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Report of the Global Working Group on Big Data for Official Statistics

Note by the Secretary-General

In accordance with Economic and Social Council decision 2020/211 and past practices, the Secretary-General has the honour to transmit the report of the Global Working Group on Big Data for Official Statistics. Responding to Statistical Commission decision 51/122, the report presents the developments of the United Nations Global Platform and its regional hubs and addresses a new funding model for the maintenance of the Platform. The report also describes the achievements of the various task teams with their release of new handbooks, training workshops and collaborative projects on new data solutions. Furthermore, the report lists priorities for the programme of work for 2021 regarding the global training programme and new projects on the Global Platform and proposes a change to the name of the Global Working Group. The Commission is invited to comment on several recommendations regarding promotion of the use of the Global Platform and the regional hubs for training and project activities, endorsement of the funding model and support for the global training programme.

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* E/CN.3/2021/1.

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Report of the Global Working Group on Big Data for Official Statistics

I. Introduction

1. In its decision 51/122, adopted at its fifty-first session, in 2020, the Statistical Commission endorsed the United Nations Global Platform as a collaborative environment for data innovation by the global statistical community and all its partners, including a broad spectrum of stakeholder communities. The Commission also endorsed the governance structure and business model of the Global Platform presented under the overall auspices of the Commission, while requesting further work on the funding aspects of the business model and coordination of the activities of the regional hubs with those of existing initiatives at the regional level. In this regard, the Commission urged the statistical community and its partners to mobilize resources and support for the Global Platform and for the related training activities.

2. During 2020, the Global Working Group on Big Data for Official Statistics addressed the issues raised by the Commission, and the measures taken are reflected in the present report.[1] Section II of the present report describes the organization of work of the Global Working Group, while section III reports on the progress made by the task teams of the Group. The developments of the Global Platform and its regional hubs and the collaboration with the Global Partnership for Sustainable Development Data are described in section IV, and the funding model of the Global Platform is explained in section V. Section VI highlights the events organized by the Global Working Group over the past year. Sections VII, VIII and IX describe the priorities for the programme of work for 2021, the proposed change to the name of the Global Working Group and the action to be taken by the Statistical Commission, respectively.

II. Organization of work

3. Sections II and IV of the previous report of the Global Working Group (E/CN.3/2020/24) described the organization of work of the Group. Some further adjustments were made in 2020. The Group is now led by only one Chair (from South Africa) and two Vice-Chairs (from Denmark and the United Kingdom of Great Britain and Northern Ireland). The Vice-Chair from Denmark is coordinating the work of the task teams and the Vice-Chair from the United Kingdom is overseeing the United Nations Global Platform and the regional hubs. The Chair represents the Group in all official functions, such as at meetings of the Statistical Commission, and leads the Advisory Board. An overview of the various bodies under the Group is provided on its website,[2] which was modernized and updated in November 2020.

4. The coordination of the work of the task teams consists of harmonizing the approaches for the acquisition of data, advancing a common methods library and developing e-learning courses and other training materials. It further consists of bringing together all of the work of the task teams on the Sustainable Development Goals through the task team on big data and the Sustainable Development Goals, and of linking the task teams to common topics, such as carbon dioxide emissions by maritime transport, which is a topic for the task team on automatic identification system vessel tracking data and for the task team on Earth observations. The task team on training, competencies and capacity development plays a central role in

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[1] The full membership of the Global Working Group met in November 2020 (see https://unstats.un.org/bigdata/events/2020/gwg-annual-meeting/).

[2] See https://unstats.un.org/bigdata/about/membership.cshtml.

coordinating the overall training programme in the use of big data and data science. The Scientific Committee assumes an oversight role of the quality of the outputs produced by each of the task teams.

5. In general, global data sets, methods, applications and services will reside on the Global Platform. Collaborative projects are expected to be built on the Platform and online training activities would be accessed from it globally. However, for the activities carried out at the regional hubs, decisions may have to be made on hosting certain projects, data, services, methods or training materials locally. The Technical Delivery Board will advise on those coordination issues and on the technical connections between the Global Platform and the four regional hubs. It also assures the quality and coherence of the Platform's information technology architecture and, within that framework, approves the project proposals in their various stages of development. The Advisory Board assumes the managerial oversight of the Global Platform and its connections with the regional hubs.

III. Task teams of the Global Working Group

6. The Global Working Group delivers most of its work through task teams, which develop methods, prepare handbooks, conduct capacity-building activities, acquire data, make algorithms available in the methods service and demonstrate the active use of the data and services available on the United Nations Global Platform. The Global Working Group has active task teams on the use of satellite imagery data, mobile telephone data, scanner data and automatic identification system vessel tracking data, on big data and the Sustainable Development Goals, on privacy-preserving techniques and on training, competencies and capacity development. The progress made by each of these task teams is reported in the present section. A more detailed overview of their work will be provided in a background document to be made available on the Commission's website.

7. Some new task teams are starting their work, notably a task team on the rural access index and Sustainable Development Goal indicator 9.1.1, which is led by the World Bank, and a task team on the acquisition of global private sector data, which was proposed and approved at the plenary meeting of the Global Working Group in November 2020. This team will approach global companies to negotiate access to their global data sources under global arrangements and will work closely with the co-investment use case on data acquisition, exchange and sharing recommended by the Friends of the Chair group on economic statistics and the proposed United Nations network of economic statisticians.

Task team on Earth observations

8. The task team on Earth observations researches and practises methods to minimize the use of in situ (survey and census) data and maximize the use of Earth observation data for the production of agricultural crop statistics while improving the overall quality and reducing the cost. It is also developing a three-stage training curriculum, from introductory remote sensing knowledge to advanced courses, with the overall goal of teaching the fundamentals of using satellite imagery and enhancing programming skills with relevant use cases.

9. Since April 2020, the Food and Agriculture Organization of the United Nations and the Statistics Division of the Department of Economic and Social Affairs of the Secretariat have collaborated on a joint project on the Global Platform. Specifically, they use the Sen2Agri toolbox developed by the European Space Agency, which allows for Earth observation data processing and provides a user-friendly graphic interface for the classification of Earth observation data into crop type maps. The

project seeks to build in-country capacity in Senegal and Uganda in the operational use of this tool to produce official crop statistics. The World Bank has recently joined the task team, adding to the toolbox of methods for agriculture statistics under the "50 x 2030" initiative, in particular for Malawi.

10. In October 2020, the Inter-Agency and Expert Group on Food Security, Agricultural and Rural Statistics[3] and the task team on Earth observations of the Global Working Group officially agreed to join forces in the use of Earth observation for land cover mapping and agriculture statistics. Under this arrangement, the joint task team, chaired by Statistics Canada, will develop and implement a programme of work that would be monitored by both expert groups and would be reported on separately to the Statistical Commission.

Task team on mobile telephone data

11. In 2019, the task team on mobile telephone data created six subgroups to develop guidelines and methodologies on the use of mobile telephone data for disaster and displacement statistics, dynamic population mapping, information society statistics, migration statistics, tourism statistics and transportation and commuting statistics. The final draft of these guidelines is expected by early 2021. Further plans for 2021 are focused on developing e-learning and other training materials, and on conducting training workshops on the use of mobile telephone data with the regional hubs and some national statistical offices (Indonesia and Oman).

Task team on scanner data

12. The task team on scanner data was relaunched in July 2020 with the aim of building on the success of its first phase, from May 2017 to April 2019. The second phase is planned to run from July 2020 to June 2022 and is chaired by the Office for National Statistics of the United Kingdom (ONS). The two-year programme will advance the work on price index methods in the use of scanner data for price index calculations. The first component of the programme will expand the current offering of methods and documentation relating to the calculation of price indices on the Global Platform. The second component will be focused on the development of classification methods at different levels of complexity, and will develop guidance on the process for classifying scanner data for price index compilation. The third component will cover trusted learning and will expand existing training material and establish a certified training course on using scanner data for the production of consumer price indices.

Task team on automatic identification system vessel tracking data

13. The task team on automatic identification system vessel tracking data is delivering a programme on the use of real-time automatic identification system data on the location, speed and status of ships for official statistics. The first component of the programme includes the development of algorithms and methods for measuring freight transportation, traffic within harbours, international trade and fishery indicators and carbon dioxide emissions. This component also includes the estimation of port calls for 1,200 ports on a weekly basis and exploration of the integration of automatic identification system data with other data sets, such as customs data, shipping manifests and ship registers, to further improve the quality and scope of the estimations. The second component of the programme pertains to the development of a multi-stage training curriculum on the use of automatic identification system data, from introductory knowledge to advanced courses, with the overall goal of teaching

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[3] Proposed to become the United Nations Committee of Experts on Food Security, Agricultural and Rural Statistics as from the fifty-second session of the Commission.

the fundamentals of using such data and enhancing programming skills with relevant use cases.

14. Following the release of the live handbook on the use of automatic identification system data in February 2020,[4] the task team organized a hackathon[5] with the use of such data in September 2020. The two winning teams had built applications on emissions of maritime transport by geographical location worldwide and on marine traffic going into the Panama Canal, respectively. A second hackathon is planned for 2021. Plans for 2021 also include the release of an e-learning course and other training opportunities.

15. Given the large size of the automatic identification system data sets, all of this work is taking place on the Global Platform. Since the increasing number of users and usage implies an increasing cost of Platform services, further optimization of the automatic identification system operations on the Platform is planned for 2021.

Task team on big data for the Sustainable Development Goals

16. The task team on big data for the Sustainable Development Goals aims to provide big data tools for the concrete monitoring of Sustainable Development Goal indicators. It conducted a survey to identify which of the 169 targets of the Sustainable Development Goals could use big data. In 2021, it will establish a repository of ongoing big data activities that can relate to the use of big data for the Goals within the scope of the Global Working Group. It will also initiate at least two projects focusing on specific indicators, which will be supported by workshops or similar events.

Task team on privacy-preserving techniques

17. The task team on privacy-preserving techniques focuses on approaches to preserve privacy in the statistical analysis of sensitive data and presents examples of use cases where such methods may apply. The methods enable protection of the privacy of data while it is being processed rather than while it is at rest in a system or in transit between systems. The guidance materials are intended for use by statisticians and data scientists, data curators and architects, information technology specialists and security and information assurance specialists and therefore do not include the cryptographic technical details of the technologies.

18. Following the release of a first handbook in 2019, the task team started on the preparation of a second handbook, which will link more to use cases in the statistical community. It is also working on the legal aspects of using these techniques, as well as on learning materials for a training programme to increase awareness and help to develop skills in the statistical community. E-learning courses are expected to be released in early 2021 in collaboration with academia and the open-source community.

Task team on training, competencies and capacity development

19. The task team on training, competencies and capacity development proposes solutions to help to build capacity for institutions that are embracing, or are considering embracing, the use of big data in official statistics. The work includes projects to understand where national statistical offices currently are on their big data journeys and what the development needs are. The aim is to ensure that national statistical offices around the world are increasingly equipped to work effectively with non-traditional data to produce high-quality statistics. The task team also provides

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[4] See https://unstats.un.org/wiki/display/AIS/AIS+Handbook+Outline.
[5] See https://unstats.un.org/bigdata/events/2020/ais-hackathon/index.cshtml.

guidance to the other task teams of the Global Working Group on common approaches to the development of training courses.

20. Following the delivery of the competency framework for big data acquisition and processing,[6] a United Nations big data maturity matrix has been developed, which will enable national statistical offices to undertake a self-assessment of their current level of maturity in working with big data. In this self-assessment, national statistical offices can identify their stage of development – and compare it with their set goals – on various dimensions of the use of big data, such as the legal framework, information technology infrastructure, human resources and big data applications in the production of statistics. Version 1.0 of the maturity matrix has been launched.[7] Work on developing a web-based application for the matrix, which will also offer guidance to bridge gaps, is ongoing.

21. In addition to the provision of guidance for other task teams in the development of training courses, guidance will be provided on using a learning management system on the Global Platform. Such a system will be made available to all task teams for hosting their online training programmes. The Global Platform also stores training products, with links to case studies and big data applications of national statistical offices.

IV. The United Nations Global Platform and the regional hubs

22. The idea of a collaborative environment for the use of big data was developed in Bogotá in November 2017 and was followed by the implementation of the United Nations Global Platform by ONS from 2018 to 2020. On 1 June 2020, ONS handed over the beta version of the Global Platform to the United Nations community, with the objective of scaling it up for global use.

A. Projects on the Global Platform

23. The Global Platform is built around the technical and institutional architecture of global data sources, cloud-based infrastructure and services and a community of experts that is driving the substantive and technical innovation. The purpose of the Global Platform is for the global statistical community to be able to work collaboratively on those data sources and technology infrastructure in projects. The following projects (either in the proof of concept, pilot or production phase, depending on their level of maturity) are currently active on the Global Platform:

(a) Project of the task team on Earth observations to build a data pipeline with the Sen2Agri toolbox, using satellite data to estimate agricultural crop statistics; the project is in the pilot phase, with data being processed for Senegal;

(b) Project of the task team on Earth observations to build an information technology system for the Artificial Intelligence for Ecosystem Services (ARIES) modelling tool to measure ecosystem services; this project is in the proof of concept phase;

(c) Project of the task team on automatic identification system vessel tracking data for estimating port calls for 1,200 ports on a weekly basis to measure international trade activity; this project is in production;[8]

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

[7] See https://unstats.un.org/bigdata/task-teams/training/Big%20Data%20Maturity%20Matrix%20v1.0.pdf.

[8] See https://marketplace.officialstatistics.org/ttt-dashboards.

(d)   Project of the United Kingdom on the processing of automatic identification system data for the weekly outputs on faster economic indicators; this project is in production;[9]

(e)   Project of the Statistics Division, the Organization for Economic Cooperation and Development and the Economic and Social Commission for Asia and the Pacific (ESCAP) to implement the .STAT technology for hosting the national database of Cambodia on the Global Platform; this project is in production;[10]

(f)   Project of the task team on scanner data to build a data pipeline on the Global Platform, using methods and algorithms developed by the team for the production of price indices; this project is in the proof of concept phase;

(g)   Project of the Statistics Division and the Organization for Economic Cooperation and Development to maintain on the Global Platform a graph database for a global group register covering the top 500 multinational enterprises; this project is in the proof of concept phase.

More projects will be onboarded, including a project to deploy the rural access index measurement tool[11] for testing against national data sources and a project to develop a "data as a service" functionality.

B.   Technical Delivery Board

24.   The Technical Delivery Board of the Global Platform, chaired by Canada, provides strategic direction and oversight regarding the development of the Global Platform and its relation to the regional hubs. The Board reviews and approves proposals of the three project phases, from proof of concept to pilot to production. Several projects and their current phases are described above. Approval of projects depends on their feasibility, the available substantive and technical support, the road map for the projects and the estimated cost of services consumed on the Platform. The Board encourages the task teams and members of the Global Working Group to put forward further project proposals accompanied with indications of how the project will be supported with both human and financial resources.

25.   The Board wants to increase its interaction with task teams through more regular meetings with the task team leads. Those meetings will help to better explain the potential of the Global Platform and its services, and how the Platform can help with task team activities. The Global Platform provides an important sandbox for exploration, with low barriers to entry. Its platform model implies that its value increases exponentially with the level of participation, contribution and expert networking. The key values of the Global Platform, which differentiate it from other data platforms, are: (a) its network of experts; (b) its readiness to manage collaboration, learning, projects, data, services and algorithms; and (c) the quality focus of national statistical offices on coherence, interpretability and repeatability. The Global Platform presents opportunities for national statistical offices to complement and enhance their innovation activities, which may be "trapped" by internal provisioning and limits.

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[9]   See www.ons.gov.uk/economy/economicoutputandproductivity/output/datasets/weeklyshippingindicators.
[10]   See http://camstat.nis.gov.kh/?locale=en&start=0.
[11]   See https://rai.azavea.com/.

C. Global Partnership for Sustainable Development Data

26.   The Global Partnership for Sustainable Development Data[12] is an initiative of the United Nations Foundation.[13] The Global Partnership wants to actively achieve better data for better decisions and better lives by, among other things, forging collective action by driving global collaboration to improve the production and use of data in critical areas; communicating the value of investing in data and of multi-stakeholder collaborations on data; bringing together multiple data communities at the global and national levels to spur innovation and collaboration; and helping to ensure the interoperability of technology platforms for assembling, accessing and using data.

27.   As is evident from the above, the Global Working Group and the Global Partnership are very well aligned in their objectives, and collaboration on the Global Platform fits with all of their aspirations. The Statistics Division and the Global Partnership have taken concrete steps in advancing their collaboration in the management of the Global Platform. The Global Partnership has agreed to manage the contracts with data and service providers, and evaluates the needs of users of the Global Platform. The Statistics Division and the Global Partnership have hired a consultant to review the Global Platform with respect to user needs, user-friendliness and other improvements, with an assessment report to be drafted by the end of 2020.

D. Regional hubs in support of the Global Platform

28.   To facilitate in-person training and project activities using the Global Platform, three regional hubs were established in 2018 in China, Rwanda and the United Arab Emirates. A fourth regional hub is being established in Brazil with the full support of the Brazilian Institute of Geography and Statistics (IBGE). The Statistics Division and IBGE are finalizing an institutional agreement for this purpose. These regional hubs will bring the community of official statisticians together at the regional level to work on projects using big data and data science for the estimation of statistics and Sustainable Development Goal indicators and to conduct corresponding training and capability-building activities.

29.   The regional hub in China has its own office space in Hangzhou and is fully equipped and fully staffed. The basic budget for the hub is in place and has been approved by the Government of China. An opening and signing ceremony of the regional hub was held as a virtual event in early December 2020 and attended by the Under-Secretary-General for Economic and Social Affairs and the Commissioner of the National Bureau of Statistics of China (NBS). Details of the ceremony and the accompanying international big data seminar are provided on the regional hubs web page of the Global Working Group website.[14] For this occasion, NBS extended an invitation to all members of the Global Working Group to visit the regional hub in Hangzhou once the coronavirus disease (COVID-19) pandemic is over.

30.   The regional hub for Africa is hosted in Kigali at the Data Science Campus and the training centre of the National Institute of Statistics of Rwanda (NISR), with additional significant support and guidance provided by the Economic Commission for Africa. NISR has secured the budget and the technical infrastructure. The Government of Rwanda approved the creation of a separate division in NISR, for which the positions are expected to be filled by January 2021. ONS has partnered with NISR in developing the Data Science Campus in Kigali. In 2021, the regional

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[12] See www.data4sdgs.org/whatwedo.
[13] See https://unfoundation.org/what-we-do/initiatives/ for more details.
[14] See https://unstats.un.org/bigdata/regional-hubs.cshtml#china.

hub plans to organize workshops with the Economic Commission for Africa and the Statistics Division, and wants to share real cases and projects, for example, on the analytics of digital payments and on the use of Earth observations for agriculture statistics.

31.   The regional hub in the United Arab Emirates is managed by the Federal Competitiveness and Statistics Centre, which is now part of the Cabinet of the country. The first phase for the hub is to increase awareness of the use of big data in the region. This will be done in collaboration with regional organizations (the Statistical Centre for the Cooperation Council for the Arab States of the Gulf and the Economic and Social Commission for Western Asia) by organizing joint training workshops and joint webinars. The regional hub in the United Arab Emirates would like to specialize in certain fields, for example, in finance statistics in a project with MasterCard. The hub will reach out to other communities for collaboration on projects, especially other government entities, universities and the younger population in general.

V.   The community model as a funding strategy for the United Nations Global Platform

32.   ONS invested significantly in the creation of the Global Platform in the period 2018-2020. On 1 June 2020, ONS officially handed over the Global Platform to the United Nations community. At that moment, the sustainability of the Global Platform became a collective responsibility of the global statistical community. The financial and technical support for the maintenance of the Global Platform now needs to be delivered by the community. The community model is based on three pillars: in-kind contributions, base funding for the cloud infrastructure and core services, and project funding for additional data and services. The growth of the Global Platform comes from the growth of in-kind contributions and increases in project funding.

33.   A joint letter signed by the chief statisticians of South Africa, Denmark and the United Kingdom and by the Director of the Statistics Division was sent to all members of the global statistical community in April 2020 inquiring about possible contributions, financially or in-kind, to the Global Platform. In total, 44 institutes (40 countries and 4 agencies) responded. About 50 per cent of the institutes were willing to contribute technical staff, and about 45 per cent were interested in making contributions in kind to project and training activities. Only 25 per cent indicated that they could contribute financially to specific activities. In some comments, it was noted that while the COVID-19 pandemic provided an opportunity to show the benefits of new data solutions, it also reduced the available funds of the institutes.

34.   As mentioned, the Global Platform is actively being used for projects with a few hundred experts providing in-kind contributions. More information technology experts are needed to effectively support the increasing number of projects. Another weakness – at this moment – is the lack of sustained funding to pay for the necessary, core services of the Global Platform, namely, the cloud services and some support services, including user access, documentation and management services. At current usage, this amounts to about $300,000 per year. This is called the base funding of the Global Platform. Additional data and services, such as for the automatic identification system data projects, currently amount to another $300,000 on a yearly basis. This part is called the project funding, and more projects will require more funds. The Government of China helped substantially for the period from June to December 2020 by providing $400,000 to support the Global Platform.

35.   At its plenary meeting in November 2020, the Global Working Group supported the community model and agreed to create a finance committee to develop a strategic approach to fundraising for the Global Platform.

36.   In its report to the Statistical Commission (E/CN.3/2021/7), The Friends of the Chair group on economic statistics proposes various key activities, including collaborative action on co-investment and co-development for global statistical infrastructure, operations and data solutions, which could be achieved through common technological solutions for the integration of geospatial data, the use of data science, the use of nowcasting techniques and the production of high-frequency statistics. The Friends of the Chair group recommends using the Global Platform for this purpose. This proposal by the Friends of the Chair group aligns very well with the proposal of the Global Working Group of co-funding in the community model for the Global Platform.

VI.   Events organized by the Global Working Group on Big Data for Official Statistics

A.   Sixth International Conference on Big Data for Official Statistics, 31 August–2 September 2020, virtual

37.   The sixth International Conference on Big Data for Official Statistics[15] was successfully organized as a virtual event by Statistics Korea, the Statistics Division, ESCAP and the Global Working Group over three consecutive days, with a total of 12 sessions. The main themes were "The COVID-19 response by the statistical community", "Big data and the Sustainable Development Goals" and "Global data collaboration and global training programme". A total of 1,700 participants registered for the event. Recordings of all the sessions are available on the web page of the Conference.

38.   At the opening session, the Minister of Science and Information and Communications Technology of the Republic of Korea, Ki-Young Choi, addressed the Conference and emphasized the increasing importance of big data in societies because of the continuing rapid development of digital technologies. The Executive Secretary of ESCAP also spoke, and noted three points for further discussion: (a) the use of big data to analyse inequalities and vulnerabilities in societies; (b) the need for investing in basic information and communications technology infrastructure and skills; and (c) the strengthening of environmental statistics and accounts to support the green recovery across economies and societies.

39.   The Conference sessions dealt in general with the role of the statistical community in the response to COVID-19 and the implications for the monitoring of the Sustainable Development Goals. Many examples were presented in areas such as the monitoring of the economic impact on jobs, businesses or specific sectors, such as tourism, or the monitoring of the reduction in human mobility to contain the spread of the disease. Some of the task teams of the Global Working Group presented their work, such as on the use of mobile telephone data for tourism, migration, population and transport; the use of satellite data for agriculture, the environment and oceans; and training in the use of new data sources and new technologies. One session explicitly addressed the co-investment and co-funding of the Global Platform. The final session of the Conference highlighted the latest developments of the Global Platform and the regional hubs in China, Rwanda and the United Arab Emirates.

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[15] See https://unstats.un.org/unsd/bigdata/conferences/2020/.

Seoul Declaration

40. The Global Working Group took the opportunity of the sixth International Conference to draw attention to some important issues contained in its Seoul Declaration, such as mainstreaming the use of big data for the compilation of official statistics and Sustainable Development Goal indicators, increasing support for the Global Platform and the regional hubs, promoting the use of privacy-preserving techniques and moving forward quickly on the implementation of a global programme on training and certification in the use of big data and data science for official statistics. The full text of the Seoul Declaration is contained in the annex to the present report.

B. Other events

41. Owing to COVID-19, no physical events have taken place since early 2020. Several virtual events have been organized by the Global Working Group in addition to the sixth International Conference on Big Data for Official Statistics, namely:

(a) The automatic identification system hackathon, organized in September 2020 with the participation of 17 teams from around the world;

(b) The "Road to Bern" webinar of the Global Working Group,[16] held in October 2020, with a presentation on the new data science competence centre at the Federal Statistical Office of Switzerland and presentations of the winners of the automatic identification system hackathon;

(c) The Asia-Pacific Stats Café,[17] where the Vice-Chair of the Global Working Group (Niels Ploug) participated in a discussion on the theme "The prospect of big data for official statistics in Asia and the Pacific". The event was followed by three thematic cafés involving members of the Global Working Group, on the use of big data for environment statistics, social and demographic statistics and economic statistics, respectively.

ESCAP, as a member of the Global Working Group, also encouraged data innovation and the use of big data for official statistics as a feature of the 2020 Asia-Pacific Statistics Week and, together with the Statistics Division, gave guidance for several papers to be further developed, submitted and published in the December 2020 issue of the *Statistical Journal of the International Association for Official Statistics*.

42. Global Working Group members have also used regional intergovernmental forums to advance the work of the Group, namely:

(a) The seventh session of the ESCAP Committee on Statistics, which discussed embracing big data for official statistics and decided that it should feature in the Committee's programme of work with an emphasis on sharing country research, experiences and good practices and facilitating capacity development;

(b) The seventh meeting of the Statistical Commission for Africa, at which the Statistics Division and Rwanda gave a joint presentation on the Global Platform and the regional hub for Africa in Kigali and invited all member States of the Economic Commission for Africa to use the Global Platform and the hub, which have been created for international collaboration on innovative data solutions and for training activities in the use of big data and data science;

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[16] See https://unstats.un.org/bigdata/events/2020/road-to-bern/default.asp.

[17] See www.unescap.org/events/asia-pacific-stats-cafe-series-prospect-big-data-official-statistics-asia-and-pacific.

(c)   The ninth session of the Statistical Commission of the Organization of Islamic Cooperation, to which the Statistics Division contributed by giving a presentation on the work of the Global Working Group and inviting all members of the Organization of Islamic Cooperation to use the Global Platform.

VII. Priorities for the programme of work for 2021

A. Global training programme

43.   The highest priority for the Global Working Group in 2021 will be the roll-out of the global training programme in the various areas of big data and data science. The training courses on privacy-preserving techniques are at an advanced stage, while the courses on the use of satellite data for crop statistics, the use of scanner data for price index calculation and the use of automatic identification system data for international trade statistics are being outlined in detail. These courses will be given at the introductory, intermediate and advanced levels. It is envisioned that the courses will be introduced with separate short modules for raising awareness on the subject matter for a broad audience. In parallel, a learning management system is being implemented on the Global Platform so that the online courses can be managed and run by the Global Working Group itself. The task team on training, competencies and capacity development will coordinate the development of the courses and conduct the courses through the learning management system.

B. Regional hubs

44.   2021 will be the year that the activities in the various regional hubs will kick off. In 2020, the COVID-19 pandemic made it impossible to bring people together. Hopefully, this situation will end in 2021 and in-person activities can resume. The regional hub in China has brought together an international advisory committee to propose training and project activities. In a similar manner, the regional hubs in Rwanda and the United Arab Emirates are also gearing up. It is expected that the courses developed by the task teams can be rolled out immediately at the regional hubs.

C. United Nations Global Platform

45.   In 2021, several projects (ARIES, the global group register and "data as a service"), which are currently in the proof of concept phase, will enter the pilot phase, in which they will deliver tangible results. It is expected that with some additional information technology experts and some additional funding, several more projects that are currently in the pipeline (on rural access to all-season roads and on the mapping of informal settlements) can be executed on the Global Platform.

46.   Recommendations for improvements from the ongoing review of the Global Platform are expected to be reported in early 2021. Implementation of those improvements may come with a cost. A newly established finance committee for the Global Platform can take into consideration the current situation and the recommended improvements for its plans to secure longer-term financial stability for the Platform.

VIII. Name change of the Global Working Group

47. The Friends of the Chair group on economic statistics proposed an alignment of naming of the various expert groups under the Statistical Commission. The Global Working Group on Big Data for Official Statistics can be consistent with that approach. It is proposed that the name be changed to the United Nations Committee of Experts on Big Data and Data Science for Official Statistics.

IX. Action to be taken by the Statistical Commission

48. **The Commission is invited:**

(a) **To acknowledge and support the work done by the task teams, including the handbooks, methods, projects and training courses, and to support the creation of a new task team on the acquisition of global private sector data;**

(b) **To promote the use of the United Nations Global Platform and the regional hubs for training and project activities, including for the compilation of fast indicators to inform policies on emerging issues, and, in particular, to encourage statistical institutes from least developed countries and small island developing States to use the capabilities of the Global Platform in their service delivery;**

(c) **To endorse the community model as a funding strategy for the Global Platform to ensure its sustainability for the longer term, and in this regard:**

(i) **To encourage all members of the global statistical community to make in-kind contributions by making experts available;**

(ii) **To encourage all members of the global statistical community and its partners to contribute financially to the platform, either directly or through project funding;**

(iii) **To support the creation of a finance committee to further develop a strategic funding approach;**

(d) **To encourage and support the timely implementation of a global programme on training and certification in the use of big data and data science for official statistics;**

(e) **To endorse the change of the name of the Global Working Group on Big Data for Official Statistics to the United Nations Committee of Experts on Big Data and Data Science for Official Statistics.**

Annex

Seoul Declaration

Recalling the mandate of the Global Working Group on Big Data for Official Statistics to provide strategic vision, direction and coordination for a global programme on the use of big data and advanced technologies in the compilation of official statistics and of the Sustainable Development Goal indicators, including developing the necessary capacity and skills in national statistical systems,

Recalling the adoption of the Cape Town Global Action Plan for Sustainable Development Data by the Statistical Commission at its forty-eighth session, in March 2017, to support the implementation of the 2030 Agenda for Sustainable Development, which requires the collection, processing, analysis and dissemination of an unprecedented amount of data and statistics at local, national, regional and global levels and by multiple stakeholders, bringing together Governments, civil society, the private sector, the United Nations system and other actors and mobilizing necessary resources,

Reiterating the Kigali Declaration of the Global Working Group that the United Nations Global Platform:

- Should provide technological infrastructure as a service for all States Members of the United Nations, especially least developed countries and small island developing States, to facilitate their access to global data sets and state-of-the-art tools and services,

- Should also connect all its partners, including the United Nations agencies as well as government agencies, private sector companies, research institutes, academia and civil society organizations, to work jointly on common goals,

- Should facilitate the exchange, development and sharing of data, methods, tools and expertise, and accelerate data innovation for official statistics and Sustainable Development Goal indicators,

- Should provide an environment for capacity development activities to teach and develop new competencies in the areas of artificial intelligence, data science, machine learning and privacy-preserving techniques,

Reiterating the Kigali Declaration of the Global Working Group that the United Nations Global Platform should have multiple hubs in various regions of the world to build capacity and deliver regional support, including for official statistics, working under a well-defined governance framework,

The Global Working Group, at the sixth International Conference on Big Data for Official Statistics, is:

- Calling on the statistical community to embrace the use of big data for the compilation of official statistics and Sustainable Development Goal indicators by establishing new partnerships with multiple stakeholders, bringing together Governments, civil society, the private sector, the United Nations system and other actors and mobilizing necessary resources;

- Calling on the statistical community and its stakeholder communities to increase support to the United Nations Global Platform through in-kind and financial contributions, to ensure the sustainability of the platform for the longer term;

- Calling on the statistical community to promote the use of the regional hubs of the United Nations Global Platform for training and project activities;

- Encouraging all statistical institutes, especially those from least developed countries and small island developing States, to use the capabilities of the United Nations Global Platform in their own service delivery;

- Calling on the statistical community and its public and private sector partners to continue their efforts in finding secure and trusted solutions for data-sharing using appropriate privacy-preserving techniques;

- Encouraging all stakeholder communities, including the private sector, to share data, methods, technology and learning materials on the United Nations Global Platform for social good;

- Promoting the use of the United Nations Global Platform for the compilation of fast indicators to inform policies on emerging issues and key priority agendas in real time, making swift course adjustments possible;

- Moving forward quickly on the implementation of a global programme on training and certification in the use of big data and data science for official statistics.