**Report of the Conference on National Reporting and Dissemination Platforms
New York, 22-24 January 2018**

*Including in Annex 1:
Principles of SDG Indicator Reporting and Dissemination Platforms
and guidelines for their application*

Prepared by United Nations Statistics Division / Department of Economic and
Social Affairs

Conference on National Reporting and Dissemination Platforms
New York, 22-24 January 2018

Report

I.   Introduction

1.   The Statistics Division of the Department of Social and Economic Affairs (UNSD/DESA) organized in cooperation with multiple partners a conference to discuss the establishment of national data platforms for the reporting of the Sustainable Development Goals (SDG) indicators in both developing and developed countries. Such national reporting and dissemination platforms are a crucial element in the monitoring and reporting of progress towards the Sustainable Development Goals at all levels. The conference brought together more than 60 experts from national statistical offices, international and regional organizations with programmes or initiatives that support reporting and dissemination platforms in countries, as well as donors and solution providers.

2.   The conference discussed user needs, reviewed best practices, showcased possible solutions, and discussed ways forward for countries. The conference provided the opportunity to review efforts by countries, partners and solution providers. In addition, the conference discussed possible recommendations and guidelines for basic requisites of national reporting and dissemination platforms suitable to SDG follow-up and review, which aim to facilitate the coordination of efforts and the establishment of interoperable and sustainable solutions. The outcomes of the conference will be presented to the 49th Session of the United Nations Statistics Commission as a background document.

3.   The meeting was opened by Mr. Laurence Chandy, Director of Data, Research and Policy at UNICEF, Mr. Seb Mhatre of the UK Department of International Development, and Mr. Stefan Schweinfest, Director of the UNSD. The meeting was conducted using focus group discussions, panel discussions, presentations and case studies as well as open discussions.

4.   Section II of this document contains the conclusions and main points raised during the meeting. Section III contains considerations for the way forward that were discussed at the meeting. Annex 1 of this document contains draft principles and guidelines for national reporting and dissemination platforms, which were discussed at the meeting and subsequently updated based on the comments of participants provided during and shortly after the meeting.

5.   The agenda of the meeting is available in Annex 2 and the presentations under each agenda item are available on the event's page at: https://unstats.un.org/unsd/capacity-building/meetings/National_Platforms_for_SDGs. The list of participants is available in Annex 3.

6.   A National Reporting and Dissemination Platform can be understood as a means to report and disseminate national statistics including SDG indicators, and refers to a web site, database, and associated IT infrastructure used to collect, store, secure, and ultimately disseminate data and related metadata and documentation in an easily accessible way to reach all targeted users. Targeted users may encompass government officials and policy makers, members of academia, non-governmental organizations, non-profits, international organizations, media and other information providers, business community, as well as individual users. Given that the scope of the platforms is wider than reporting and dissemination for the SDGs, the platforms can be also referred to as "national data platform".

II.   Conclusions and main points raised at the meeting

7.   Below are the main points emerging from the discussion under the agenda item 1. Setting the stage:

   i.   There is a need for an efficient data architecture that allows all data sources to be integrated and used;

  ii.   National reporting and dissemination platforms are important for communication and dissemination, but also to compile data and organize the process of producing data and indicators at the national level, establishing, for instance, the roles of data custodian entities and minimum quality standards. Such data platforms play a role in coordinating data flows within national information systems beyond the SDGs, and even beyond purely statistical data (e.g., by helping integrate geospatial information at the national and subnational levels);

  iii.   Different countries are in different stages of their statistical development, and solutions need to be flexible and respond to the countries' respective needs. This requires that solutions are interoperable following established statistical standards. Principles and guidelines should facilitate the implementation of these standards and establish common ground rules;

  iv.   Countries have often expressed the need for guidance on how to assess different alternatives for the development of national reporting and dissemination platforms. There is no one-size-fits-all solution, and interoperability is key to integrate the presently disparate systems;

  v.   Statisticians are concerned with data comparability. Statistical and technical standards need to be reflected in the data architecture;

  vi.   There is a commitment by partners to provide support for data for decision making based on the three principles of collaboration, open source and interoperability.

8.   Below are the main points emerging from the discussion under the agenda item 2. Analysis of user needs from national and international perspectives:

  i.   There are different user groups with different needs in accessing SDG indicator data and other data (including machine-to-machine data exchange); users include data producers and indirect users; beyond government policy makers and administrators, users include media, academia and researchers, civil society, and citizens;
 ii.   There should be ongoing user engagement and feedback mechanisms, and there should be a process for the education of users; a user community should be created;
iii.   To be successful, national reporting and dissemination platforms must be easy to use and engaging, regularly updated and be a trusted, independent and authoritative source of SDG data (and other data) that complies with quality standards;
 iv.   A primary purpose of a national reporting and dissemination platform is to monitor the national sustainable development priorities and inform policy makers and citizens; sub-national data drives accountability within local government; national reporting and dissemination platforms ideally establish a single Point of entry for SDG data, and should include disaggregated data down to the lowest geographical level;
  v.   There is a distinction between data reporting and data dissemination. The former is about providing data to specific, known counterparts (where machine-to-machine data exchange is more relevant); the latter is about giving access to data to very different types of users.
 vi.   Reporting at different levels should be consistent, comparable and harmonized; while SDG reporting at national and subnational level may be different than at the global level, there is a need to understand the differences;
vii.   Metadata is necessary to understand why country data may be different from global data; reporting and dissemination platforms should be metadata driven and be able to transmit metadata together with the data; there is the need to coordinate metadata across platforms; SDMX attributes and metadata structures need to be available.

9.   Below are the main points emerging from the discussion under the agenda item 3. Strategies for the SDG statistical data management and dissemination, identifying requirements and challenges:

  i.   Some countries have already publicly launched their SDG reporting and dissemination platforms and are now working on improving them, while many other countries are still in an evaluation phase; international agencies are already building, or planning to build capacity in countries for SDG data dissemination in their area of expertise and based on their mandate;
 ii.   A standalone SDG dissemination system may not be sufficient, and in many countries a full data warehouse is required;
iii.   Many countries require that the national reporting and dissemination platform also provides support for data collection from multiple sources; in the past, many dissemination platforms suffered from a lack of automation of data entry;
 iv.   National reporting and dissemination platforms need to be able to satisfy requirements of sub-national, national, regional and global levels; many countries start with a focus on the needs at national level.

10.   Below are the main points emerging from the discussion under the agenda item 4. National Reporting Platforms (NRPs) - Best practices and lessons learnt, identifying key success factors and lessons learned:

i.   The development of national reporting and dissemination platforms needs to take into account work-flows, data governance, roles and responsibilities, as well as policy needs. Success of a national reporting and dissemination platform depends on its integration with the implementation of the national development agenda, the timeliness of data, and on a seamless integration with the national processes of data production and management;

ii.   A national reporting and dissemination platform should be seen as a building block in the overall statistical information system that facilitates the coordination of the national statistical system, especially for the follow-up and review of the 2030 Agenda at national level; proper coordination of the national statistical system is a critical success factor as the scope of the task is much broader than in the past with more than 230 SDG indicators and the need for disaggregation to leave no one behind;

iii.   A fully functional national reporting and dissemination platform requires continuous funding; support and commitment from high level policy makers is key to the sustainability of the platform; to secure ongoing funding, it is necessary to demonstrate the ability to deliver the data, statistics and information that policy makers require;

iv.   Key challenges in the past were (i) the underuse of the platforms due to factors such as lack of demand-side capacity, (ii) outdated data, (iii) lack of trust, (iv) insufficient national ownership in multi-country initiatives, (v) lack of sustainability of efforts, (vi) fragmentation of efforts and duplication of platforms, (vii) limited support for the "full data life cycle", (viii) discrepancies between data at different levels, and (ix) lack of metadata;

v.   Success factors of MDG platforms in the past include: (i) simplicity, (ii) widespread adoption, (iii) use of standard reporting formats (SDMX), (iv) having national data champions, (v) data transparency, (vi) a robust community to take ownership, (vii) international support - without international technical support the national reporting and dissemination platforms were not sustainable in many countries;

vi.   Success factors for the future are (i) broad and continuous engagement with users, including advocacy, (ii) visibility and accessibility, (iii) country ownership and buy-in at all levels, (iv) having "core" datasets (of indicators) at the country/regional level that are aligned with the national development priorities, (v) statistical capacity and coordination within the national statistical system, (vi) capacity building and training, (vii) support of partners and coordination of their efforts, and (viii) open data as an operating principle;

vii.   On the technical side key success factors will be (i) interoperability of platform components and solutions as there will be multiple and overlapping systems in many countries, (ii) data life cycle process management, (iii) use of open source technologies according to countries' needs, (iv) agility to technological change,

(v) metadata-driven implementation, (vi) support for localization, (vii) implementation of multi-language support for a wider adoption and use;

viii. Countries should establish their own path responding to their specific needs and context, create a community of collaboration among national data stakeholders, and should not be pushed towards specific solutions; international partners should seek an integration of their efforts.

11. Below are the main points emerging from the discussion under the agenda item 5. Building the business case for a national reporting platform:

i. Human-centred design and system thinking are essential to analysing the environment for developing national reporting and dissemination platforms and engaging the broad user base;

ii. Outreach to and buy-in of policy makers is essential for the sustainability of solutions, especially when resources are constrained. A good way to achieve buy-in is linking the data requirements to the policy agenda for sustainable development; high-level commitment of decision-makers is also needed to ensure better coordination and avoid duplication;

iii. National reporting and dissemination platforms should be aligned with and support the implementation of national development priorities, and should be integrated into National Strategies for the Development of Statistics.

12. Below are the main points emerging from the discussion under the agenda item 6. Building the solution for NRPs: innovative approaches and technologies:

i. The use of open data as an operating principle for access to data is a balancing act between the benefits and challenges, balancing in particular openness with the need for security and privacy;

ii. The establishment of a national reporting and dissemination platform should aim at building the backbone of the national statistical data infrastructure based on components that follow international standards, are interoperable and cover the full data lifecycle; an important element is modularity – solutions should respect the phases of the General Statistical Business Process Model (GSBPM);

iii. SDMX provides a complete information model that organizes and structures statistical data and its exchange, and hereby enables interoperability of solutions; it is a mature standard and used already in many statistical domains;

iv. Frictionless Data is the idea of packaging data in a standardized way to make the use, transmission and validation of data much simpler and seamless;

v. The use of open source software that is transparent, free to use and customize and has an existing community around it can dramatically cut down on the effort and time to develop a software solution, as demonstrated by examples from Brazil and the United States. However, when pursuing open source solutions, consideration must be given to the total cost of ownership beyond the initial development of the software solution;

vi. The provision of machine-readable access to data and metadata through an Application Programming Interface (API) allows external data users to embed the data in their own software applications and data platform and is therefore an

increasingly important and wide-spread dissemination tool; however, making an API public means a commitment to others to maintain it and keep it accessible in the long term;

vii. At the same time, APIs allow to build modular and interoperable data management and dissemination systems within organizations which can lead to dramatic gains in efficiency and flexibility; it is even possible to build on legacy technologies as long as open formats such as JSON and CSV are being used;

viii. Open Linked Data refers to a set of best practices for publishing and connecting structured data on the Web and is based on open standards defined by the World Wide Web Consortium (W3C). Among the key technologies that support Linked Data are Uniform Resource Identifiers (URIs) as a generic means to identify entities or concepts in the world;

ix. Geographical information systems (GIS) are mature and powerful tools for the integration of all types of data; GIS use maps as common language that help us understand patterns and changes in the world and hereby facilitate policy analysis, planning and decision making; National reporting and dissemination platforms should integrate the use of geospatial data;

x. The technical instruments to achieve interoperability are available, and it was pointed out that the challenge is its implementation.

13. Below is a summary of the information emerging from the presentation of case studies during the meeting under agenda item 7:

i. With presence in more than 130 countries, UNICEF has been historically involved in supporting countries on national reporting and dissemination platforms, leading on the efforts to support the DevInfo data platform on behalf of the UN system; the experience from the past shows that countries need to avoid being locked-in with specific solutions, and to put focus on sustainability issues;

ii. Countries are looking into different options for reporting on the SDGs and many are interested in solutions that can be supported and maintained in-house;

iii. National reporting and dissemination platforms should encompass SDG indicators as a subset but also cover other national development agendas, as countries may not have sufficient resources to develop and maintain multiple tools;

iv. The Africa Information Highway (AIH) is the African Development Bank's (AfDB) initiative that has linked the African countries through the Open Data Platform (ODP); this initiative covers data management and data dissemination tools; The system facilitates data exchange in SDMX; using the ODP, the IMF implemented for countries a National Summary Data Page (NSDP) which covers all e-GDDS data domains;

v. National reporting and dissemination platforms should include workflows for uploading, reviewing and publishing SDG and other data and support bringing together data from various sources. Jordan is piloting a project to connect the information system of the Ministry of Education; Mexico is integrating data from existing statistical legacy databases into its ArcGIS online platform as a way to achieve interoperability with other platforms; statistical and geospatial data are tightly integrated in Mexico;

vi.   As part of a UNSD/Esri research initiative, Ireland has launched a data platform based on an ArcGIS environment that includes approximately 95 maps and allows to publish "Story Maps", which combine text, graphs and maps to tell a specific story using data; one of the main challenges is to be able to organize and disseminate on the same platform datasets corresponding to national, European, and global SDG indicator frameworks;

vii.   In 2016, the United States made its national reporting platform available in GitHub; the US approach takes advantage of GitHub features to manage not only code, but also data (e.g., version control and collaboration); the United Kingdom has built on and further developed the US platform; the project philosophy is to start small based on rapid application deployment, and iterate frequently; the US platform currently has manual data entry but data collection from APIs is in the works;

viii.   The development of national reporting and dissemination platforms should not be seen as one-off projects, but as a continuous activity that needs to be sustained over time; the need for ongoing capacity development from the onset of the implementation of a national reporting and dissemination platform was pointed out;

ix.   Countries need to assess their internal capacity before starting the development and implementation process of a national reporting and dissemination platform; for example, in case of the Philippines the representative mentioned the NSO's experience in using open source and proprietary software and concluded that the implementation of the proprietary software was much more intuitive and easier to setup and use than the available open source tools;

x.   An API for UNSD's Global SDGs database has been made available, which opens the use of the database for a wider development community; a new beta interface has been developed based on the Global Database API; the development environment relies on open source technologies that could be shared with interested countries for further use and development;

xi.   The SDGs SDMX Data Structure Definition (DSD) is being developed by a working group established by the Inter-Agency and Expert Group on SDG Indicators (IAEG-SDGs); it was requested to provide the global SDMX DSD in the registry for public consumption; countries also requested SDMX implementation guidelines for national indicators and the sub-national level to support the respective data flow;

xii.   The development of a Metadata Structure Definition (MSD) for the SDG indicators will start after the finalization of the DSD; in this context, it was suggested to reach out to the W3C group that is working on DCAT, an RDF vocabulary designed to facilitate interoperability between data catalogues published on the Web.

14.   Below is a list of additional data platforms or platform components[1] that were briefly introduced:

i.   The .Stat suite which is supported by the Statistical Information System Collaboration Community (SIS-CC) set up by the OECD, is an SDMX based modular platform covering the complete end-to-end data lifecycle (GSBPM) from collection through to dissemination, enabling the assembly of the different building blocks to build tailored

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[1] This list is not exhaustive as there may be many more data platforms or platform components in use.

data portals, topical or regional data explorers, or lightweight reporting platforms, in a fluid and agile manner.

ii. CKAN is an open-source and community driven solution for the development of open data management systems for publishing data online; at the moment one of the main focus areas is on making CKAN interoperable with other systems, and to develop tools for data management and data quality assurance.

iii. The SDG Tracker by DataActLab is an intuitive data visualization tool which is interoperable, meaning based on open standards;

iv. PublishMyData by Swirrl manages large collection of data and metadata and follows open standards; it provides RDF query language using SPARQL;

v. Data For All (DFA), by Community Systems Foundation, is a platform of loosely-coupled open source software tools for monitoring development priorities, by complying with international standards to capture, manage, analyse and strategize using data.

III.   Principles and guidelines and the way forward

15.   UNSD introduced a set of proposed principles and guidelines for the development and implementation of national reporting and dissemination platforms, which were also shared with participants before of the meeting. Participants welcomed the principles and guidelines as an excellent starting point and provided many comments concerning its contents and structure; it was pointed out that the principles and guidelines are not a checklist but considerations that may not all be satisfied at the same time or to the same degree; the principles and guidelines do not prescribe a solution but support an informed decision by countries and partners looking to design national reporting and dissemination platforms for the SDGs; participants provided additional comments in writing.

16.   Subsequently to the meeting UNSD finalized the principles and guidelines based on the comments received (see Annex 1 of this report); the results of the meeting including the principles and guidelines will be provided to the upcoming 49th session of the United Nations Statistical Commission as a background document. The Commission is expected to express its views regarding the results of this meeting, including the proposed principles and guidelines.

17.   It is suggested that the document on the principles and guidelines will be introduced to a larger audience and further discussed throughout 2018, such as at UN World Data Forum in October, and then finalized for submission to the 50th session of the Commission in 2019.

18.   UNSD offered to hold a follow-up conference in late 2018 or early 2019 to review the work undertaken for the establishment of national reporting and dissemination platforms, also in light of the proposed principles and guidelines. Furthermore, it was suggested to establish a user community and/or a community of practice in respect to national reporting and dissemination platforms.

19.   Countries that have not chosen a specific solution for their national reporting and dissemination platform are expected to develop their respective business case and mobilize the required resources with support of international partners, and may seek the collaboration of partners and solution providers on pilot efforts; it is hoped that designed solutions will take into account the discussed principles and guidelines and will be portable to other countries.

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Annex 1: Principles of SDG Indicator Reporting and Dissemination Platforms and guidelines for their application

Final Draft (February 2018)

1.   The global SDG indicator framework developed by the Inter-agency and Expert Group on SDG indicators, and adopted by the General Assembly in 2017 in its resolution on Work of the Statistical Commission pertaining to the 2030 Agenda for Sustainable Development (A/RES/71/313), is the basis for reviewing the implementation of the 2030 Agenda for Sustainable Development. In the same resolution, the General Assembly urges the United Nations Statistical Commission to ensure the harmonization and consistency of data and statistics for the indicators used to follow up and review the Sustainable Development Goals and targets.

2.   The High-Level Group for Partnership, Coordination and Capacity-building for Statistics (HLG-PCCB) has been tasked by the Statistical Commission to promote system-wide coherence and coordination for data and statistics in support of the 2030 Agenda for Sustainable Development, as the implementation of the SDG indicator framework requires national statistical systems to store, analyze, share and disseminate a large volume of complex SDG-related data and indicators, disaggregated by characteristics such as age, sex, residence, income, and disability at the national and sub-national levels.

3.   The main framework for responding to the data needs of the 2030 Agenda is provided by the Cape Town Global Action Plan for Sustainable Development Data, adopted by the UN Statistical Commission at its 48th session and endorsed by the UN General Assembly in its resolution A/RES/71/313. Strategic Area 4 of the Cape Town Global Action Plan on "Dissemination and use of sustainable development data" and its Objective 4.1 call to "develop and promote innovative strategies to ensure proper dissemination and use of data for sustainable development".

4.   Based on the achievements and lessons learned from monitoring the Millennium Development Goals (MDGs), national statistical offices have stressed the need for national SDG indicator reporting and dissemination platforms to improve access to data on key national development priorities and the transparency of official statistics, in compliance with the Fundamental Principles of Official Statistics.

Definition

5.   A National Reporting and Dissemination Platform can be understood as a means to report and disseminate national statistics including SDG indicators and descriptive metadata, and refers to a web site, database(s), and associated IT infrastructure, workflows and processes used to collect, store, secure, and ultimately disseminate data and related metadata and documentation in an easily accessible way to reach all target users. Target users may encompass government officials and policy makers, members of academia, non-governmental organizations and non-profits, international organizations, media and other information providers, business community, as well as individual users.[2] –Given that the scope of the platform is wider than reporting and dissemination for the SDGs, the platforms can be also referred to as "national data platform".

Principles

6.   The following principles for the design and implementation of national data platforms were discussed and proposed at the meeting on National Reporting Platforms, held from 22 to 24 January 2018 in New York:

   1. Clear institutional arrangements and management
The responsibility for the development, implementation and maintenance of a National Reporting and Dissemination Platform, including the required coordination and cooperation within the national statistical system should be clearly established through adequate laws and/or regulations, mandates and standard operating procedures. The National Statistical Office, commonly tasked with the coordination of the national statistical system, is typically assigned this responsibility.

   2. Fitness for purpose
The exact purpose, scope and features of the National Reporting and Dissemination Platform should be clearly established in cooperation and consultation with all stakeholders and users. National Reporting and Dissemination Platforms should comply with the Fundamental Principles of Official Statistics and should address the priority needs and requirements of subnational, national, regional and global monitoring and reporting.[3]

   3. Sustainability
The decision on the purpose, scope, features, development and implementation of the National Reporting and Dissemination Platform needs to take into account the availability of internal and external resources and capacities over the medium and

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[2] See National Reporting Platforms (Practical Guide), prepared by the UNECE Task Force on Reporting SDG Indicators Using National Reporting Platforms, 8. December 2017. To conform with the Fundamental Principles for Official Statistics, a national reporting platform would ideally have the following minimal features: (a) gather official statistics calculated according to established and reliable methodology; (b) provide national and global metadata in a transparent manner; (c) be publicly accessible; (d) allow for feedback from data users.

[3] An important consideration in this context is the national reporting mechanism. See National Mechanisms for providing data on global SDG indicators, prepared by the UNECE Task Force on Reporting SDG Indicators Using National Reporting Platforms, 7. December 2017.

long term. Government offices and partner organizations need to consider the specific objectives of the country in establishing its National Reporting and Dissemination Platform, the sustainability of the platform, and the duration of support by the partners.

4. Interoperability and statistical standards

The components of National Reporting and Dissemination Platforms should follow international and national statistical standards and best practices, to facilitate the integration, customization and further development of components and different solutions. In particular, standards should be supported that aim to facilitate data harmonization and exchange across different stages of the statistical production and across institutions, including common data structure definitions and code lists.

Guidelines for the implementation of a SDG Indicator Monitoring and Reporting Platform

7. The above principles are intended to be universally applicable and Member States may consider them when establishing their National Reporting and Dissemination Platform to foster interoperability of solutions and data.

8. The following guidelines are directed in particular at countries that aim to develop their National Reporting and Dissemination Platform jointly with development partners and solution providers, but may be equally applicable to any country.

1. National Ownership. National statistical offices should have the ability to maintain, adapt, transform and customize their National Reporting and Dissemination Platform to address their own and their users' needs, such as the management of subnational administrative boundaries, country-specific ethnic and language groups, and additional indicator definitions related to national development priorities. Reference principles: 1, 2, 3.

2. Collaboration. National Reporting and Dissemination Platforms should be designed, developed, improved and maintained on the basis of a collaborative approach that leverages learning between technology developers, donors, policy makers, subject-matter experts, business partners, advocacy groups and both institutional and grassroot users. Reference principles: 1, 2, 3.

3. Multilingualism and accessibility. In order to leave no-one behind, to ensure national ownership, and to promote the use and impact of data for policy and decision making at the local level, National Reporting and Dissemination Platforms should support national languages and accessibility to persons with disabilities, as well as full access across the range of browsers and devices, including mobile devices. Reference principles: 2.

4. User-centered Design. National Reporting and Dissemination Platforms should be designed for and with users, (including both operational and end

users, such as data consumers or NSO officers), and project owners should engage them in all phases of development. This includes, inter alia, the analysis of user-platform interaction and the establishment of a permanent feedback loop that will result in an iterative process of continuous improvement. For this purpose, data platforms should be developed following the Agile principles and using strategies such as design thinking. Reference principles: 2, 3.

5. Data Communication. National Reporting and Dissemination Platforms should implement innovative strategies to improve the presentation, communication and use of data for sustainable development. They should support multiple ways to explore, represent and communicate data on statistical indicators, and address the needs and priorities of diverse groups of users, including policy-makers, legislators, civil society, private sector, the media, the public, and academia. This includes innovative data visualization and data story-telling capabilities. Regular collection and analysis of usage data and online user feedback should guide future modifications and enhancements. Reference principles: 1, 2, 3.

6. Data disaggregation. National Reporting and Dissemination Platforms should support improved access to, and use of, disaggregated data to focus on all segments of the population, including the most vulnerable. In particular, data platforms should allow the management and dissemination of data disaggregated by subnational geographic areas, sex, age group, residence, wealth and income group, disability, ethnicity, migrant status, and other important characteristics. Reference principles: 2.

7. Modularity and extensibility. National Reporting and Dissemination Platforms should be modular, composed of modules (sub-systems) and components that interoperate to service the different phases of the data life cycle. The data that these modules and components consume as inputs and produce as outputs, should as much as possible be based on open standards and protocols such as Statistical Data and Metadata Exchange (SDMX) and Common Statistical Production Architecture (CSPA). The system should support extensibility through addition of modules or components, upstream or downstream. Reference principles: 2, 3, 4.

8. Standardized interfaces. National Reporting and Dissemination Platforms should provide standardized Application Programming Interfaces (APIs) in accordance with the industry best practices such as the OpenAPI Specification. This facilitates creating and sharing data across global, regional, national and sub-national data communities. Reference principles: 3, 4.

9. Scalability. National Reporting and Dissemination Platforms should be able to support needs beyond their immediate or 'pilot' scope of application. By taking into account the needs and resources of different NSO departments and other national agencies, the design of data platforms should facilitate their adoption across the national statistical system. Reference principles: 2, 3.

10. <u>Metadata</u>. National Reporting and Dissemination Platforms should support statistical metadata at the appropriate level of granularity. This includes structural metadata such as codes and their descriptions; reference metadata such as methodology and quality aspects of published indicators; and other relevant information such as the date of last update. Reference principles: 2.

11. <u>Open Data</u>. National Reporting and Dissemination Platforms should be consistent with Open Data best practices, summarized as "Open data and content can be freely used, modified, and shared by anyone for any purpose[4]". National Reporting and Dissemination Platforms should include and follow a data license consistent with the Open Data principles, such as Creative Commons Attribution (4.0) or the Open Database License. Published datasets should be clearly attributed to the originating organization. Reference principles: 2, 3.

12. <u>Linked Data</u>. Responding to the increasing demand for open data to leverage global and national investments in data for evidence-based policy and decision making, National Reporting and Dissemination Platforms should comply with a minimum of level 3 of the 5-star Linked Open Data principles[5]:

    1. Make data available on the web (in any format), under an open license

    2. Make data available as structured data (e.g., Excel instead of image scan of a table)

    3. Make data available in a non-proprietary open format (e.g., CSV instead of Excel)

    4. Use URIs to denote data items, so they can be referenced.

    5. Link own data to other data on the Web, to provide context

    Reference principles: 2, 3.

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[4] http://opendefinition.org
[5] The 5-star rating system for Open Linked Data were proposed by Tim Berners-Lee in 2006, and updated in 2010.

Annex 2: Agenda of the meeting

<u>**Monday, 22 January 2018**</u>

08:30-09:00	Registration
09:00-10:00	**1. Setting the Stage**
10:00-10:15	Break
10:15-12:30	**2. Analysis of user needs from national and international perspectives**
12:30-13:45	Lunch break
13:45-15:30	**3. Strategies for the SDG statistical data management and dissemination**
15:30-15:45	Break
15:45-16:45	**4. National Reporting Platforms (NRPs) - Best practices and lessons learnt**
16:45-17:00	Summary of the day

<u>**Tuesday, 23 January 2018**</u>

09:00-09:15	Recap of previous day, objectives of the second day
09:15-11:00	**5. Building the business case for a NRP**
11:00-11:15	Break
11:15:12:30	**6. Building the solution for NRPs: innovative approaches and technologies**
12:30-13:45	Lunch break
13:45-15:30	(continuation of previous session)
15:30-15:45	Break
15:45-16:45	**7. Case studies: Implementation of platforms**
16:45-17:00	Summary of the day

<u>**Wednesday, 24 January 2018**</u>

09:00-09:15	Recap of previous day, objectives of the third day
09:15-09:55	(continuation of previous session)
09:55-10:15	**8. Other data platforms**
10:15-11:00	Summary and conclusions
11:00-11:15	Break
11:15-12:30	**9. Possible recommendations and guidelines**
12:30-13:45	Lunch break
13:45-14:30	(continuation of previous session)
14:30-15:30	**10. The way forward**
15:30-15:45	Break
15:45-17:00	Conclusions and next steps

Annex 3: List of participants

Name	Country / Organization
Mr. Leonardo Queiroz Athias	Brazil
Mr. Lay Chhan	Cambodia
Mr. Panhara Oukchay	Cambodia
Mr. Omar Seidu	Ghana
Mr. Kevin McCormack	Ireland
Ms. Sona Abuzahra	Jordan
Ms. Elmira Alymkulova	Kyrgyzstan
Mr. Manuel Cuellar Rio	Mexico
Mr. Mohamed Salimi	Morocco
Mr. Houssam El Ouinkhir	Morocco
Mr. Cassiano Chipembe	Mozambique
Mr. Tirtha Raj Chaulagain	Nepal
Mr. Gene Lorica	Philippines
Ms. Bernadette Balamban	Philippines
Ms. Renata Bielak	Poland
Mr. Dominique Habimana	Rwanda
Mr. Risenga Maluleke	South Africa
Ms. Yandiswa Mpetsheni	South Africa
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Ms. Sara Gertrud Frankl	Sweden
Ms. Ruth Davison Minja	Tanzania
Ms. Mouna Zgoulli	Tunisia
Ms. Ann Corp	United Kingdom
Mr. Matthew Steel	United Kingdom
Mr. Philip Ashlock	United States
Mr. Koua Louis Kouakou	African Development Bank
Mr. Momar Kouta	African Development Bank
Mr. Edgardo Greising	International Labour Organization (ILO)
Mr. Andreas Hake	International Monetary Fund (IMF)
Mr. Jonathan Challener	Organisation for Economic Co-operation and Development (OECDD)
Mr. Rajiv Ranjan	Partnership in Statistics for Development in the 21st Century (PARIS21)
Mr. Serge Kapto	United Nations Development Programme (UNDP)
Mr. Molla Hunegnaw Asmare	United Nations Economic Commission for Africa (UNECA)
Mr. Eric Hermouet	United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP)
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Ms. Linda Peters	ESRI
Ms. Jennifer Slotin	Global Partnership for Sustainable Development
Ms. Shaida Badiee	Open Data Watch
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