United Nations E/CN.3/2025/20

Economic and Social Council

Distr.: General
18 December 2024

Original: English

Statistical Commission
Fifty-sixth session
New York, 4 - 7 March 2025
Item 3(q) of the provisional agenda*
Items for discussion and decision: data science

Report of the Committee of Experts on Big Data and Data Science for Official Statistics

Note by the Secretary-General

In accordance with Economic and Social Council decision 2024/312 and past practices, the Secretary-General has the honour to transmit the report of the Committee of Experts on Big Data and Data Science for Official Statistics, which is submitted to the Commission for discussion and decision.

* E/CN.3/2025/1.

I. Introduction

1. The UN Committee of Experts on Big Data and Data Science for Official Statistics (UNCEBD) was established in 2014 by the Statistical Commission in Decision 45/110 to explore the benefits and challenges of using big data for official statistics. After 10 years of activities of the UNCEBD and its task teams, hubs and UN Global Platform, a review was undertaken in 2023 to determine if the UNCEBD was still on the right track or if its course needed to be adjusted. In its Decision 55/105 of last year, the Commission supported updating the mandate of UNCEBD to reflect current needs, including data science and private sector partnerships.

2. The Commission also acknowledged the crucial role of the regional and global hubs of UNCEBD in enhancing capacity in big data and data science and supported the proposal for these hubs to expand their partnerships with national statistical offices, international organizations, academia, and the private sector. It further supported the creation of a new task team on data science and Sustainable Development Goal (SDG) localization and the creation of a task team on large language models (LLMs) in the production and dissemination of official statistics. Finally, the Commission supported the development of a playbook for integrating data science into the work of statistical offices, reiterated the need for further capacity-building in data innovation and requested to improve the UN Global Platform for easier access.

3. This report addresses the requests of the Commission, while noting that due to the current financial and human resources constraints at the United Nations Secretariat the pace of implementation is slower than expected. For example, UNCEBD is still preparing the setup of the new task team on data science and SDG localization and has postponed the setup of a new task team on the use of LLMs for official statistics. Further, the preparation of the playbook needed to be phased over a longer period.

4. Section II describes the updating of the terms of reference (TOR) of the UNCEBD. Section III highlights the achievements and plans of the task teams, the hubs and the UN Global Platform. Section IV is devoted to the Data Science Leaders Network and Section V concludes with the next steps and points for discussion.

II. Updating of the Terms of Reference of the UNCEBD

5. Last year's report[1] of UNCEBD presented the 10-year survey which showed that statistical institutes are incorporating references to innovation, data science, and the use of alternative data sources, such as big data, into their strategic agendas, that access to private sector data together with protection of data privacy are main priorities in the innovation strategies, that they are updating their statistical legislation to facilitate access to privately held data, and that they are actively developing data science capabilities in their institutes. In line with the survey results, the interviews recommended that the existing UNCEBD mandate needs to be updated in line with contemporary practices including use of data science and partnerships with the private sector.

6. In addition to the recommendation for an update of the TOR, the background document[2] to last year's report of the UNCEBD highlighted further recommendation namely that UNCEBD should conduct more use cases, while facilitating data access and protecting data privacy; develop solutions for many methodological, technical and legal challenges; promote capacity-building activities; promote partnerships with private sector and academia; promote the integration of statistical and geospatial information; and develop communication strategies to maintain public trust.

7. Subsequently, the main mandate of the UNCEBD was reformulated as follows "to provide a strategic vision, direction and coordination for a global programme on emerging new statistical methodologies and technologies, such as Artificial Intelligence (AI), data science and the use of big data and other alternative data sources for the improvement of official statistics." AI has been included given the enormous take-up of generative

1 See https://unstats.un.org/bigdata/documents/reports/UNCEBD%20report%20-%202024-6-BigData-E.pdf
2 See https://unstats.un.org/UNSDWebsite/statcom/session_55/documents/BG-3d-Report_of_the_10-year_review_on_the_use_of_Big_Data_and_Data_Science_for_Official_Statistics-E.pdf

AI in all parts of the societies. The complete text of the updated TOR is given in Annex I. It was further recommended that the TORs of the individual task teams also needed to be recalibrated with the needs of the NSOs. The new versions of the TORs of the eight task teams are provided in a background document to this report.

8. In view of this changing and broadening scope of the mandate of the UNCEBD, coordination and cooperation with other communities, which work on similar topics, are becoming more pertinent. For example, in the European Statistical System a project just started on one-stop-shop for AI and Machine Learning for Official Statistics[3] (AIML4OS). UNCEBD will try to stay closely in touch with the developments under AIML4OS and organize activities jointly where possible. Similarly, the High-Level Group on Modernization of Official Statistics (HLG-MOS[4]) under the Conference of the European Statisticians engages in several initiatives on AI and data science that have overlaps with the work of the UNCEBD and close coordination will therefore be necessary. As a final example, PARIS21 just created a task team on AI for Official Statistics for Development. Again, UNCEBD will try to collaborate and coordinate with that initiative.

III. Achievements and plans of the task teams, the regional and global hubs, and the UN Global Platform

9. The UNCEBD delivers its work through 8 task teams, 6 hubs, the Data Science Leaders Network and many collaborative projects on the UN Global Platform. Some highlights of the achievements during 2024 and the 2025 plans are reported in this section. More detailed information on the activities and events of the task teams and hubs is given on the UNCEBD website[5]. As mentioned, UNCEBD is still in the process of setting up the new task team on data science and SDG localization, which will work closely with the Data Science Leaders Network.

A. Task Teams

10. The joint task team on global facilitation of access to privately held data was established by the UNCEBD together with the Network of Economic Statisticians (see also the report[6] of the Network). It had identified five specific use cases for pursuing the process of building a relationship with private data holders, which focused on (a) tourism industry; (b) semiconductor industry, (c) e-commerce; (d) retail industries; and (e) horticultural industry. The sub-teams had started implementing their respective work plans. However, due to limited capacity and difficulty in engaging relevant actors from outside the statistical community, activities on the proposed use cases were limited in 2024. Currently, Statistics Netherlands, the coordinator of the task team is adjusting the scope of the work to a new portfolio of activities. It would focus more on generic aspects related to accessing external data sources, such as knowledge commons, data governance, organisation of and participation in data spaces, and aim at developing guidelines and frameworks. The TOR of the revamped task team are included in the background document together with the TORs of all the other task teams.

Task Team on Mobile Phone Data for official statistics

11. Significant progress has been made in advancing the use of Mobile Phone Data (MPD) for official statistics, with key achievements shaping the landscape of data-driven policymaking. The publication of six comprehensive methodological guides for MPD use in various statistical domains, such as dynamic population, migration, information society and tourism, marked an essential step forward. Each guide provides a structured approach to MPD methodologies, best practices, and applications, offering standardized tools for countries to adopt. These guides aim to streamline MPD analysis across different statistical systems, enhancing its utility and integration in policy contexts. The guides have already been introduced to national statistics offices (NSOs)

3 See https://cros.ec.europa.eu/dashboard/aiml4os
4 See https://unece.org/statistics/networks-of-experts/high-level-group-modernisation-statistical-production-and-services
5 https://unstats.un.org/bigdata
6 See E/CN.3/2025/xx

through webinars organized by the UNCEBD regional hubs, fostering a shared understanding and skill development across participating countries.

12. In addition to the guides, initiatives to raise awareness and build trust have been instrumental in promoting ethical and transparent MPD practices. A specialized awareness-raising course, now accessible via the UN Global Platform Learning Management System (LMS) and ITU Academy, provides stakeholders with foundational knowledge on MPD's applications and ethical considerations. Furthermore, guiding principles aimed at maintaining public trust in mobile data use were published in the Data and Policy Journal, reinforcing the importance of transparency and ethical standards. These principles support policymakers and data practitioners in fostering public confidence in MPD practices, particularly critical as MPD use expands in official statistics.

13. A series of impactful engagements at global forums has also helped raise MPD's profile on the international stage. Presentations at the UN World Data Forum in Colombia and the 8th International Conference on Big Data and data science for official statistics[7] (hereafter the 8th Big Data conference) in Bilbao, Spain, highlighted the relevance and potential of MPD in diverse policy areas, including in sustainable tourism. The events provided a platform to discuss advancements, challenges, and the practical applications of MPD in official statistics. Additionally, innovative tools like the ITU Jupyter Notebooks were developed to enhance countries' analytical capabilities, enabling them to calculate SDG indicators and improve national data systems.

14. Future work will focus on refining the existing guides, expanding MPD application areas, and enhancing capacity building in countries. Detailed reviews of the migration, tourism, and transport guides will ensure they remain relevant and actionable, with dedicated sub-groups to drive improvements. Collaboration with UN agencies is planned to align MPD outputs with international statistical standards. New guides in emerging research areas, synthetic data development, and practical training for MPD Project Managers are also in the pipeline.

15. An essential component of this effort is the Global Data Facility (GDF) program[8] on MPD for policy led by the World Bank and ITU, which aims to position mobile data as a valuable resource for policy by supporting governments and statistical agencies in building robust MPD pipelines. Through the GDF, this project offers technical guidance, capacity-building workshops, and tools designed to strengthen analytical capabilities and address specific policy needs like tracking migration trends or assessing tourism impact. Lastly, an emphasis on country-specific training will support sustainable MPD integration, with tailored resources ensuring countries can fully leverage MPD in official statistics to support data-driven policymaking.

Task Team on Scanner and Webscraping data for Price statistics

16. The task team advanced the work on (a) guidance on using alternative data sources (ADS) for consumer price indices. This workstream produced an e-handbook on using ADS to produce consumer price indices (CPI) from the initial stages of data acquisition until implementing these new data sources in live production; (b) guidance on the process for classifying scanner data to produce data ready for price index compilation. This will include advice on various machine learning techniques and, where appropriate, making the code available for other NSOs; and (c) the production of a new e-learning training course on the UN Global Platform.

17. 2024 has been a year of great successes for the task team such as the workshop session at the Ottawa Group conference[9] in May 2024, where it launched the e-handbook[10] and presented on the progress of other

7 See https://unstats.un.org/bigdata/events/2024/conference/

8 See https://www.worldbank.org/en/events/2024/09/25/global-data-facility-mobile-phone-data-program-for-policy-cohort-1-launch-workshop

9 See: https://stats.unece.org/ottawagroup/meeting/18

10 See: https://unstats.un.org/wiki/display/GWGSD/Handbook+on+utilising+new+data+sources+in+the+production+of+consumer+price+statistics

workstreams. The workstream on classifications continued drafting guidance on methods to classify scanner data for price index compilation, as well as producing code notebooks for each method. For training, it developed a curriculum of training requirements, and developed a training programme of online courses, along with code tutorials and exercises, to be published in the LMS on the UN Global Platform.

18. The task team also set up two new workstreams in 2024: the system architecture workstream to support the implementation of the new data sources and the FAIR workstream to promote the FAIR principles (findability, accessibility, interoperability, and reusability), develop a catalogue for open datasets and produce high-level guidance on how the FAIR principles can be used in the field of CPI and alternative data sources. For 2025, the task team aims to deliver the remaining training content and publish the classification guidance in its e-handbook. Both of which are planned to be showcased at the UNECE meeting in Geneva in April 2025. For the two new workstreams, the task team is planning to have some initial guidance drafted over the course of 2025.

Joint Task Team on Earth Observations for agricultural statistics

19. During 2024, the task team worked on sharing various successful case studies developed in different countries using Earth Observations (EO), algorithms and AI tools to generate statistical information for agriculture. For example, the Asian Development Bank enhanced sampling frames to map agricultural areas in Armenia, Cook Islands, and Lao People's Democratic Republic, comparing different methods to measure lands and evaluate biases, using high resolutions imagery.

20. Further, Mexico is developing an algorithm to classify crops using AI with optical and radar satellite images. A tutorial has been developed for this application aiming to share training data with other countries. Brazil used the U-Net algorithm and high-resolution satellite images for the automatic delineation of crop field boundaries. The current exercise focuses on one district. But the goal is to use the U-Net to produce the field boundary map at national level. Brazil will use such information in the next agriculture census in 2026. Indonesia works with mixed methods in collaboration with ESCAP and FAO, aiming to map rice paddies and to predict rice yield monthly. In this context, Indonesia works on the fusion of Sentinel-1, Sentinel-2 and now CosmoSky-Med data provided in kind through FAO, the European Space Agency and the Italian Space Agency.

21. FAO is actively working in 21 countries. At this stage of the reporting, work has been completed in Senegal, Ecuador, Peru and Cameroon in collaboration with the respective Ministries of Agriculture, and in Zimbabwe, Colombia and Chile with the respective NSOs. In each of these countries, FAO aimed to build capacity in the use of EO data to produce crop type maps and to forecast crop yield in a geospatially explicit form, ultimately to produce granular, accurate, and disaggregated crop acreage and crop yield statistics. FAO provided support using the Satellite Image Time Series (SITS)[11] package developed by IBGE, Brazil.

22. In various countries like Colombia, Peru, Ecuador and Cameroon, capacity building focused on crop yield mapping, through the integration of remote sensing with crop yield forecasting modeling using SALUS[12] developed by the Michigan State University. The model was fed with time series crop yield data from official statistical reports, and with EO-based information on soil, precipitation, temperature and with expert information on agronomic practices. The models were used to simulate the yield for main crops of interest (Rice, Maize, Cocoa, Potato, Cassava, Millet, Coffee). Simulated yields show correlation above 0.85 with the field observations.

23. The task team collaborates closely with the UN Global Hub in China on the authoring of the UN Handbook of Remote Sensing for Agricultural Statistics, which is expected to be delivered by December 2025. The task team has been instrumental in co-developing the skeleton of the Handbook, in identifying international experts who could contribute, and in defining the TOR of the editorial board of the Handbook.

11 See https://e-sensing.github.io/sitsbook/index.html
12 See https://basso.ees.msu.edu/salus/index.html

24. The task team organizes with the Regional Hub in Brazil a workshop on the use of EO data for agricultural Statistics in Latin America and Caribbean. The task team together with ESCAP supported the Regional Hub in Indonesia in the development of a mixed method for a national rice monitoring system. The task team provides technical training, facilitates the access to high-resolution satellite images, and facilitates the connection and engagement of international experts on rice mapping, thanks to the broad collaboration with academia and with GEOGLAM. The task team further participated in various forums to promote new EO data sources, tools, methods, and guidelines, such as the 8th Big Data conference in Bilbao in June 2024; and the 7th High Level Forum on UN Global Geospatial Information Management in Mexico City in October 2024.

25. In 2025, the task team plans to complete an extensive report of its work program that includes the integration of EO data sources, like combining optical and radar imagery; improving the quality of maps, using very high-resolution drone images and best practices for evaluating area estimations; new topics such as early warning systems, biodiversity, evaluating drought models, and the impact of climate change; the optimization of field surveys; and showing the importance of national and regional Data Cubes. Finally, the task team will upload training and tutorial materials to the UN Global Platform to make them available for the countries.

Task Team on AIS data for official statistics

26. AIS data contains information about ships' location, speed, and status. The task team aims to develop algorithms and methodologies for measuring freight transportation, traffic within harbours, economic trade indicators, CO2 emissions, the amount of fishery, and other experimental indicators, and further conducts training in the use of AIS data. The task team uses the UN Global Platform (UNGP) for global collaboration in accessing, analyzing, and sharing projects involving AIS data.

27. Some of the major achievements in 2024 and plans for 2025 include the continuous updating of AIS Python packages in the GitLab libraries, which are shared by the members and hosted on the UNGP, to reduce users' learning curves. Further, more and more projects are using AIS for official statistics, notably in transport statistics, such as ongoing projects of Italy and Canada. There is also more engagement by partner organizations in various projects using AIS data such as the Project Insight[13] by the Bank of International Settlements to monitor the complexities of global value chains and the project of "An ocean of data[14]" to monitor global trade flows by the OECD. Finally, the task team has the plan to create a training environment in UNGP that will allow new users to learn and experiment with a limited set of AIS data before transitioning to the production environment. This new training environment will be used alongside a series of e-learning courses.

Task Team on Privacy-Enhancing Technologies for official statistics

28. The task team on Privacy-Enhancing Technologies (PET) is working on a major refresh of its UN PET Guide[15] that was published in 2023. This will include an update of the methodology chapter with new technological advancements in PETs achieved in the past two years, results of methodological experiments performed by the UN PET Lab community and findings from new case studies, collected from the global PET community. New topics in the guide will be data governance, data management and risk management aspects of PETs and there will also be updates on legal and regulatory aspects and the role of standards. Updated content of the PET Guide will be published in the second quarter of 2025.

29. The main challenges in 2024 were related to the continuing evolution of PET technologies combined with the high barriers for adoption of these technologies by NSOs. The UN PET Lab grew over the past years with participation from more NSOs, private sector PET providers and academic researchers, and evolved into an active community of practice. However, research of technologies and their application in use cases alone is not enough to mainstream the use of PETs. PETs are increasingly becoming part of data-centric strategies which

13 See https://www.bis.org/about/bisih/topics/suptech_regtech/insight.htm
14 See https://www.oecd-ilibrary.org/economics/an-ocean-of-data_34b7a926-en
15 See https://unstats.un.org/bigdata/events/2023/unsc-pet-guide/

require broader and more holistic understanding of data protection including legal, organizational, ethical, communication and possible other aspects.

30. In view of the new topics, the task team will revise its TOR to broaden the focus on organizational capabilities required for successful implementation of PETs (people, processes and policies) with the aim to identify common patterns, standards and best practices that can help NSOs to implement PETs faster and in controlled way. Further, the task team updated its web site to improve communication to its audiences. These updates are in line with the recommendations of the 10-year review of the UNCEBD.

31. The task team has been involved in regular capacity development activities, such as presentations to NSOs in Mexico and Brazil, where a project was initiated on the use of PETs for the dissemination of the Brazilian Agricultural Census. At the 8th Big Data conference in Bilbao, the task team provided an introduction on PETs for safe and responsible access to Mobile Phone Data and organized a demo on PySyft, an open-source framework for cross-organizational data access and analysis across the public and private sector.

32. The experimentation and research work of the PET Lab is continuing in several major work-streams and related projects in NSOs, including Private Set Intersection (PSI) for analysis of asymmetries in cross-border trade statistics; Private Machine Learning on human activity recognition with the Federated Learning method; and use of the "Lomas" platform, developed by the Federal Statistical Office of Switzerland, for confidential analysis of sensitive data.

33. For 2025, the task team envisions to update the PET Guide as an online knowledgebase, that will help subgroups (on legal and regulatory issues, data governance, and case studies) to develop reports on an ongoing basis, including the updating of the repository of PET case studies. The task team also plans to establish a Github site on the UN Global Platform to share resulting code and technical documentation and will promote the reuse of directly deployable modules for private data science. First modules from the Swiss Lomas project are already available in that way.

Task Team on Training, Competencies and Capacity Development

34. This task team proposes solutions to build capacity for institutions that are embracing the use of big data and data science in official statistics. It aims to ensure that NSOs around the world are increasingly equipped to work effectively with non-traditional data and to produce statistics that are authoritative, provide value and insight, and are trustworthy. The task team also supports other task teams in their training programmes by providing guidance on common approaches to the development of training courses, including e-learning courses. This guidance included model curricula, needs assessments based on existing tools, and requirements for course development at different levels.

35. The task team actively supported the development of various e-learning courses on the use of AIS data (awareness and intermediate level), mobile phone data and scanner data. It reviewed e-learning courses and actively supported their deployment on the LMS of the UN Global Platform. It also developed a new overarching course as an introduction to big data and supported an e-learning course for the International Data Masterclass. Moreover, the maturity matrix was further developed and made available to countries in a stand-alone format for self-assessments, allowing NSOs to identify their stage of development along detailed components and dimensions of the use of big data, such as legal framework, IT infrastructure, human resources and big data applications in the production of statistics, generating an overall picture and identifying gaps.

36. Further, a Big Data Training Catalogue[16] was developed, providing information on about 300 training courses and materials relevant for developing skills to use big data in official statistics. The catalog does not only provide standard searches by keywords and courses' features, but also allows to establish a "Personal Learning

16 See https://unstats.un.org/bigdata/task-teams/training/catalog/

Path", recommending courses and materials based on a person's profile (considering the type of function in the organization, targeted skill type and level, as well as current knowledge). This learning path approach uses the concepts and dimensions of the Competency Framework[17] for big data acquisition and processing and is updated with support from Statistics Poland every 6 months.

37. Work in 2024 focused on supporting the work with the regional and global hubs to (a) identify relevant objectives for the hubs, (b) establish functioning management structures of the hubs, (c) identify project, skills and training needs, (d) develop and prioritize work programmes, (e) manage inclusion of a wider range of countries in their respective regions in project development and knowledge exchange, (f) communicate and exchange knowledge among the different hubs, and (g) develop communication plans. This has supported the initiation of projects and workshops for the hubs in Brazil and Indonesia. The task team organized a dedicated workshop for the regional hubs at the 8th Big Data conference in June 2024.

B. Regional and global hubs on big data and data science for official statistics

38. In the period 2020-2022, UNCEBD created four regional hubs and two global hubs. The regional hubs are operating in Brazil, Indonesia, Rwanda and UAE serving their specific regions, whereas the global hubs in China and Spain operate globally with focus on agriculture statistics and digital economy in China and on AI for environmental sustainability in Spain.

39. In 2024, the International Monetary Fund (IMF) established its Big Data Center to support member countries in leveraging Big Data and data science for macroeconomic and financial statistics. The Center collaborates closely with the Data Science Leaders Network and the UNCEBD regional and global hubs. In September 2024, the Center, in partnership with the African Development Bank, co-organized a workshop on "Big Data for Macroeconomic Statistics" in Kigali hosted by the Regional Hub in Rwanda. The workshop brought together participants from central banks and statistics agencies across 13 African countries. Looking ahead to 2025, such workshop is expected to be offered again at IMF training centers and potentially at other UN regional hubs. Additionally, the IMF Big Data Center will provide technical assistance to member countries, focusing on enhancing the timeliness and granularity of national accounts and high-frequency indicators.

Regional Hub for Big Data and data science for official statistics in Brazil

40. In its third year, the Regional Hub in Brazil carried out several capacity building activities to leverage the use of big data in statistical production by NSOs in Latin America and the Caribbean. The Hub delivered a regional workshop for 15 countries on the use of the ARIES (Artificial Intelligence for Environment and Sustainability) to produce mitigation and adaptation indicators to analyse climate change. Further, nine webinars were organized, on the use of alternative data sources, on climate change indicators, on the use of mobile phone data for public policies and on satellite imagery for agricultural statistics. The webinars brought together more than 600 people mostly from Latin America and the Caribbean. In addition, the Hub collaborated in the organization of the 8th Big Data conference and the UN Datathon 2024.

41. The Hub concluded, continued and initiated academic and technical projects. It concluded the research projects "Informal settlements using satellite imagery" and "Big data quality", continued the research project "Privacy Enhancing Technologies (PET) in National Statistical Offices in Latin America and the Caribbean" and initiated the research projects "Mobile Big Data for Urban Mobility Analysis" and "Big data and Communication". Also initiated the project "Environmental and climate change indicators: a common approach using innovative methods and alternative data sources" with participation from 11 countries of the region: Argentina, Brazil, Chile, Colombia, Costa Rica, Ecuador, Mexico, Paraguay, Peru, Dominican Republic and Uruguay.

[17] See https://unstats.un.org/bigdata/task-teams/training/UNGWG_Competency_Framework.pdf

42. For 2025, the Hub has planned to continue the project on environmental indicators, the series of webinars on climate change indicators, on the use of PETs, on the use of MPD and on big data and communication. In addition, two workshops are planned on the use of satellite images to produce agricultural statistics, the fourth consultation on the use of big data in the NSOs of the region and a satellite event of the 2025 UN Datathon. It is also expected to carry out on-demand activities such as webinars and training sessions.

Regional Hub on Big Data and data science for official statistics in Indonesia

43. The 2024 agenda of the Regional Hub for Asia and the Pacific in Indonesia outlined a transformative year filled with strategic webinars, hands-on training, workshops, and collaborative competitions, all aimed at enhancing data methodologies and capacity across Asia-Pacific for more effective policy-making and statistical accuracy. The year's initiatives kicked off in February 2024 with a webinar on rice yield estimation using EO data involving various national stakeholders which focused on advancing Indonesia's "One Rice Data" program to improve rice production accuracy.

44. In March 2024, a technical workshop was conducted with ESCAP and FAO on rice monitoring using EO data methods. In June 2024, a high-level webinar brought global experts to address Indonesia's One Rice Data project on the use of EO data for precise crop monitoring, fostering regional and global insights. In July 2024, a training, field visit, and technical discussion in West Java and Bandung provided hands-on data cube analysis and field verification.

45. Also in March 2024, a webinar was organized on success stories of using MPD to improve official statistics, with a focus on real-world applications and innovative practices. In July 2024, a workshop on MPD processing and analytics was conducted in collaboration with Telkomsel and ESCAP, for NSOs from across the Asia-Pacific region, emphasizing MPD integration into official statistics and strengthening regional data expertise.

46. From May through August 2024, the program on web scraping prices for Consumer Price Index (CPI) offered online training sessions and an in-person workshop in September 2024 in Bangkok organized with ESCAP, focusing on web scraping techniques to enhance CPI data collection and accuracy for national and regional use. Rounding out the agenda, a Datathon was organized with the Australian Bureau of Statistics from July to September 2024, inviting Indonesian government data analysts to tackle policy challenges with innovative, data-driven solutions, fostering creativity and practical problem-solving.

47. These ambitious efforts still face several significant challenges, such as ensuring robust funding for both virtual and in-person gatherings, managing cross-agency coordination with organizations of varying structures and goals, and bridging the technical knowledge gaps among participants. These are some of the critical obstacles that need to be navigated. Additionally, the logistical complexity of organizing field visits and achieving full stakeholder engagement demands high levels of coordination, planning, and resources to guarantee the successful execution of each program.

Regional Hub on Big Data and data science for official statistics in Rwanda

48. In 2024, the Regional Hub for Africa in Rwanda showcased a new webinar programme that drew on knowledge and expertise from across the UNCEBD network and international data science community. All webinar recordings have been uploaded to the Hub's new YouTube channel and shared via the Hub's website[18]. The Hub organized many activities over the last year. In total, the Hub hosted 11 webinars, two workshops and one Datathon.

[18] See https://ecastats.uneca.org/regionalhub/Events

49. These activities included among others the hosting (as satellite location) of the UN Datathon in November 2023, a workshop on the use of Big Data and administrative records for official statistics, a workshop on Post Enumeration Survey (PES) for assessing quality of Census, and webinars on use of MPD for official statistics, on EO data for agriculture statistics, on dynamic population mapping using MPD, as well as use of MPD for transports statistics and information society indicators, and use of the UN Global Platform for NSOs.

50. The Hub will further enhance international collaboration, drawing on the international data science community and UNCEBD network, to build capability, enhance data science skills, and address the challenges being faced by NSOs that prevent them from progressing in this field. It will also ensure that the proposed recommendations discussed during the 8th Big Data conference in June 2024 are implemented, and that knowledge exchange is in place to learn from the successes of other UN Global and Regional Hubs.

51. In 2025, the Regional Hub for Africa will undertake a follow-up survey of all African NSOs to better understand the evolving needs. The results will be fed into the workplan for 2025, and ultimately into the webinars, workshops, and collaborative NSO programmes. The Hub will develop a webinar programme for 2025, that is broad and varied, focusing on topics and areas that will support NSO big data and data science progress. The Hub is in the process of creating a new Data Science Champions Network, that will provide a forum for those at NSOs who are working with big data and data science to discuss developments in data science and how they may be applied in the production of official statistics (specific to Africa) and to learn from the experience of others and build up a network of people interested in data science.

52. The Hub will continue to seek out NSO collaborative project topics of interest. It will progress with the delivery of its third collaborative project looking at the application of EO data for Agricultural Statistics. This will bring together numerous NSOs for shared learning, delivered collaboratively by the task team on EO data, the FAO and the UN Global Hub in China. The Hub will stay abreast of new products and tools that are developed and produced across the international community and will promote their application. In this regard, the Hub will strengthen and improve its communications, via well maintained webpages, a new quarterly Newsletter, and regular Blog posts of interesting data science applications from across the region.

53. The main challenge for the UN Regional Hub for Africa continues to be the lack of a fixed budget for recruiting dedicated support staff and providing resources for the delivery of capability enhancing events and activities such as in-person workshops and trainings. Therefore, the Hub plans to strengthen stakeholder engagement and to seek out co-delivery partnerships with organisations and academia, whose strategic objectives align with the Hub's. The Hub is also in the process of welcoming representatives from the African Development Bank and African Union Commission to join the Regional Hub's Programme Management Unit and Steering Committee, to support and agree future visions and plans, as well as potentially support future financial requirements for big data and data science capability building activities across the region.

Regional Hub on Big Data and data science for official statistics in the United Arab Emirates

54. The Regional Hub in the UAE was also established in March 2020 and is managed by the Federal Competitiveness and Statistics Center (FCSC) of the UAE. The main objectives of the hub are to facilitate projects in the use of big data and data science, the sharing of knowledge on newly developed methods, algorithms and tools, and the provision of training for the community of official statisticians in the Middle East and North African (MENA) region. The Hub collaborates with academia on internship programs for Data Science and Statistics students, private sector to produce tourism statistics using MPD, and other government authorities in machine learning projects transforming traditional processes. It conducted a series of webinars with all the task teams, actively participated in the International Data Science Accelerator program and hosted teams participating in the 2023 UN Datathon.

55. The Hub has actively collaborated with the Data Science Leaders Network (DSLN) and has supported DSLN in the development of its Playbook for integrating data science in the work of statistical office. In January 2024, the Hub partnered with the local Roads and Transport Authority and DSLN in hosting in Dubai an

international seminar[19] on Data Science for the Statistical and Transport Communities. Following two preparatory webinars on AI and data science for economic statistics in November and December 2024, the Hub will host together with the DSLN an international symposium[20] on AI and data science for economic statistics in January 2025 in Dubai.

Global Hub on Big Data and data science for official statistics in China

56. In 2024, the UN Global Hub in China focused its work on specific areas of agricultural remote sensing, e-commerce, and the measurement and analysis of the digital economy, and has leveraged the advantage of the robust development of digital economy in Zhejiang Province, and mobilized the resources at home and abroad to deepen exchanges and collaboration, facilitate capacity building, advance innovative applications of statistical big data, and contribute to promotion of the UN 2030 Agenda for Sustainable Development. The global and national influence of the Hub was markedly strengthened thanks to the support of the National Bureau of Statistics (NBS) of China and the UN Statistics Division. During last year, the Hub in China was also formally renamed from a Regional Hub to a Global Hub. Furthermore, NBS of China financed the establishment of a Laboratory of Remote Sensing for Statistics, including the plan for the laboratory building and the procurement of equipment, marking the transition to the actual construction phase.

57. Comprehensive consultations were conducted with the UN Statistics Division in terms of the functions, workforce scale, and basic conditions of the possible UN Global Center on Big Data and data science for official statistics in Hangzhou, China. With strong support of governments of Zhejiang Province and Hangzhou City, the Hub has consistently negotiated with both parties on scientific research funding and office space. A research group focused on “Exploring the Path of Establishing UN-affiliated Global Center” was set up. The group undertook forward-looking surveys on the founding and operations of seven international organizations and institutions in China with on-site visits, and 14 UN-affiliated institutions globally in an online way. Accordingly, all acquired practical experience in functional orientation, organizational structure, co-construction mode, and coordination mechanisms was utilized as a reference to propose initial concepts. Further, a leading group for big data application research has been established to mobilize resources of government, industry, academia, and research institutions to promote more breakthroughs. The Hub also works with Zhejiang Lab to continue our joint research on data sharing and data security governance based on privacy computing.

58. The Hub promoted the implementation of the pilot outcomes from the China high-resolution Remote Sensing (RS) for Statistics Application System (Phase II) and proposed an automated rice recognition approach that integrates temporal, spatial, spectral, and phenological information. With the digitalization of the Zhejiang Smart Agricultural Survey, the Hub improved the production, management, and visualization of RS data, employing technologies such as multi-party secure computing and homomorphic encryption in data mining. The Hub also explores the application scenarios of technologies such as AI, automatic interpretation, and multi-source data fusion in agricultural census, and illustrates the feasibility and implementation strategies of different technologies.

59. With the support of leading IT enterprises, the Hub uses Internet technology and intelligent data processing systems to collect online price data for daily consumption and services and explore replacing the discrete price data collected via traditional methods with high-frequency continuous data, thereby enhancing the representativeness and sensitivity of CPI survey. The Hub also optimized the statistical monitoring system for big data in e-commerce. Utilizing the transaction data from over 90 e-commerce platforms in China to carry out comprehensive measurement and analysis by industry and region to better understand the development situation and trends of online retail.

60. The Hub coordinated senior experts to participate in the 5th UN World Data Forum in Colombia in a session on RS for agriculture and global food security, offering an opportunity to showcase the Chinese

19 See https://unstats.un.org/bigdata/events/2024/transport-seminar/

20 See https://unstats.un.org/bigdata/events/2025/ai-data-science/

experience. The Hub supported a webinar on rice yield estimation in Indonesia, hosted by ESCAP. To facilitate the Rwanda Regional Hub's comprehensive monitoring of agricultural resources and disaster impacts, the Hub gathered professionals to provide technical support. The Hub will share China's advanced agricultural remote sensing technologies to developing countries, such as Mongolia and Indonesia. The Hub will spare no efforts to contribute to the UN Handbook compilation, prepare for offline conferences in China, and seek the possibility of holding a release conference of the Handbook.

61. Regarding measuring the digital economy, the Hub organized its 5th International seminar[21] on "Digital Economy Statistics" in Xiamen, China, in May 2024 with about 150 participants from China and other countries in Asia, Africa, and Latin America. The Hub is also ready to participate in the EO Task Team, and support experts from digital economy, mobile phone data, privacy computing and other fields. Finally, the Hub advocated for the China contribution to the UN Datathon competition.

62. The Hub deepened cooperation with leading enterprises and universities, including Alibaba, Didi Inc, the Chinese Academy of Sciences, the State Key Laboratory of Remote Sensing Science, Zhejiang Lab, Wuhan University, and Zhejiang University, explored the formation of a big data innovation alliance, and carried out cooperation in specific fields such as agricultural remote sensing, e-commerce, and the measurement and analysis of the digital economy. Further, a new brochure of the Global Hub was prepared. The Hub will also have new promotional videos in Chinese and English and take the opportunity to speak out through important international conferences, mainstream media, and other channels to enhance international and domestic publicity.

Global Hub on AI for environmental sustainability in Spain

63. This Global Hub was established in 2022 as a collaboration of the Basque Centre for Climate Change (BC3), the Donostia International Physics Centre, the UN Statistics Division and the United States Geological Survey. The main aim of the Hub is to bring together the use of semantic AI and big data and provide a much-needed platform to advance the interoperability of data and models in the domain of sustainability. This approach goes beyond the use of machine learning applied to large databases. Amid an ecological crisis, it is urgent to integrate AI as a unifying tool to tackle the complex challenge of sustainability by enhancing its strengths and limiting its negative effects. The amount of information (i.e., data, models, etc.) produced by different actors in our society continues to increase rapidly, but it is often compartmentalized, limiting its reuse rather than building into a larger body of collective knowledge. Semantic AI, on the other hand, focuses on understanding and consciously integrating data, developing the ability to reason about it and combine it to answer complex questions beyond mere pattern recognition.

64. The main technological advances (and educational resources) of the Hub for 2024 included the launch of a new website[22], data portal[23], and e-learning platform[24], and advanced functionalities for the coupling of the ARIES platform to the openEO platform of the European Space Agency[25], particularly for Ecosystem Extent and Condition. In 2025, the hub plans to produce more e-learning modules and launch other online applications with focus on Biodiversity, Ecosystem Extent and Condition, and Risks related to Climate Change.

65. The main highlight for the Hub in 2024 was the hosting by BC3 of the 8th Big Data conference[26] with the theme of "Informing Climate Change and Sustainable Development Policies with Integrated Data", in Bilbao in June 2024. The conference included, among many other sessions, a session on "Informing biodiversity policies through use of big data, remote sensing and citizen science" and a session on "Integrated modelling for ecosystem extent mapping and ecosystem services". The Conference was followed by a day and a half of a technical

21 See https://unstats.un.org/bigdata/events/2024/measuring-digital-economy/
22 See https://aries.integratedmodelling.org/
23 See https://data.integratedmodelling.org/
24 See https://learning.integratedmodelling.org/
25 See https://eo4society.esa.int/projects/openeo/
26 See https://unstats.un.org/bigdata/events/2024/conference/

workshop on ARIES for SEEA, where practitioners from NSOs were introduced to the ARIES platform though practical hands-on exercises for the compilation of ecosystem accounts. Proceedings of the Conference are provided in a background report. Further, capacity development activities undertaken in 2024 include the collaboration with the Colombian NSO (DANE) on Ecosystem's Extent presented at COP16 in Cali.

66. For 2025, the Hub will collaborate more with Latin American statistical offices and the Brazilian regional hub on risks related to climate change, and with the UN Statistics Division on Biodiversity monitoring (especially ecosystem extent and condition). BC3 invested significant financial resources in the improvement of its digital infrastructure, which has more than doubled the infrastructure's capacity. In 2025, the Hub is planning to enable fully parallel processing of modelling tasks and interact on a deeper level with the cloud services of the UN Global Platform. The Hub also plans to expand the user base of ARIES for SEEA organically, attracting new users through community engagement and capacity building, and providing valuable experiences that encourage technical and non-technical people to join and use the platform.

C. The United Nations Global Platform (UNGP)

67. In line with its mandate "to promote practical use of big data sources", UNCEBD has encouraged and initiated many projects over the years. UNGP was developed in the period 2018-2020 for the purpose of international collaboration on Big Data projects, and has become over the years a valuable capability for the statistical community. This platform provides data, Cloud technology and a coding environment. It has shown to be very useful as a coding and algorithm execution environment. UNGP holds AIS data from 2018 until the present and is very much used to execute AIS projects with over 50 institutes actively conducting projects, such as the PortWatch project by IMF, or the estimation of maritime CO2 emissions by the NSO of Indonesia.

68. UNGP is also used for other kinds of projects, such as (i) the .STAT project for data warehousing and dissemination with Cambodia, Kyrgyzstan, Madagascar and Maldives; .STAT is technically supported by UNSD and OECD, (ii) a Learning Management System (LMS), which host all the e-learning courses of UNCEBD and UN Statistics Division, (iii) the testing and deployment of the PySyft PETs environment, and (iv) the UN Data Commons project between the UN Statistics Division and Google. In 2024, more than 12,000 persons used the LMS for 43 different e-learning courses. To meet the current and expected future demands for its services, UNGP will need some significant financial and human resources investments in 2025.

IV. The Data Science Leaders Network (DSLN)

69. DSLN was established by the Statistical Commission in 2022 in Decision 53/124. It convenes data science leaders within national statistical systems to provide overall vision, coordination, guidance, prioritization and direction in the area of data science for official statistics. The expected outputs are concrete strategies and roadmaps with a view to achieve coherent and integrated programmes of work in this area. DSLN sees three important uses of data science for statistical offices: (a) to automate and increase efficiencies in statistical business processes, (b) to produce timely and relevant indicators on emerging issues, and (c) to transform the statistical production process.

70. The first DSLN Sprint took place virtually in March 2023 with main recommendations to gradually incorporate data science methods into statistical production to enhance insights and improve efficiency and to foster a culture of experimentation and collaboration among data scientists, data engineers, and statisticians to successfully integrate data science with traditional statistics. A second DSLN Sprint was held in-person in Dubai in January 2024 and started the development of a Playbook for integrating data science into the work of statistical offices.

71. The Playbook addresses the need for systematic, actionable guidance to help NSOs mainstream data science methods and innovative data sources and technologies in the production of official statistics—from data collection to dissemination. Designed as a practical, user-friendly resource, the Playbook will offer both strategic and tactical insights to support NSOs in implementing data science projects, mobilizing resources, documenting

successes, and overcoming institutional barriers for mainstreaming data science in their day-to-day operations. Following the guidance of the DSLN, the playbook will emphasize solutions that are action-oriented, scalable, accessible, and tailored to diverse regional and institutional contexts.

72. The Playbook consists of four sections, focused on (1) leveraging basic data science tools for immediate efficiency gains, (2) addressing emerging data needs, (3) achieving the full digital transformation of official statistics, and (4) cross-cutting themes such as collaboration, capacity building, and resource mobilization. So far, experts from various international organizations and national statistical offices have volunteered to lead the drafting process of individual sections, and a Wiki platform has been setup to support content drafting, resource sharing, and iterative feedback. Once finalized, the Playbook will be released as a digital resource to ensure accessibility and enable continuous updates, supporting NSOs globally in adopting data science effectively.

73. As a further source of input to the Playbook, a third Sprint was jointly organized with the Network of Economic Statisticians[27] on the topic of AI and data science for economic statistics. This Sprint consisted of 3 parts: 2 webinars on 7 November 2024 and 12 December 2024, respectively, and an international symposium in Dubai in January 2025. The Sprint had three main objectives. First, it seeks to develop a comprehensive repository of impactful AI and data science use cases that streamline data production and analysis, which is critical for efficient policy support. Second, the Sprint explores generative AI applications that could transform the dissemination and interpretation of economic data, making insights more accessible and comprehensible to a broader audience and for economic decision making. Finally, the initiative tackles essential strategic issues, including data security, ethical AI deployment, and cross-domain integration, all of which are crucial for responsibly adopting AI and data science in statistical practices.

The UN Datathon 2024

74. The UN Datathon 2023 was held synchronously online and on-site in November 2023 with the main venue in Montevideo, Uruguay, and satellite venues in Dubai (UAE), Hangzhou (China), Kigali (Rwanda), Brisbane (Australia), and Geneva (Switzerland). That event attracted registrations from over 500 teams worldwide, and nearly 2,000 participants from 110 countries signed up to take part. The overall winning team[28] was from the Ghana Statistical Service, which had prepared a submission focusing on localizing SDG indicators in Ghana and computing a new “access to information” index.

75. The UN Datathon 2024[29] was organized as a pre-event to the 5th UN World Data Forum in Medellin, Colombia. This Datathon was kept more local with about 80 teams from Colombia and 20 international teams participating. Moreover, the Datathon was held mostly in person taking place at the Ruta N building in Medellin. The theme of the Datathon was about Sustainable Tourism in Medellin, considering the socio-economic, environmental and economic dimensions. It was about measuring the real impact of tourism on citizens’ quality of life in Medellin and its metropolitan area. This includes the impact of tourism on jobs (including informal employment), trends of housing and urban settlements, the infrastructure of the city, and education. The teams were asked to identify the interlinkages of these SDG related issues for the city of Medellin using the data available and to estimate their impact in economic, environmental and social terms. Of the 100 teams, more than 40 teams were able to finish their submissions within the 3-day timeframe. The winners were not yet known at the time of writing this report.

V. Next steps and points for discussion

76. In the coming years, the World Bank-ITU GDF program on use of mobile phone data for policy will deliver essential resources, programmatic support, and sharing of knowledge through several rounds of country cohorts. The cohorts will each comprise of several countries and will participate in programmatic activities to

[27] See also See E/CN.3/2025/xx

[28] See https://unstats.un.org/bigdata/events/2023/un-datathon/winners.cshtml

[29] See https://unstats.un.org/bigdata/events/2024/un-datathon/

build local capacity. The repurposing of MPD into policy measurements is a growing priority for governments around the globe and is still very challenging. Mainstreaming adoption of MPD use involves investments in technical capacity, data infrastructure, and safeguards.

77. The task team on scanner data for price indices will develop a data catalogue for open datasets and produce some high-level guidance for researchers on how the FAIR principles can be used in the field of consumer price statistics and alternative data sources. The EO task team will further improve the quality of maps, using very high-resolution drone images and best practices for evaluating area estimations and will take on a few new topics such as early warning systems, biodiversity, evaluating drought models, and the impact of climate change. Further, the AIS task team will create in 2025 a training environment on UNGP that will allow new users to learn and experiment with a limited set of AIS data before transitioning to the production environment. This new training environment will be used alongside a series of e-learning courses. Finally, the PET task team will update the PET Guide with new topics, such as data governance, data management and risk the role of standards. Updated content of the guide will be published in the second quarter of 2025. The task team also plans to establish a Github site on UNGP to share resulting code and technical documentation and will promote the reuse of directly deployable modules for private data science.

78. In 2025, the Region Hub in Brazil will continue its regional project on environmental indicators, organize webinars on climate change indicators and on use of MPD, conduct research on use of PETs, and hold workshops on remote sensing for agricultural statistics. The Regional Hub in Rwanda will develop a webinar programme, that is broad and varied, focusing on topics and areas that will support NSO big data and data science progress. The Regional Hub in UAE will host together with the DSLN an international symposium on AI and data science for economic statistics in January 2025 in Dubai.

79. The Global Hub in China aims to deliver the Handbook on remote sensing for agricultural statistics towards the end of 2025, whereas the Data Science Leaders Network wants to deliver the Playbook in that same time period. The Global Hub in Spain plans to produce more e-learning modules and will launch other online applications with focus on biodiversity, ecosystem extent and condition, and risks related to Climate Change. The Hub is also planning to interact on a deeper level with the cloud services of UNGP. The plans for UNGP are to further develop the Learning Management System by adding more e-learning courses and improving its user-friendliness, to test and deploy the PySyft PETs environment, and to advance the UN Data Commons project with UNSD and Google.

80. As is clear from this report, the structure of UNCEBD in terms of its task teams, hubs and network is quite elaborate. The Bureau of UNCEBD reflects on ways in which it could simplify the structure of the Committee with the purpose of being able to give sufficient support to each group and keep proper oversight and coordination. During 2025, the Bureau will draft a proposal for a possible reorganization of the structure of UNCEBD.

81. The Commission is invited to:

(a) Endorse the updated Terms of Reference and mandate of the UNCEBD;
(b) Acknowledge and support the outputs prepared and delivered by the task teams, the regional and global hubs, the UN Global Platform and the Data Science Leaders Network;
(c) Emphasize the importance of the UN Global Platform for the global statistical community as an international collaboration environment;
(d) Strongly encourage national and international statistical offices to support the work of the UNCEBD by investing time and resources in the organization and management of the various task teams and hubs and in the projects on the UN Global Platform; and
(e) Encourage more Member States to get involved in international collaboration on AI, data science and the use of big data and other alternative data sources for the improvement of official statistics.

ANNEX: Terms of Reference of UNCEBD

1. At its 45th session in 2014, the Statistical Commission requested that the global statistical community take urgent action to exploit the possibilities of the use of big data and harness its challenges effectively, regarding methodology, quality, standards and norms, human resources, training, volatility, confidentiality, access and legislation. It then created the UN Committee of Experts on Big Data and Data Science for Official Statistics (UNCEBD) to explore these issues and report back to the Commission on a regular basis.

2. In 2024, after 10 years of activities of the Committee of Experts and its task teams, hubs and the United Nations Global Platform, a review and stock-taking seemed necessary to determine if the Committee was still on the right track or if its course needed to be adjusted. On behalf of the Committee, UNSD conducted a survey and held interviews on the use of big data and data science in statistical offices. Based on the results of this review, recommendations were formulated to improve and streamline the Committee's mandate and structure, including the objectives and deliverables of its task teams, hubs and subcommittees. The results demonstrated the gradual emergence of data science in the work of statistical offices over the course of the past decade, as well as the increasing willingness of statistical offices to use data from the private sector. Those changes are reflected in the Committee's updated mandate and deliverables.

3. At its 55th session in 2024, the Statistical Commission acknowledged the 10-year review outcomes and the achievements of the Committee and supported updating the Committee's mandate to reflect current needs, including data science and private sector partnerships, because the statistical community has the obligation of exploring the use of emerging new technologies and methodologies, such as AI, data science and the use of big data and other alternative data sources to meet the expectation of society for enhanced service and products, and for improved and more efficient ways of working.

4. The objectives of the mandate and Terms of Reference find their justification in several documents, which are relevant to the topic of innovation in statistics and data governance and have been recognized by the some of the highest bodies within the United Nations, namely (i) the Data Revolution report, (ii) the Fundamental Principles of Official Statistics, (iii) ECOSOC Resolution 2022/3 and (iv) the Global Digital Compact (Revision 3 of 11 July 2024).

5. The Data Revolution report of 2014 noted that the main deficiency of the indicators for monitoring of the Millennium Development Goals was lack of timeliness (or data availability) and called for a data revolution, which would draw on existing and new sources of data in order to fully integrate statistics into decision-making, promote open access to, and use of, data and ensure increased support for statistical systems. It emphasized that statistical offices will need to change, and continue to adapt, abandoning expensive and cumbersome production processes, incorporating new data sources, including administrative data from other government departments, and focusing on providing data that are human- and machine-readable, compatible with geo-spatial information systems and available quickly enough to ensure that the data cycle matches the decision cycle.

6. The Fundamental Principles of Official Statistics encourage the use of emerging new technologies and methodologies, such as AI, data science and the use of big data and other alternative data sources, as they state that:

- Official statistics […] that meet the test of practical utility are to be compiled and made available on an impartial basis by official statistical agencies to honour citizens' entitlement to public information (principle 1)
- Data for statistical purposes may be drawn from all types of sources, be they statistical surveys or administrative records [or other]. Statistical agencies are to choose the source with regard to quality, timeliness, costs and the burden on respondents. (principle 5)

7. ECOSOC Resolution 2022/3 recommends to the Member States to ensure that the work in the field of statistics and data is adaptive to the changing statistical and data ecosystem, specifically emphasizing the need for

technological innovations to systematically modernize statistical offices and national statistical and data systems in response to the wide range of statistical and data sources, including, for example, administrative records, geospatial information, privately held data, and other data sets generated through new tools that can be integrated, after quality assurance, to produce statistics.

8. Digital technologies have profoundly transformed society and offer unprecedented opportunities and new challenges. Shaping a shared vision on digital cooperation and a digital future, is a priority as the world is now more than ever relying on digital tools for connectivity and social-economic prosperity. The Global Digital Compact (GDC) was proposed to achieve an inclusive, open, sustainable, fair, safe and secure digital future for all. This compact has the following objectives.

(1) Close all digital divides and accelerate progress across the Sustainable Development Goals.
(2) Expand inclusion in and benefits from the digital economy for all.
(3) Foster an inclusive, open, safe and secure digital space that respects, protects and promote human rights.
(4) Advance responsible, equitable and interoperable data governance approaches.
(5) Enhance international governance of Artificial Intelligence for the benefit of humanity.

These objectives are fundamental in harnessing the benefits of technology for the wellbeing and advancement of people, societies and the planet.

Mandate of the UNCEBD

9. Against this background, the revised mandate is formulated as follows:

a) To provide a strategic vision, direction and coordination for a global programme on emerging new statistical methodologies and technologies, such as AI, data science and the use of big data and other alternative data sources for the improvement of official statistics, including for indicators of the 2030 Agenda for Sustainable Development as well as for indicators on emerging issues.

b) To give an overview of, coordinate and reinforce ongoing initiatives in the area of AI, data science and the use of big data and other alternative data sources for official statistics.

c) To promote practical use of AI, data science and the use of big data and other alternative data sources, while building on existing precedents and finding solutions for the many existing challenges, including:

- Methodological issues, covering – among others – data quality, data analytics and quality of AI methods.
- Legal and related issues, especially in respect to accessing privately-held data sources.
- Privacy protection, relevant to the use of AI and Machine Learning, use and reuse of data, data linking, re-identification and data integration.
- Information technology and data management, including data dissemination, data visualization, cloud computing, data maintenance and cost-benefit analysis.

d) To promote capacity development, training and sharing of good practices in the use of AI, data science, statistical modelling and the use of big data and other alternative data sources.

e) To foster enhanced communication and advocacy on the use of AI, data science, statistical modelling and the use of big data and other alternative data sources for policy applications, especially for the monitoring of the 2030 Agenda for Sustainable Development

f) To build public trust in the use of AI, data science, statistical modelling and the use of big data and other alternative data sources for official statistics

g) To promote strategic relationships with private sector, geospatial community, academia and other public sector institutes to:

- Ensure better access to data and responsible use of AI; and
- Cultivate or nurture ongoing knowledge sharing for enhanced capability.

h) To promote and support the roles of the regional and global hubs for building capacity and for collaboration on the UN Global Platform.

i) To promote the use of the UN Global Platform as a collaborative environment for development of applications using AI, data science, statistical modelling, big data and other alternative data sources; and improve the platform services for the global statistical community.

j) To explore the utilization of emerging statistical technologies and methodologies, including AI applications and ethics in the production of official statistics, and

k) To promote data governance, AI governance, data stewardship and open data policies for better access and use of data.

ANNEX II. Membership of UNCEBD 2024-2025

Countries

Australia
Bangladesh
Brazil
Cameroon
Canada
China
Colombia
Denmark
Egypt
Georgia
Germany
Indonesia
Ireland
Italy
Mexico
Morocco
Netherlands
Oman
Pakistan
Philippines
Poland
Republic of Korea
Rwanda
Saudi Arabia
South Africa
Switzerland
United Arab Emirates
United Kingdom of Great Britain and Northern Ireland
United Republic of Tanzania
United States of America

Organizations

African Development Bank
Caribbean Community
Economic Commission for Europe
Economic Commission for Africa
Economic and Social Commission for Asia and the Pacific
Eurostat
Food and Agricultural Organization of the United Nations
International Monetary Fund
International Telecommunication Union
Statistical Centre for the Cooperation Council for the Arab States of the Gulf
Statistics Division of the Department of Economic and Social Affairs
Statistical Institute for Asia and the Pacific
Universal Postal Union World Bank