



# SUSTAINABLE DEVELOPMENT GOALS

## Workshop of Quality on Statistics for SDG Indicators

13 – 15 May 2019, Chiba, Japan

conducted jointly by the Statistical Institute for Asia and the Pacific, Economic and Social Commission for Asia and the Pacific, United Nations Statistics Division, Department of Economic and Social Affairs, United Nations, IMF's Statistics Department and Director General for Policy Planning on Statistical Standards, Ministry of Internal Affairs and Communications, Government of Japan

## Session 1: Global Quality Framework for Sustainable Development Goal Indicators - Part 2

Matthias Reister, Chief  
Development Data Section

Statistics Division, Development Data and Outreach Branch  
United Nations Department of Economic and Social Affairs

## The special challenge of assuring the quality of the SDG indicator data and statistics

### Background

- In September 2015, the United Nations General Assembly adopted the 2030 Agenda for Sustainable Development. Its 17 Sustainable Development Goals (SDGs) and 169 targets are expected to guide the actions of the international community up to 2030.
- Subsequently, in July 2017, the General Assembly adopted resolution 71/313 containing in its Annex the list of 232 global indicators, which were identified by the Inter-agency and Expert Group on the SDG indicators (IAEG-SDGs) and agreed by Member States at the United Nations Statistical Commission (UNSC) to monitor and review the progress towards achieving the 2030 agenda.
- **Comprehensive review in 2020:** Expert Group agreed on general guiding principles, criteria and a timeline for the 2020 comprehensive review. Between May and July 2019, an open consultation will be held on the preliminary list of possible deletions, adjustments, replacements and additions, and by September 2019 the Group will review the results of the consultations

## The special challenge of assuring the quality of the SDG indicator data and statistics

The following 6 factors characterize the special challenge of assuring the quality of the indicator data and statistics for the monitoring of the SDGs:

1. The production of the SDG indicators is a task that may involve all members of the NSS as well as new or non-traditional statistics producers and data providers;
2. The set of identified global SDG indicators is large and diverse ranging from basic presence or absence indicators (e.g. presence or absence of a certain regulation) to indicators involving complex statistical calculations;
3. While some indicators are already calculated, others will require collecting additional data including from administrative and other data sources;
4. Countries are establishing their own national indicator frameworks according to their national circumstances and priorities; these localized frameworks are expected to be based on the global SDG indicators, containing some (or many) but not all global indicators and additional national indicators. Furthermore, countries may utilize different types of proxy indicators, which provide indirect or partial measures of the phenomena which the global indicators cover;

## The special challenge of assuring the quality of the SDG indicator data and statistics

5. The global SDG indicators when adopted in 2017 were at different stages of methodological development with many global indicators considered as being without internationally agreed methodology. There was also an initial lack of compilation guidance aside from the general challenge for countries to understand and compile data for indicators that are new and have not been compiled before;
  6. The disaggregation of the global SDG indicators is a major challenge for countries. However, as by the end of 2018, there has been a lack of methodological guidance on how to disaggregate certain indicators. Also, given that countries have different needs, there is a lack of guidance on which dis-aggregations should be provided on a priority basis across countries in support of global and regional reporting beyond what is reflected in the indicator titles and target names.
- For guidance on the compilation of the global SDG indicators please see: E-Handbook on Sustainable Development Goals Indicators, available at: <https://unstats.un.org/wiki/display/SDGeHandbook/Home>.

## Quality assurance of SDG indicator data and statistics

**Core recommendations: The following core recommendations for quality assurance in Chapter 2 are of particular importance in assuring the quality of the SDG indicator data and statistics:**

- a. **it is recommended** that countries include the requirements of quality assurance in their national statistical legislation and other legislation mandating production of statistics for official use (**core recommendation #2**);
- b. **it is recommended** that countries establish a national quality assurance framework for official statistics and that all members of the national statistical system are committed to continually assess, improve and report on the quality of official statistics, as well as on the quality of data and statistics used in the production of official statistics as required. (**core recommendation #3**);
- c. **it is recommended** that the national quality assurance framework is implemented at the national statistical office and throughout the entire national statistical system. Furthermore, **it is recommended** that the national quality assurance framework is applied to all data and statistics produced outside of the national statistical system that is disseminated with the help and support of a member of the national statistical system or that is used for government decision making, as deemed appropriate and required (**core recommendation #5**).

## Quality assurance of SDG indicator data and statistics

### General considerations

- ❑ Quality assurance for individual producers of official statistics typically starts and focuses on the quality of the statistical outputs. This also applies to SDG indicator data and statistics.
- ❑ However, the quality of the SDG indicators also depends on carrying out proper statistical processes, on an adequate institutional environment and on an efficient management of the statistical system. Therefore, all UN NQAF principles and requirements are necessary for quality assurance of the SDG indicators.
- ❑ The Generic Statistical Business Process Model (GSBPM) provides a basis to systematically examine, identify and address pertinent quality aspects for the development, production and dissemination of SDG indicators.

# Quality assurance of SDG indicator data and statistics

## Institutional arrangements

- ❑ *Role of National Statistical Office (NSO):* Specific arrangements vary, but typically the NSO is the central coordination body of the NSS and has the following responsibilities
  - ❑ overall dissemination and reporting of the SDG indicators.
  - ❑ overarching responsibility in the assurance of quality for the SDG indicators.
  - ❑ Typically compiles the largest share of the SDG indicators that are included in the national SDG indicator framework
- ❑ *Roles of other national statistical system (NSS)-wide bodies:* Depending on the specific national arrangements, quality assurance for the SDG indicators may be supported by an
  - ❑ NSS-wide governance body,
  - ❑ an NSS-wide advisory body and
  - ❑ subsidiary or supporting bodies such as an SDG indicator working group (SDG-WG) or an NSS-wide data quality task force

# Quality assurance of SDG indicator data and statistics

## Institutional arrangements

- ❑ *Roles of the individual producers of the SDG indicator data and statistics:*
  - ❑ Individual producers of the SDG indicators such as government ministries, departments and agencies, and other public and private entities are required to produce high quality data and statistics according to their respective mandates reflected in the laws and regulations of the country or other formal arrangements. Most of the producers of SDG indicators will be members of the NSS while some producers may not be members of the NSS.
  - ❑ All producers of SDG indicators are responsible for assuring the quality of their indicators by properly managing their statistical production processes and outputs.
  - ❑ However, some may be newcomers to statistical quality assurance and may not have the capacity and ability to assure the quality of the SDG indicators under their responsibility alone. In these cases, appropriate capacities need to be built and adequate technical support will need to be provided by the coordination body, other NSS-wide bodies and members of the NSS.

## Quality assurance of SDG indicator data and statistics

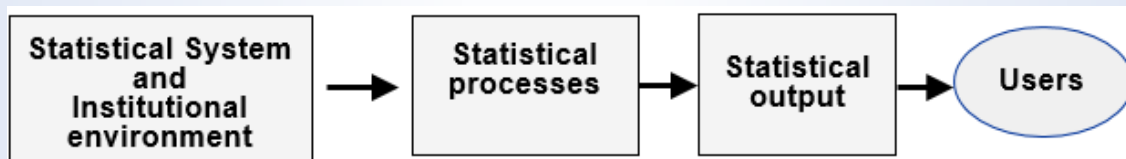
UN NQAF arranges its quality principles and associated requirements into four levels:

Level A: Managing the statistical system

Level B: Managing the institutional environment

Level C: Managing statistical processes

Level D: Managing statistical outputs



Chiba, 13-15 May, 2019

9

## Quality assurance of SDG indicator data and statistics

United Nations National Quality Assurance Framework (UN NQAF) contained in Chapter 3 and Annex A of the UN NQAF Manual

### Level A. Managing the statistical system

Principle 1 - Coordinating the national statistical system  
Principle 2 - Managing relationships with stakeholders  
Principle 3 - Managing statistical standards

### Level B. Managing the institutional environment

Principle 4 - Assuring professional independence  
Principle 5 - Assuring impartiality and objectivity  
Principle 6 - Assuring transparency  
Principle 7 - Assuring statistical confidentiality and data security  
Principle 8 - Assuring the quality commitment  
Principle 9 - Assuring adequacy of resources

### Level C. Managing statistical processes

Principle 10 - Assuring methodological soundness  
Principle 11 - Assuring cost-effectiveness  
Principle 12 - Assuring appropriate statistical procedures  
Principle 13 - Managing the respondent burden

### Level D. Managing statistical outputs

Principle 14 - Assuring relevance  
Principle 15 - Assuring accuracy and reliability  
Principle 16 - Assuring timeliness and punctuality  
Principle 17 - Assuring accessibility and clarity  
Principle 18 - Assuring coherence and comparability  
Principle 19 - Managing metadata

Chiba, 13-15 May, 2019

10

## Quality assurance of SDG indicator data and statistics– some first thoughts

	Focus of implementation of quality assurance for the SDGs (a first possible proposal - subject to further discussions)	Relative importance for NSO as coordinator	Relative importance for data provider	Relative importance for new data sources and providers
<b>Managing the statistical system</b>				
NQAF 1:	Coordinating the national statistical system	Highest	Not applicable	Not applicable
NQAF 2:	Managing relationships with data users and data providers	Highest	Not applicable	Highest
NQAF 3:	Managing statistical standards	Medium	Not applicable	Not applicable
<b>Managing the institutional environment</b>				
NQAF 4:	Assuring professional independence	Medium	Medium	Medium
NQAF 5:	Assuring impartiality and objectivity	Medium	Medium	Medium
NQAF 6:	Assuring transparency	Medium	Medium	Medium
NQAF 7:	Assuring statistical confidentiality and security	Medium	Medium	Medium
NQAF 8:	Assuring the quality commitment	Highest	Highest	Highest
NQAF 9:	Assuring adequacy of resources	Highest	Highest	Medium
<b>Managing statistical processes</b>				
NQAF 10:	Assuring methodological soundness	Highest	Highest	Highest
NQAF 11:	Assuring cost-effectiveness	Medium	Medium	Medium
NQAF 12:	Assuring soundness of implementation	Medium	Highest	Medium
NQAF 13:	Managing the respondent burden	Medium	Medium	Medium
<b>Managing statistical outputs</b>				
NQAF 14:	Assuring relevance	Highest	Medium	Highest
NQAF 15:	Assuring accuracy and reliability	Medium	Medium	Highest
NQAF 16:	Assuring timeliness and punctuality	Medium	Medium	Medium
NQAF 17:	Assuring accessibility and clarity	Highest	Medium	Medium
NQAF 18:	Assuring coherence and comparability	Highest	Medium	Medium
NQAF 19:	Managing metadata	Highest	Highest	Highest

Chiba, 13 – 15 May 2019

11

## Quality assurance of SDG indicator data and statistics

### Level A: Managing the NSS as part of assuring the quality of the SDG indicators

- ❑ The development, production and dissemination of SDG indicators is a task that involves most if not all members of the NSS. In some countries, statistics producers outside of the NSS may participate.
- ❑ Assuring quality at the level of managing the NSS is necessary in view of the methodological complexity of the task and the need to ensure efficient coordination of the data (and metadata) flows between providers of source data and the producers of the SDG indicators.
- ❑ The table below identifies **essential requirements or elements to be assured** with respect to this level of quality assurance. The table also includes the rationale for their inclusion as well as a brief explanation of who is or should generally be responsible for their implementation.

Chiba, 13-15 May, 2019

12

## Quality assurance of SDG indicator data and statistics

### Level A: Managing the NSS as part of assuring the quality of the SDG indicators

Requirements / elements to be assured*	Rationale for inclusion and description of the responsibilities
<b>Principle 1: Coordinating the national statistical system</b>	
<p>As appropriate, review the national statistical law and initiate its update as required to:</p> <ol style="list-style-type: none"> <li>1) establish effective institutional arrangements by, among other things enhancing the coordination role of the NSO, also in the production and quality assurance of the SDG indicators;</li> <li>2) establish a mechanism for the assessment of data quality;</li> <li>3) improve transparency of, and public access to the SDG indicators and related metadata. (1.1)</li> </ol>	<p><u>Rationale:</u> Effective institutional arrangements are necessary for the development, production and dissemination of SDG indicators, including quality assurance to be able to respond to current and emerging data and statistical needs.</p> <p><u>Responsibility:</u> The central coordination body (NSO), assisted by a high-level advisory body should participate in the development of draft amendments to the statistics law, as appropriate; the individual NSS members should be consulted and should provide input and comments to ensure that the amendments address the specific needs.</p>

## Quality assurance of SDG indicator data and statistics

### Level A: Managing the NSS as part of assuring the quality of the SDG indicators

Requirements / elements to be assured*	Rationale for inclusion and description of the responsibilities
<b>Principle 1: Coordinating the national statistical system</b>	
<p>2. Establish an NSS-wide coordination body and NSS-wide supporting body, such as the SDG-WG, with the responsibility for coordinating the development, production and dissemination of the SDG indicators (and related metadata) and for ensuring their quality. (Requirements 1.2 and 1.3)</p>	<p><u>Rationale:</u> The establishment of an SDG coordination body and a SDG-WG is necessary as the production of the SDG indicators requires ongoing collective efforts and coordination with all producers of SDG indicators and concerned data providers.</p> <p><u>Responsibility:</u> The central coordination body (typically the NSO) should initiate the establishment of the SDG-WG; all producers of SDG indicators should actively participate in the work.</p>



## Quality assurance of SDG indicator data and statistics

### Level A: Managing the NSS as part of assuring the quality of the SDG indicators

Requirements / elements to be assured*	Rationale for inclusion and description of the responsibilities
<b>Principle 1: Coordinating the national statistical system</b>	
3. As appropriate, review the legal and/or regulatory framework underpinning data collection activities of the NSS members and draft proposals for amendments, as necessary, to facilitate access to administrative and other data needed for the compilation of the SDG indicators. (1.1, 1.3 and 2.4 - 2.6).	<p><u>Rationale:</u> The data collection by the individual NSS members is regulated by applicable legislation and/or government regulation; they may need to be amended to allow for the compilation and sharing of data required for the efficient production of the SDG indicators.</p> <p><u>Responsibility:</u> Individual NSS members.</p>
4. Review and update the National Strategy for the Development of Statistics (NSDS) (1.4 and 9.1)	<p><u>Rationale:</u> The NSDS needs to be reviewed and updated to reflect the additional requirements for the monitoring of the SDGs.</p> <p><u>Responsibility:</u> The central coordination body (NSO) should initiate the review and update of the NSDS; all NSS members should actively participate in the work as required.</p>

Chiba, 13-15 May, 2019

15

## Quality assurance of SDG indicator data and statistics

### Level A: Managing the NSS as part of assuring the quality of the SDG indicators

Requirements / elements to be assured*	Rationale for inclusion and description of the responsibilities
<b>Principle 1: Coordinating the national statistical system</b>	
5. Organize efficient data flows for SDG indicator related data and metadata exchange between the NSS members by, among other things, amending existing Memoranda of Understanding with the providers of source data (e.g. specify data items, formats of data files, schedule of submission etc.). (1.2)	<p><u>Rationale:</u> Efficient data flows are required for timely production of the SDG indicators.</p> <p><u>Responsibility:</u> The central coordination body (NSO), SDG-WG and all producers of SDG indicators.</p>

Chiba, 13-15 May, 2019

16



## Quality assurance of SDG indicator data and statistics

### Level A: Managing the NSS as part of assuring the quality of the SDG indicators

Requirements / elements to be assured*	Rationale for inclusion and description of the responsibilities
<b>Principle 2: Managing relationships with data users, data providers and other stakeholders</b>	
1. Develop a policy and identify good practices for public-private cooperation in data collection and use of data from private data providers for the production of SDG indicators; establish the necessary institutional arrangements for such cooperation. (1.2, 1.3 and 2.3 - 2.6)	<p><u>Rationale:</u> The SDG indicator compilation may require the use of data from multiple data providers, including from private data providers.</p> <p><u>Responsibility:</u> The central coordination body (NSO), the SDG-WG and individual NSS members should participate in this effort.</p>
2. Establish regular contacts with the media to better disseminate SDG indicator related information and obtain user-feedback. (2.2 and 14)	<p><u>Rationale:</u> The general public must be informed about the country's progress and the media plays an important role in that respect, often providing valuable user-feedback.</p> <p><u>Responsibility:</u> The central coordination body (NSO) and the SDG-WG should provide leadership and coordination for this task; individual producers of SDG indicators should undertake such efforts.</p>

## Quality assurance of SDG indicator data and statistics

### Level A: Managing the NSS as part of assuring the quality of the SDG indicators

Requirements / elements to be assured*	Rationale for inclusion and description of the responsibilities
<b>Principle 3: Managing statistical standards</b>	
1. Promote, monitor and support a uniform application of the international and national statistical standards (statistical concepts and classifications, etc.) by all producers of SDG indicators. (3.1 – 3.3)	<p><u>Rationale:</u> Standards need to be applied to ensure comparability and to allow the combined use and the merging of data.</p> <p><u>Responsibility:</u> The central coordination body (NSO) should lead this work with support of the SDG-WG; the individual producers of SDG indicator should assure their compliance.</p>
2. Review the application of international standards in the production of the SDG indicators, identify the reasons for non-compliance and develop action plans to improve compliance. (3.1 – 3.3 and 18.1)	<p><u>Rationale:</u> Nationally produced global indicator data and statistics should be internationally comparable.</p> <p><u>Responsibility:</u> The central coordination body (NSO) and the SDG-WG should steer these efforts; the individual producers of SDG indicators should review their compliance and explain the reasons for non-compliance.</p>
3. Organize a system-wide staff training on statistical standards and good practices in the production of SDG indicators. (3.2)	<p><u>Rationale:</u> Adequate training will increase the capacity of the NSS to produce the SDG indicators.</p> <p><u>Responsibility:</u> The central coordination body (NSO) and SDG-WG should organize and conduct such training, while producers of SDG indicators should participate.</p>

## Quality assurance of SDG indicator data and statistics

### Level B: Managing the institutional environment as part of assuring the quality of the SDG indicators

- ❑ Managing the institutional environment for the production of SDG indicators entails securing a quality commitment from all producers of SDG indicators and assuring that sufficient resources are available for their production (Principles 8 and 9).
- ❑ The implementation of activities aiming to assure professional independence (Principle 4) and impartiality and objectivity (Principle 5) by all members of NSS who are involved in the production of SDG indicators will improve the trust of the users in the SDG indicator data and statistics.
- ❑ The importance of assuring transparency in the SDG indicator production (Principle 6) and statistical confidentiality and data security (Principle 7) of the individual data should be emphasized as those principles are important for securing trust of users and cooperation among NSS members.
- ❑ **Essential requirements or elements to be assured** with respect to this level of the UN NQAF, a rationale for their inclusion as well as a brief explanation of the responsibilities for their implementation are provided in table below.

Chiba, 13-15 May, 2019

19

## Quality assurance of SDG indicator data and statistics

### Level B: Managing the institutional environment as part of assuring the quality of the SDG indicators

Requirement / element to be assured*	Rationale for inclusion and description of the responsibilities
<b>Principle 4 and 5: Assure professional independence and impartiality and objectivity</b>	
1. Review and evaluate the policies of producers of SDG indicators regarding the assurance of professional independence, impartiality and objectivity, and amend them as necessary using guidelines provided by the International Statistical Institute's Declaration on Professional Ethics, and advice from the national statistical association. (5.2)	<p><u>Rationale:</u> Users must be able to trust in the quality of SDG indicators; trust will assure wide usage.</p> <p><u>Responsibility:</u> The central coordination body (NSO) and SDG-WG need to work with the individual producers of SDG indicators to review and evaluate compliance with these principles.</p>
2. Adopt a code of conduct based on international standards (such as FPOS) and inform the public about the adherence to the code of conduct in the development, production and dissemination of SDG indicators. (5.2)	<p><u>Rationale:</u> The adoption and compliance with a code of conduct helps to gain public trust in the quality of SDG indicators and ensure their wide use.</p> <p><u>Responsibility:</u> The central coordination body (NSO) and SDG-WG will support the individual producers of SDG indicators in the adoption of the code; individual producers of SDG indicators must comply with the code of conduct.</p>

Chiba, 13-15 May, 2019

20

## Quality assurance of SDG indicator data and statistics

### Level B: Managing the institutional environment as part of assuring the quality of the SDG indicators

Requirement / element to be assured*	Rationale for inclusion and description of the responsibilities
<b>Principle 4 and 5: Assure professional independence and impartiality and objectivity</b>	
3. Prepare a release schedule of the SDGs indicators and make it available to all users. SDG indicators are made available to all users at the same time. (5.5)	<p><u>Rationale:</u> All users should be treated equally as required by FPOS.</p> <p><u>Responsibility:</u> The central coordination body (NSO) and SDG-WG should develop and publish a release calendar in consultation and cooperation with the individual SDG indicator producers.</p>
<b>Principle 6: Assuring transparency</b>	
1. Disclose the terms and conditions under which source data for the SDG indicator production were obtained, and which methods were used in the SDG indicator production (including methods of estimation of missing data and data modelling). (6.1)	<p><u>Rationale:</u> Users should be able to understand and evaluate how SDG indicators were produced.</p> <p><u>Responsibility:</u> The individual SDG indicator producers should disclose the terms and conditions under which source data are obtained and should disclose the methods applied in the SDG indicator production.</p>

Chiba, 13-15 May, 2019

21

## Quality assurance of SDG indicator data and statistics

### Level B: Managing the institutional environment as part of assuring the quality of the SDG indicators

Requirement / element to be assured*	Rationale for inclusion and description of the responsibilities
<b>Principle 7: Assuring statistical confidentiality and data security</b>	
1. Take appropriate measures and publicly guarantee the privacy of the information provided by individual respondents. (7.2)	<p><u>Rationale:</u> The information provided by the respondents must be protected to ensure their willingness to provide correct information.</p> <p><u>Responsibility:</u> The central coordination body (NSO) and SDG-WG should develop appropriate measures to assure confidentiality and data security and assist SDG indicator producers in their application.</p>
<b>Principle 8: Assuring the quality commitment</b>	
1. Declare and explain the commitment to quality of the SDG indicators internally and externally. (8.1)	<p><u>Rationale:</u> Staff at producers of SDG indicators must be aware of the quality commitment of their organization and users must be allowed to hold SDG indicator producers accountable; this will increase trust and usage of the SDG data and statistics.</p> <p><u>Responsibility:</u> All SDG indicator producers should express their quality commitment.</p>

Chiba, 13-15 May, 2019

22

## Quality assurance of SDG indicator data and statistics

### Level B: Managing the institutional environment as part of assuring the quality of the SDG indicators

Requirement / element to be assured*	Rationale for inclusion and description of the responsibilities
<b>Principle 8: Assuring the quality commitment</b>	
2. Designate a SDG indicator quality focal point or unit within each SDG indicator producer. (8.3)	<p><u>Rationale:</u> There should be a focal point or unit which is tasked with assuring the quality of the SDG indicators.</p> <p><u>Responsibility:</u> All SDG indicator producers should have a quality focal point or unit.</p>
3. Develop and update, on a regular basis, guidelines for quality assurance of SDG indicators. (8.5)	<p><u>Rationale:</u> Quality guidelines specify actions to put the quality commitment into practice.</p> <p><u>Responsibility:</u> The SDG-WG should develop guidelines for quality assurance and all SDG indicator producers should apply them.</p>

## Quality assurance of SDG indicator data and statistics

### Level B: Managing the institutional environment as part of assuring the quality of the SDG indicators

Requirement / element to be assured*	Rationale for inclusion and description of the responsibilities
<b>Principle 8: Assuring the quality commitment</b>	
4. Identify appropriate quality indicators to assess the production process of the SDG indicators. (8.6)	<p><u>Rationale:</u> Quality indicators are needed for quality assessment.</p> <p><u>Responsibility:</u> The central coordination body (NSO) and SDG-WG should prepare the set of applicable quality indicators in cooperation with producers of SDG indicators.</p>
5. Issue a common quality report on all the SDG indicators produced in a country and conduct a user-producer dialog on its content. (8.6)	<p><u>Rationale:</u> Quality reports raise the confidence of users in the quality of the SDG indicators and provide a benchmark for further improvements.</p> <p><u>Responsibility:</u> The central coordination body (NSO) and SDG-WG in cooperation with individual SDG indicator producers should prepare such a report.</p>

## Quality assurance of SDG indicator data and statistics

### Level B: Managing the institutional environment as part of assuring the quality of the SDG indicators

Requirement / element to be assured*	Rationale for inclusion and description of the responsibilities
<b>Principle 9: Assuring adequacy of resources</b>	
1. Assess adequacy of currently available resources to compile the SDG indicators included in the national indicator framework. (9.1)	<p><u>Rationale:</u> The production of SDG indicators requires adequate resources.</p> <p><u>Responsibility:</u> The central coordination body (NSO) and SDG-WG should provide a consolidated assessment report covering the entire NSS; the individual SDG indicator producers should assess the resources they can use for compiling the SDG indicators for which they are responsible.</p>
2. Prepare a consolidated report on the statistical capacity of the country to produce the SDG indicators; the report should list the SDG indicators which cannot be produced without additional resources; submit the report to the government and development partners. (9.3)	<p><u>Rationale:</u> The need for additional resources must be communicated to policy makers and development partners.</p> <p><u>Responsibility:</u> The central coordination body (NSO) and SDG-WG should prepare a consolidated report with input from NSS members.</p>

Chiba, 13-15 May, 2019

25

## Quality assurance of SDG indicator data and statistics

### Level C: Managing the statistical processes as part of assuring quality of the SDG indicators

- The management of statistical processes is at the core of the production of the SDG indicators. The production of the SDG indicators that are not currently compiled by NSS members or not compiled with sufficient periodicity may require revision of existing statistical processes or, in some cases, setting up new processes.
- An opportunity and challenge for the production of SDG indicators is the use of administrative data sources and other data sources such as big data and geospatial data.
- Assuring methodological soundness (Principle 10) and appropriate statistical procedures (Principle 12) directly impact international comparability of the SDG indicators and their comparability over time.

Chiba, 13-15 May, 2019

26

## Quality assurance of SDG indicator data and statistics

### Level C: Managing the statistical processes as part of assuring quality of the SDG indicators

- ❑ Assuring cost-effectiveness in the development, production and dissemination of the SDG indicators (Principle 11) and managing the respondent burden (Principle 13) are important challenges given the immense requirements of SDG monitoring.
- ❑ **Essential requirements or elements to be assured** with respect to this level of the UN NQAF and a rationale for their inclusion as well as a brief explanation of the responsibilities for their implementation are provided in table below

## Quality assurance of SDG indicator data and statistics

### Level C: Managing the statistical processes as part of assuring quality of the SDG indicators

Requirement / element to be assured*	Rationale for inclusion and description of the responsibilities
<b>Principle 10: Assuring methodological soundness</b>	
1. Review and evaluate the methodology used for the production of the SDG indicators. (10.1 and 10.3)	<p><u>Rationale</u>: The methodology used for the production affects the output quality of the SDG indicators.</p> <p><u>Responsibility</u>: The central coordination body (NSO) and SDG-WG should conduct this activity together with the individual producers of SDG indicators.</p>
<b>Principle 11: Assuring cost-effectiveness</b>	
1. Assess whether existing data sources and existing data can be used for the production of SDG indicators. (11.2 and 11.5)	<p><u>Rationale</u>: The use of existing data sources or existing data is normally more cost effective than the collection of new data.</p> <p><u>Responsibility</u>: The central coordination body (NSO), the SDG-WG and producers of SDG indicators should conduct this activity before committing to carrying out any new data collection.</p>

## Quality assurance of SDG indicator data and statistics

### Level C: Managing the statistical processes as part of assuring quality of the SDG indicators

Requirement / element to be assured*	Rationale for inclusion and description of the responsibilities
<b>Principle 11: Assuring cost-effectiveness</b>	
2. Use administrative data sources and other data sources and develop data integration and data modelling techniques for the production of SDG indicators where feasible and cost-effective. (11.5)	<p><u>Rationale:</u> The use of administrative and other data sources is often more cost-effective than the use of statistical sources such as sample surveys and censuses.</p> <p><u>Responsibility:</u> All producers of SDG indicators with support of the central coordination body (NSO) and the SDG-WG.</p>
3. Use the GSBPM to analyze the statistical production processes of the SDG indicators. (8.7 and 11.6)	<p><u>Rationale:</u> The GSBPM allows a systematic analysis of the statistical production process and to identify quality issues and appropriate quality indicators.</p> <p><u>Responsibility:</u> The central coordination body (NSO) and the SDG-WG would typically introduce the use of the GSBPM to members of the NSS.</p>

## Quality assurance of SDG indicator data and statistics

### Level C: Managing the statistical processes as part of assuring quality of the SDG indicators

Requirement / element to be assured*	Rationale for inclusion and description of the responsibilities
<b>Principle 13: Managing the respondent burden</b>	
1. Assess the respondent burden when collecting data for SDG indicators and their dis-aggregation. (13.1)	<p><u>Rationale:</u> Minimizing the respondent burden is an integral part of the statistical operations and contributes to the quality of the obtained information.</p> <p><u>Responsibility:</u> All producers of SDG indicators with support of the central coordination body (NSO) and SDG-WG.</p>



## Quality assurance of SDG indicator data and statistics

### Level D: Managing statistical outputs as part of assuring the quality of the SDG indicators

- ❑ SDG indicators are statistical outputs obtained at the end of a statistical production process to which all UN NQAF principles regarding statistical outputs apply.
- ❑ However, some quality requirements may need higher attention than others. For example, assessing the relevance (Principle 14) of existing and additional national SDG indicators is a critical step for assuring their usefulness.
- ❑ Assuring the accuracy and reliability (Principle 15) of SDG indicators can be challenging in the case of complex statistical production processes and the use of administrative, other or multiple data sources.
- ❑ Principle 18 on assuring coherence and comparability is essential for the comparability of global SDG indicators.
- ❑ **Essential requirements or elements to be assured** with respect to this level of the UN NQAF and a rationale for their inclusion as well as a brief explanation of the responsibilities for their implementation are provided in table below.

## Quality assurance of SDG indicator data and statistics

### Level D: Managing statistical outputs as part of assuring the quality of the SDG indicators

Requirement / element to be assured*	Rationale for inclusion and description of the responsibilities
<b>Principle 14: Assuring relevance</b>	
1. Discuss and agree on the national SDG indicator framework in an inclusive consultation process with all national and international stakeholders.	<u>Rationale:</u> The national indicator framework needs to satisfy user needs, taking into account the needs for global, regional and national monitoring.
2. Clearly identify in the national SDG indicator framework the global indicators, national indicators and indirect measures (proxies) of the global indicators as well as the required level of disaggregation. (14.1 and 14.2)	<u>Responsibility:</u> The central coordination body (NSO) and the SDG-WG would typically lead this activity.

## Quality assurance of SDG indicator data and statistics

### Level D: Managing statistical outputs as part of assuring the quality of the SDG indicators

Requirement / element to be assured*	Rationale for inclusion and description of the responsibilities
<b>Principle 15: Assuring accuracy and reliability</b>	
1. Employ internationally recognized statistical methods and techniques in the production of the SDG indicators. (10.1 and 15.1-15.2)	<p><u>Rationale:</u> Established methods and techniques have been shown to be accurate and reliable.</p> <p><u>Responsibility:</u> The individual SDG indicator producers should conduct this activity with support of the central coordination body (NSO) and the SDG-WG.</p>
2. Establish an SDG indicator revision policy which also entails the explanation of revisions to users. Involve the international SDG indicator custodian agency where appropriate. (15.3)	<p><u>Rationale:</u> The availability of a sound revision policy is proof of the commitment to quality and contributes to user confidence. International custodian agencies depend on and provide support for the production of many SDG indicators in developing countries.</p> <p><u>Responsibility:</u> The central coordination body (NSO), and the SDG-WG may issue guidelines on the SDG indicators revision policy and monitor its implementation; the individual SDG indicator producers are responsible for the implementation of the revision policy for their indicators.</p>

Chiba, 13-15 May, 2019

33

## Quality assurance of SDG indicator data and statistics

### Level D: Managing statistical outputs as part of assuring the quality of the SDG indicators

Requirement / element to be assured*	Rationale for inclusion and description of the responsibilities
<b>Principle 16: Assuring timeliness and punctuality</b>	
1. Consider the trade-offs between timeliness and other quality dimensions (e.g. accuracy, cost and respondent burden) during development and production of the SDG indicators; include information about trade-offs in the SDG indicator metadata. (16.1)	<p><u>Rationale:</u> Dealing with trade-offs is a part of the planning of the statistical production process; users should be informed about them to understand the limitations of the SDG indicators.</p> <p><u>Responsibility:</u> The central coordination body (NSO), the SDG-WG and the individual SDG indicator producers should conduct this activity.</p>
2. Automate the SDG indicators production process and related data flows so that the SDG indicators become available as soon as possible after all source data becomes available. (16.1)	<p><u>Rationale:</u> Any delay in the SDG indicator production at the final stage of the statistical process should be avoided.</p> <p><u>Responsibility:</u> The central coordination body (NSO) and the individual SDG indicator producers conduct this activity.</p>

Chiba, 13-15 May, 2019

34

## Quality assurance of SDG indicator data and statistics

### Level D: Managing statistical outputs as part of assuring the quality of the SDG indicators

Requirement / element to be assured*	Rationale for inclusion and description of the responsibilities
<b>Principle 16: Assuring timeliness and punctuality</b>	
3. Publish an SDG indicator release calendar; it must be in line with the global reporting schedule, as applicable. (5.5 and 16.1)	<p><u>Rationale:</u> Users should be informed when SDG indicators are planned to become available.</p> <p><u>Responsibility:</u> The central coordination body (NSO), the SDG-WG and the individual SDG indicator producers should jointly conduct this activity.</p>
<b>Principle 17: Assuring accessibility and clarity</b>	
1. Establish a national SDG indicator reporting and dissemination platform allowing user-friendly access to all data and metadata. (17.1, 17.3 and 17.6)	<p><u>Rationale:</u> A national reporting and dissemination platform is required to give timely and full data access to all users.</p> <p><u>Responsibility:</u> The central coordination body (NSO) is typically responsible for the establishment and maintenance of the SDG indicator database and dissemination platform, while SDG indicator producers need to provide the SDG indicators in accordance with agreed formats and schedules.</p>
2. The national SDG indicators reporting and dissemination platform should provide data access that facilitates data integration and re-dissemination. (17.3)	

Chiba, 13-15 May, 2019

35

## Quality assurance of SDG indicator data and statistics

### Level D: Managing statistical outputs as part of assuring the quality of the SDG indicators

Requirement / element to be assured*	Rationale for inclusion and description of the responsibilities
<b>Principle 18: Assuring coherence and comparability</b>	
1. Review and monitor the use of international and national standard concepts, definitions and classifications in the development and production of the global SDG indicators and identify any divergences. (3.3, 10.1 and 18.1)	<p><u>Rationale:</u> The use of international standard concepts, definitions and classifications is necessary to achieve international comparability.</p> <p><u>Responsibility:</u> The central coordination body (NSO) and the SDG-WG should conduct this activity together with the individual SDG indicator producers.</p>
2. Inform about the compliance with international standards in the SDG indicator metadata and quality reports. (3.3 and 18.1)	<p><u>Rationale:</u> The information about the compliance with international standards will increase the confidence of users and will allow users to understand any differences to national data published by international agencies.</p> <p><u>Responsibility:</u> The central coordination body (NSO), the SDG-WG and the individual SDG indicators producers conduct this activity.</p>

Chiba, 13-15 May, 2019

36

# Quality assurance of SDG indicator data and statistics

## Level D: Managing statistical outputs as part of assuring the quality of the SDG indicators

Requirement / element to be assured*	Rationale for inclusion and description of the responsibilities
<b>Principle 19: Managing metadata</b>	
1. Produce SDG indicator metadata, periodically update them and make them available to users. The metadata should include information about concepts, definitions, classifications, data sources, production methods including statistical methodology used. (17.1 and 19.2)	<p><u>Rationale:</u> SDG indicator metadata are indispensable for the interpretation of the data by users.</p> <p><u>Responsibility:</u> The central coordination body (NSO), the SDG-WG and the individual SDG indicators producers conduct this activity.</p>
2. Establish a metadata management system for the SDG indicators. (19.1)	<p><u>Rationale:</u> Metadata must be systematically maintained.</p> <p><u>Responsibility:</u> The central coordination body (NSO), the SDG-WG and the individual SDG indicators producers conduct this activity.</p>

THANK YOU