the impact of climate change and the adaptation strategies at the household level, thus compromising the effectiveness of national adaptation plans (NAPs), disaster risk reduction plans and other mitigation and adaptation-related targets and commitments, which depend on the availability of high-quality data. To fill this data gap, the [Pacific Community's Statistics for Development Division](#) (SDD) is developing a Climate Change and Natural Disasters Survey Module to facilitate the collection and use of comparable climate change and natural disaster data in population censuses and household surveys.

To understand 'what should be measured in a survey module on Climate Change and Natural Disasters in the PSIDS?' the current and projected characteristics of climate change and natural disasters in Pacific Islands and their impacts on households and communities were researched. This included a literature review of current and past Population and Housing Censuses, the Census of Agriculture 2020, the LSMS (Living Standards Measurement Study) and LSMS-ISA (Living Standards Measurement Study - Integrated Surveys on Agriculture programmes) surveys, the National Socio-economic Surveys in Forestry, the 50x2030 Initiative, specific surveys on climate change implemented by Bangladesh and Nepal, and many other relevant statistical operations collecting climate change-related data.

A proposed Core Module and the outline for a broader Sourcebook, including an extended set of questions by type of socio-economic impact, were presented to the 10<sup>th</sup> Pacific Statistics Methods Board (PSMB) [meeting](#) in October 2022. The next steps will be to field-test the proposed methodology in an upcoming national household survey, finalise the Sourcebook and deliver a regional training session on its use.

For PSIDS, developing the Climate Change and Natural Disasters survey module comes at a critical time. The information produced will be relevant to monitoring indicators proposed by the UNFCCC (United Nations Framework Convention on Climate Change) strategic objective on "Improving the living conditions of affected populations by climate change, including poverty, income, and access to drinking water measurements", as well as supporting monitoring of both SDG Target 1.5 – "Build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters" and SDG13 on Climate Action. In addition, the survey module is intended to support countries in reporting some of the statistics and indicators proposed in the [Framework for the Development of Environment Statistics \(FDES 2013\)](#) and the [Global Set of Climate Change Statistics and Indicators](#).



The Pacific Community would like to acknowledge the contribution of Ms Monica Madrid, Consultant and Climate Change Statistics Advisor, to this work.

Tonga Statistics Department is currently in the field administering the UN Women Gender and Environment Survey [Gender and Environment Model Questionnaire](#). Tonga is the first Pacific Island country to run this survey and the results will support our understanding of women's and men's experiences dealing with hazards, coping with climate change and promoting conservation.

## ESCAP News

(Contributed by ESCAP)

### **ESCAP-GOAP side event at the United Nations Ocean Conference, Lisbon, Portugal, 30 June 2022**

ESCAP together with the Global Ocean Accounts Partnership (GOAP) co-hosted a side event at the 2022 UN Ocean Conference on “Sustainable Ocean Development “Beyond GDP”: Scaling global efforts to make nature and people count through ocean accounts”. The panel, consisting of eight governments and several representative bodies, discussed the importance of environmental-economic accounting in underpinning Sustainable Development Goals, the Post-2020 Global Biodiversity Framework, and 2020 commitments of 16 Heads of Government represented on the High-Level Panel for a Sustainable Ocean Economy. For more information, visit <https://www.oceanaccounts.org/un-ocean-conference/>

### **Advancing a community of practice on disaster-related statistics**

Following its 5-year [Strategic Plan](#), The Technical Working Group on Disaster-related Statistics (TWG-DRS) initiated a national review of Disaster Related Statistics Framework ([DRSF](#)) tables. The key objective of this initiative is to demonstrate the compilation of disaster-related statistics within different national contexts and offer potential solutions for data producers and compilers in dealing with data challenges. It is expected that this demonstration will: strengthen members' capacity; help convey Asia-Pacific good practices and priorities to international standard setting processes; and improve in-country interdepartmental collaboration for disaster-related statistics.

### **The 5<sup>th</sup> Asia-Pacific Day for the Ocean, Bangkok, Thailand, 30 November 2022**

ESCAP and GOAP co-organized a dialogue titled 'Evidence for Sustainable Ocean Management'. The session offered attendees the opportunity to learn from Asia-Pacific experts about how organised and integrated ocean data benefit decision-making for sustainable ocean management. The dialogue also showcased how taking into account the ocean's contribution to the economy and society improves social and economic development decision-making. For more information, visit <https://www.unescap.org/events/2022/fifth-asia-pacific-day-ocean-5>

## Armenia's experience on Environment and Water Related Statistics

(Contributed by the Statistical Committee of the Republic of Armenia (ARMSTAT))

Environment statistics has existed since the establishment of the Armenian Statistical Office (1921), and has been maintained from the very beginning, with data on water resources always being classified as strategic information.

Among other environmental statistical areas, the Environment Statistics Division maintains water statistics. The concepts of water statistics cover water abstraction, consumption, use, treatment and discharge with definitions based on the UN Framework for the Development of Environment Statistics (FDES) and the UNECE Statistics Division and are used for water indicator exercises and SDGs indicators. In Armenia, the Environmental Protection Authority and the Mining Inspectorate Body annually collect data from enterprises and municipal authorities in towns and villages via a special reporting survey of observation units that have permission for water supply service and self-abstraction of water. These data are submitted in Excel format to ARMSTAT for quality check to publish aggregates of water statistics. The metadata are in line with Eurostat and OECD which jointly conduct a questionnaire on inland waters. ARMSTAT reports annual data to this questionnaire.

In addition, on a national initiative, water accounts hybrid tables on supply and use are produced. "Water Accounts" was one the components of the EU Twinning program (2015-2017) that was led by Statistics Denmark with participation of national statistical offices of Finland, Italy and Lithuania. The objective of the program was to support the modernization of official statistics of Armenia, introducing new statistical methodologies aligned with EU standards and strengthening dissemination of official statistics to the public. The assessment of the status of water statistics in Armenia was carried out by Italian experts, the report "Development of a system of satellite water accounts in Armenia ([Armenian version](#))" was developed based on the System of Environmental-Economic Accounting (SEEA) adopted by the United Nations, and Water Accounts methodologies.

The time series of tables of physical water flows are filled in by water abstraction, water use and drainage data available in the database of [Armstatbank](#), as well as on the basis of annual summary statistical data on drinking water reported by public water supply company ("[Natural resources and environment in the Republic of Armenia \(annual, 2021\)](#)" and "[Housing resources and public utility in the Republic of Armenia, 2021](#)" annual statistical handbook).

The production-expenditure monetary data from the National Accounts of Armenia in accordance with the National Accounts System (SNA 2008) basic classifications, definitions and concepts, as well as other methodological frameworks are used to derive the [Key Indicators](#).

ARMSTAT now is working closely with the Ministry of Environment to support the policy-making based on high-quality statistics and to monitor the implementation of internationally agreed goals. In order to improve the accessibility and quality of environmental statistics and environmental-economic accounts, it is planned to publish infographics based on key indicators. The cooperation with international experts is ongoing to finalize and publish air emission accounts.

A sector review was undertaken within the framework of the EUROSTAT funded project, "Global assessments, peer reviews and sector reviews for the European Neighbourhood Policy (ENP) countries" to analyse ARMSTAT's statistical production processes in Environment Statistics. The Sector Review Mission took place in June 2022 in Yerevan. The review process was initiated by EUROSTAT at the request of ARMSTAT. The company DevStat – Statistical Consulting Services S.L., under contract with EUROSTAT, was responsible for organising all activities and tasks relating to the Sector Review. A self-assessment questionnaire (SAQ) was filled in to raise awareness of the strengths of ARMSTAT Environment Statistics production process and of the areas where improvements are still needed to align the sector of Environment Statistics with the European Statistical Standards. The Review confirms that the basic principles of official statistics, closely following the UN Fundamental Principles of Official Statistics and the European Statistics Code of Practice are cemented in the Law on Official Statistics (adopted in 2018) that is fully based on the Generic Law on Official Statistics (GLOS).

The further strengthening of compilation of official statistics on environmental phenomena is reflected in the Five-Year Statistical Program for 2019-2023 and Annual Statistical Program that are used as the main mechanisms for the



coordination and planning process of environment statistics.

## Environment and Climate Change Statistics in Grenada

(Contributed by Junior Alexis, Central Statistical Office of Grenada)

The Environment Statistics Unit is one of the various sections of the Central Statistical Office which was established in 1960, under the Statistical Act No. 30 of 1960 (revised under No 21 of 1961), and its main objective is to provide information about the environment, its most important changes over time and across locations, and the main factors that influence them. This objective was established under the Framework for the Development of Environment Statistics (FDES) in 2013 by the United Nations Statistics Division.

The Unit has published two previous environment statistics compendia and are currently preparing the third. The first edition was produced in 2001 as a result of a United Nations Statistics Division (UNSD)/Caribbean Community (CARICOM) project, “Strengthening Capacity in the Compilation of Statistics and Indicators for Conference Follow-up in the CARICOM region”. The [second edition](#) was published in 2020.

During the calendar year 2022 the Unit has continued to grow and strengthen its operations. The Economic Commission for Latin America and the Caribbean (ECLAC) and the Organisation of Eastern Caribbean States (OECS), in collaboration with the Central Statistical Office and Ministry of Climate Resilience, the Environment and Renewable Energy in Grenada, in support of the United Nations Development Account and Escazú Agreement hosted a national ‘in-person’ workshop: “Generating climate change and disasters indicators for use in policy decision-making” that was held on 17-19 October 2022 at the Coyaba Hotel, Grand Anse, St. George’s, Grenada. UNSD also delivered presentations and served as resource persons in the workshop both in-person and virtually.

The objectives of this workshop were to train participants to build selected environment, climate change and disaster indicators and corresponding metadata; identify data and capacity gaps to develop an Environment Information System (EIS) and build a regional resilience platform, and have a better understanding of how geospatial data can enhance the use of environment, climate change and disaster indicators for effective decision making.

The Environment Unit of the Central Statistical Office has been given the assurance of continued support by the Permanent Secretary and the Minister of the Ministry of Economic Development, Planning, Tourism, ICT, Creative Economy, Agriculture and Lands, Fisheries & Cooperatives. This was reiterated during their opening remarks at the national workshop mentioned above.

The environment statistics network includes stakeholders from policy and decision making at all levels; the general public, including media and civil society; analysts, researchers and academia; and regional and international agencies.

Thirty participants attended the workshop representing 22 different stakeholders. Some of the main topics presented and discussed at the workshop were:

- Global and regional enabling frameworks and strategies
- Environment, climate change and disasters indicators for Grenada needs and priorities
- What is needed to produce environment, climate change and disaster statistics and indicators
- How to produce environment, climate change and disaster statistics and indicators
- Building selected environment climate change and disasters indicators with national data
- Towards an environmental information system in Grenada

These presentations and deliberations were enabled by local, regional and international resource personnel.

In conclusion, all stakeholders committed to enhance their bilateral and multilateral working relationships in order to strengthen the collection, compilation, analysis and publication of environmental statistical information. The relevant stakeholders pledged to submit outstanding data to the Environment Statistics Unit for the third edition of the environment compendium which includes data up to 2021.

One of the most significant outcomes of the national workshop was the approval of the cabinet of Grenada, the highest

decision-making body in the country, on the establishment of an Environment Statistics Advisory Committee (ESAC). The specific tasks and responsibilities of the ESAC are to provide guidance on the adequacy and use of national environment statistics and to also advise the Government on priorities for ensuring that environmental statistical needs are identified and are met. The ESAC is to be composed of 25 stakeholders and a technical committee comprising eight officials from five stakeholders. The ESAC is expected to be officially launched in the first quarter of 2023.

The Committee will endeavour to, among others:

- o Promote inter-agency cooperation and collaboration for the development of environment statistics;
- o Advise on the mainstreaming of environment statistics into national development plans and policies;
- o Make recommendations to identify and prioritize thematic areas of environmental concerns in support of national priorities for the production of environment statistics (key indicators for national policy and planning requirements);
- o Establish linkages for the harmonization of environmental data;
- o Recommend mechanisms to close data gaps;
- o Advise on environment statistics available to support the development; and implementation of a measurable system and a monitoring and evaluation system.

## The Italian experience on water statistics

(Contributed by Tiziana Baldoni, Simona Ramberti and Stefano Tersigni, Italian National Institute of Statistics (Istat))

[Istat](#) is engaged in the production and updating of water statistics and water accounts. As the country suffers the lack of a national information system on water resources, Istat has been actively working for several years to meet users' needs, fill data gaps and provide high quality statistical information, in line with the national and international requests.

Following are some key activities performed in these years.

- **Water balance.** Ongoing joint project between Istat and Italian National Institute for Environmental Protection and Research (ISPRA) aimed to provide a homogeneous assessment on the state of water resources and the indicators derived (e.g. Water Exploration Index plus, SDG 6.4.2) to international (Eurostat, EEA (European Environment Agency), Organisation for Economic Cooperation and Development (OECD), FAO, etc.), national, regional and local bodies.

- **Public water supply.** Through the [Urban water census](#), Istat collects information on: water withdrawal for drinkable use (35,000 abstraction points), adduction and supply networks, public sewage (at municipal level) and urban wastewater treatment (more than 18,000 plants). Data collection started in the 1950s, but it has been consolidated in the current survey since the 1999 edition. Respondent units are the water operators (approximately 2,400 in 2020), both water utility companies and local authorities.

The survey contents have been progressively updated by considering emerging information needs. Since 2018, the survey frequency has been reduced to two years. The last census referred to the year 2020. Data are elaborated at several territorial levels: e.g. administrative aggregations, river basin districts, water bodies, sewage agglomerations.

- **Water use in agriculture and industry.** To overcome the lack of an adequate monitoring system for non-civilian uses, Istat has developed, tested and validated a methodology for estimating water volumes in both agriculture and industry.

As a result of these estimations, made at the national, river basin district, regional and local labour system levels, the total water withdrawal and use for public water supply, industry and agriculture has been calculated.

- **Wastewater statistics.** The number of urban wastewater treatment plants in operation is really high and there is a partial validation of wastewater quality parameters especially because of missing data. Some critical issues in the calculation of the total volume of wastewater generated and treated, at the national and subnational level, are essentially due to the limited knowledge on plants for exclusive industrial use.

To summarize, there is much to be done to ensure a continuous, regularly updated, timely and comprehensive production of water statistics. The improvements in existing surveys and the evaluation of data integration with administrative archives are further steps needed.



Finally, reinforcing citizens' awareness on water issues is another objective to perform, by telling water statistics in a simple, detailed and clear way. As such, Istat provides an [annual focus](#) for the World Water Day. Text, data tables, infographics and maps are provided to feed knowledge to increase awareness on the sustainable use of water.

## Environmental Statistics and Accounts in Jordan

(Contributed by Sudki Hamdan, Department of Statistics (DOS), Jordan)

Jordan has a long history in tracking environmental statistics. The Environmental Statistics Division of the Department of Statistics (DoS), established in 1995, was mandated with collecting environmental data from various official sources, in addition to compiling, coordinating, classifying, analyzing and disseminating this data, with the aim of creating a comprehensive national environment information base. DoS is focused on implementing specialized environmental surveys to provide data and field statistics related to energy, water, waste and environmental expenditures using international and regional methodologies and recommendations to serve planners, workers, researchers and those concerned with the environment.

DoS has started to engage in international co-operation several years ago. It contributed to the Framework for the Development of Environment Statistics (FDES 2013) revisions and participates in the Expert Group on Environment Statistics (EGES). In recent years, DoS started to apply the System of Environmental-Economic Accounting (SEEA) on a national participatory level; inclusive the use of the 'Environmental Goods and Services Statistics and Environmental Expenditure Accounts' tables.

The 20<sup>th</sup> issue of the DoS Annual Environmental Statistics Report 2021 was recently released, based on the FDES 2013 structural standards. It is one of the most important official environmental statistical publications in Jordan.

Together with the Ministry of Environment, DoS shares the responsibility of the National Greenhouse Gas Inventory, environmental statistics and accounts, energy statistics and inventory compilation. The Department is also trying to harmonize its data through a common data management system. This type of expertise has allowed Jordan's DoS to support and share its experiences with other Arab countries regarding environmental and water issues.

Based on its knowledge and expertise, DoS Jordan has been advancing sustainable development and green growth indicators in many national and international projects; it has also participated in the technical committee of the Green Growth Plan 2018-2025.

For further information please visit:

<http://dosweb.dos.gov.jo/environment/environment-surveys/>

[http://dosweb.dos.gov.jo/databank/publication/Electronic\\_and\\_Electrical\\_Waste\\_at\\_Households\\_2018.pdf](http://dosweb.dos.gov.jo/databank/publication/Electronic_and_Electrical_Waste_at_Households_2018.pdf)

## Latest achievements of the Environment statistics Working group in Luxembourg

(Contributed by Dr Olivier Thunus, National Institute of Statistics and Economic Studies)

In Luxembourg, the production of environmental statistics is a task performed by many institutes, observatories and administrations in the country.

In order to ensure the quality of the information produced and to coordinate the respective work, the Public Statistics Committee created under its aegis a Working group dedicated to environmental statistics in October 2013. This Working group, led by the National Institute of Statistics and Economic Studies, holds one to two meetings per year on various topics such as the communication of metadata, confidentiality of information, big data for environmental statistics or interactive communication tools.

This Working group also has the power of initiative. It is indeed on its proposal that Luxembourg has launched the production of a national list of indicators related to climate change in 2019.

At the same time, the Working group also expressed the wish to give a certain dynamic to the production of new indicators and their communication. As a result, group members have embarked on several pilot projects to produce new metrics on carbon footprint, material footprint, carbon sequestration, fuel poverty, fossil fuel subsidies, ecosystem extent accounts, etc.

In 2022, the National Institute also launched a project to bring its database on environmental indicators into compliance with the recommendations of the Joint Task Force on environment and indicators (Committee on Environmental Policy - Conference of European Statisticians - UNECE). This project was a preliminary step to the constitution of a new annual publication "Environment in numbers" proposed by the Working group. This publication is intended to be different from a compendium in its structure and its format. Through the presentation of some key indicators, it will attempt to answer a dozen topical questions such as "Is Luxembourg impacted by climate change?", "Is Luxembourg a green and circular economy?" or "What is the environmental footprint of our country? Its release is planned for the first half of 2023.

In the meantime, the most important environmental statistics are available on the new public statistics portal: <https://statistiques.public.lu/en/themes/territoire-environnement.html>

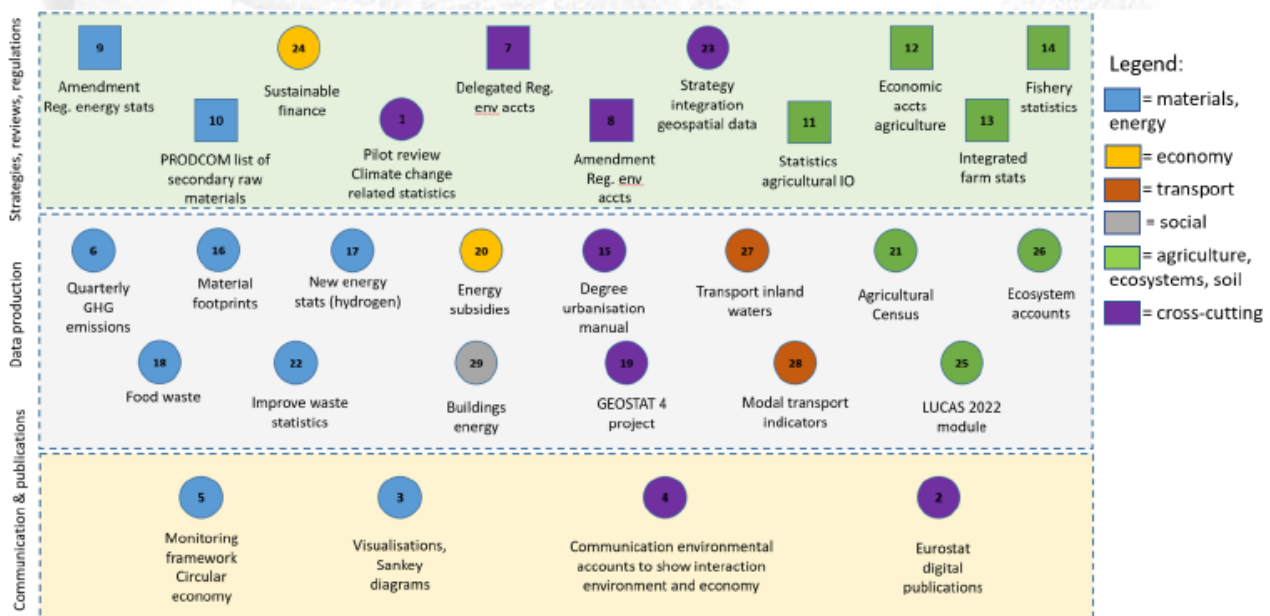
## European Green Deal in the Netherlands

(Contributed by Arthur Denneman and Thom Werkhoven, Statistics Netherlands)

To achieve environmental objectives, in 2030 and beyond, more efforts are needed at local, national, regional, and global levels. That calls for an environmental sector that keeps growing in importance. The share of the environmental sector in the Dutch economy has grown steadily, from 1.7 percent in 2001 to 2.6 percent in 2021. Moreover, employment in renewable energy doubled in the Netherlands in the past 10 years ([news release](#)). More use of renewable energy contributes to achieving climate targets, but other environmental domains also deserve a high policy attention to continue and accelerate the progress made in recent decades.

The [European Green Deal](#), launched in December 2019, includes a program for the transition to a low-carbon, circular and sustainable EU economy, minimizing the negative impact on the planet. The ambitious program defines a wide range of intertwined action plans and legislative proposals in policy areas like Climate, Nature and Environment, Energy, Industry, Buildings, Materials, Agriculture, Mobility, Finance and Innovation.

To support national policy makers and other stakeholders involved in the transition process of the European Green Deal, Statistics Netherlands is drawing up a Dutch Green Deal statistical action plan, with activities for the short and medium term as well as a wish list for the longer term. It builds on the [Eurostat Action Plan](#), endorsed by the European Statistical System in October 2021, which includes 29 EU green deal activities, as shown in the figure below.





Parallel to the preparation of a Dutch Green Deal statistical action plan, Statistics Netherlands will develop a Green Deal Dashboard in close collaboration with several public and private stakeholders. The data on this dashboard will be based on already existing statistics, in the sense that Statistics Netherlands will not develop its own data if these have already been compiled by other national data producers. In addition, the Dutch dashboard will be inspired by the green deal relevant indicators recommended by international communities, such as [UNSD Global Set](#), [CES indicators](#), and those on [Eurostat](#), [IMF](#) and [IPAC](#) dashboards.

## FORTHCOMING EVENTS

54th session of the United Nations Statistical Commission  
(in person, New York from 28 February to 3 March 2023)  
<https://unstats.un.org/UNSDWebsite/statcom/54>



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