UNECE

CES Road Map on Statistics for SDGs
Addendum to the 2nd edition:

Guidance on Assessing and Conceptualizing SDG Indicator Availability

United Nations

Acknowledgements

The Addendum to the CES Road Map on Statistics for SDGs: Guidance on assessing and conceptualizing SDG indicator availability was prepared by the Steering Group on Statistics for SDGs and members of the Friends Network: Renata Bielak (co-chair, Poland), Sara Frankl (co-chair, Sweden), Anahit Safyan (Armenia), Alexandra Wegscheider-Pichler (Austria), Cara Williams (Canada), Agnes Tassy (Denmark), Claire Plateau (France), Doreen Taubmann (Germany), Mary Smyth-McCarthy (Ireland), Amit Yagur-Kroll (Israel), Marina Gandolfo (Italy), Jelena Markovic (Montenegro), Bo Hoogerwerf (Netherlands), Olga Świerkot-Strużewska, Magdalena Ambroch and Monika Gorzelak (Poland), Carolina Santos (Portugal), Ana Carmen Saura Vinuesa and Silvia Alvarez (Spain), Medea Savary (Switzerland), Nicola Shearman, Simon Jones and Joseph Moss (United Kingdom), Jeongsoo Kim and Kali Kong (United States), Elena Vosmirko (CISSTAT), Övünç Uysal (European Environment Agency), Kathrin Gebers (Eurostat), Guillaume Cohen (OECD), Tiina Luige and Jonathan Gessendorfer (UNECE).

Its foundation was laid during an in-person meeting of the Steering Group in October 2023, and was further developed alongside a country self-assessment tool for SDG indicator availability through a number of virtual meetings.

The work on the addendum to the Road Map was led by Jonathan Gessendorfer, UNECE. The self-assessment tool was finalized by Renata Bielak and Monika Gorzelak (Poland), Doreen Taubmann and Moritz Boße (Germany), Sara Frankl (Sweden), and Jonathan Gessendorfer (UNECE).

The draft addendum is planned to be endorsed for publication by the Steering Group during its in-person meeting in October 2024.

Content

1. Introduction

1. Despite significant progress, the availability of SDG indicators (and the data used to compile those indicators) remains a concern at the halfway point of the 2030 agenda.

2. International discussion on indicator availability focuses largely on the global SDG indicators in the SDG database maintained by the UN. As a global policy agenda, the SDGs require a statistical follow-up based on internationally comparable data that can be aggregated at regional and global levels.

3. On the national level, the main purpose of SDG data is to inform the national public and to enable policy makers to make informed decisions on SDG implementation. The SDGs are implemented nationally, which makes national availability of SDG indicators arguably as important as global availability for the overall success of the 2030 agenda.

4. Information on the global availability of SDG indicators is readily available by analysing data in the global SDG database. Analyses of the global availability of SDG indicator data have for example been done by ETH Zürich in 2023, UN ESCAP and UN ECLAC.

5. However, it is much more difficult to assess what is available nationally (i.e., indicators published in national databases or publications). International and regional organizations need a clear picture of national indicator availability as this provides an important measure of the success of the international statistical community in the domestic implementation of the statistical follow-up of the 2030 agenda and can reveal capacity development needs.

6. Countries themselves may also be interested in collecting detailed information on the availability of SDG indicator data. Such information may reveal structural issues in underlying survey or data programs and data gaps for vulnerable groups, or emerging areas. Examining the availability can also demonstrate progress in the reporting on SDGs, or provide a basis for requesting additional resources to ensure the necessary statistical domains are covered and data can be disaggregated.

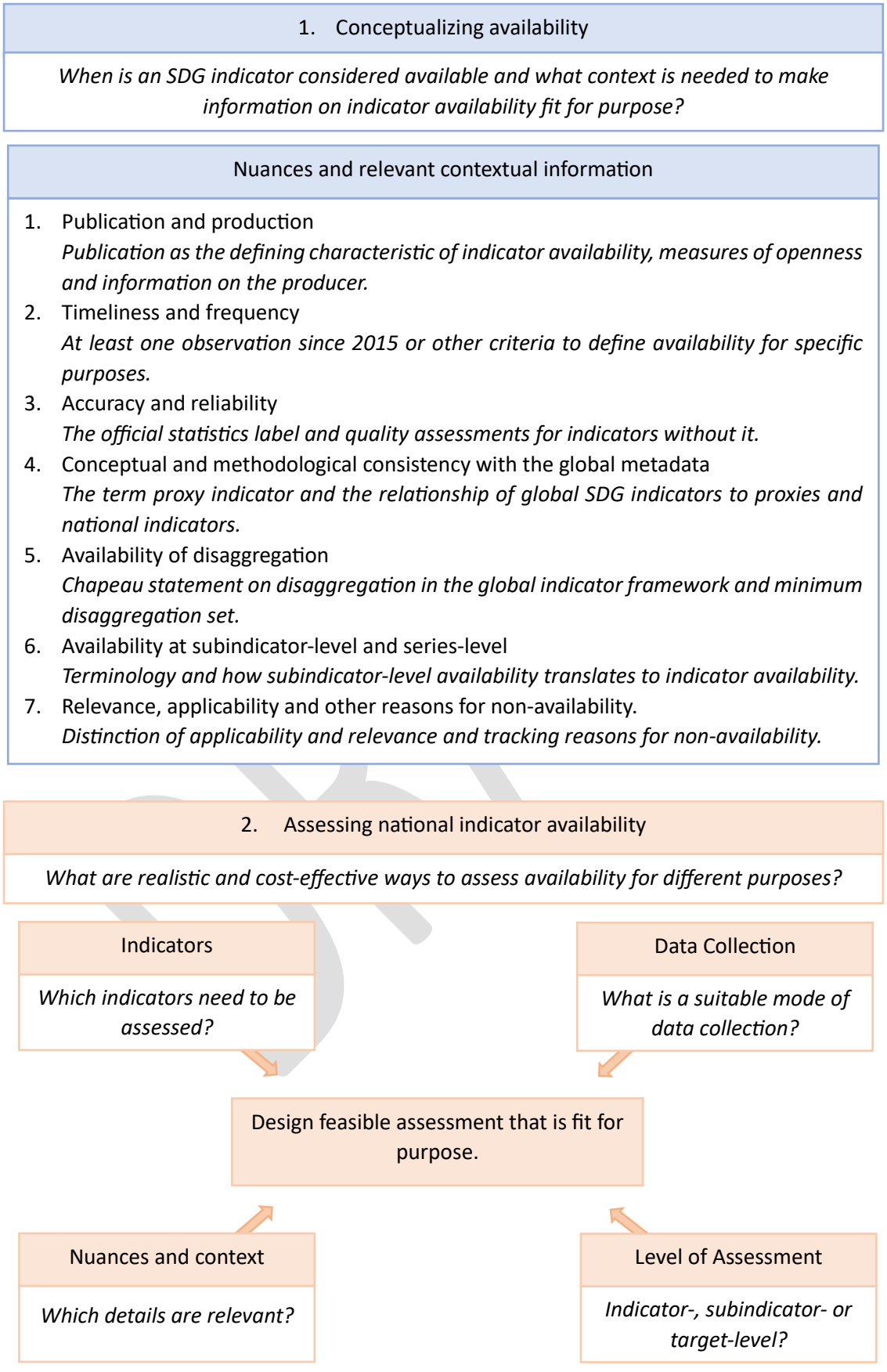
7. However, while assessing indicator availability may seem like a simple counting exercise, it is not straightforward. It can be very time-consuming and complex once you start examining the indicators more closely. There are two major questions that this addendum tries to answer:

1) When is an SDG indicator considered available and what context is needed to make information on indicator availability fit for purpose?
2) What are realistic and cost-effective ways to assess availability for different purposes?

8. This document can also be used as guidance for effectively presenting information on SDG indicator availability. A sentence such as: “In country X 150 of the 231 global indicators are available” can be interpreted differently. Information on availability needs to be communicated in a way that ensures it is interpreted as intended.

9. While many issues discussed below primarily deal with global SDG indicators, they can be applied also for an assessment of the availability of indicators in the global database, national indicator frameworks, or even non-SDG indicator frameworks.

Figure 1: Structure of the publication



2. Definition and relevant concepts

When is an SDG indicator considered available and what context is needed to make information on indicator availability fit for purpose?

10. The following two basic definitions form the basis of the discussion below:

   i. *"An indicator is available if it is accessible to the public."*

   ii. *"An indicator is nationally available if it is made accessible to the public by a mandated national public sector body."*

11. The defining characteristic that makes an indicator available is its publication, i.e. being available to the public. Availability, on this fundamental level, is simple.

12. However, the question of when an indicator is considered available may have different answers. For example, there may be interest in the availability to a particular group, or in the availability through particular means (such as a web platform for SDG data), or in the availability to do something specific with the indicator (such as assess progress).

13. The purpose of an assessment influences how availability is defined operationally, i.e. if any additional (or less restrictive) requirements are set for an indicator to be considered available within a given assessment. The purpose will also inform what contextual information is required. There are, therefore, many nuances that can be important in the context of indicator availability.

14. Many are linked with quality assurance principles for managing statistical outputs and apply to statistics in general. The above definitions already touch on one of the principles of the UN National Quality Assurance Framework for Official Statistics (UN NQAF) – principle 17 which includes the necessity to ensure accessibility.

15. However, there are also issues specific to the SDGs, such as availability at the subindicator-level and availability of national or proxy indicators, which make availability a particularly complex topic in the context of SDG indicators.

16. A common question on indicator availability is why there are discrepancies in the availability on the UN SDG Global Database and what is reported nationally. Box 1 at the end of Section 2 summarizes why some indicators may be available globally but not nationally and vice versa. It discusses the importance of international comparability and national relevance of indicators, which are the driving forces behind the differences in availability.

2.1 Publication and production

17. As mentioned above, a defining characteristic of whether or not an indicator is considered available is the publication of the indicator. UN NQAF Principle 17 – assuring accessibility and clarity, requires that "statistics […] can be found and obtained without difficulty". It may be relevant to provide details on how the indicators are published. For example, whether they are published on a dedicated web platform for SDG data.

18. Building on publication but going into more detail are other measures of openness that can be important for some purposes. See, for example, the elements used by Open Data Inventory (ODIN)

which include the availability of reference metadata, download options that make the data more accessible, and whether the data is available in a machine-readable, non-proprietary format and available for use under an open data license or open data terms of use.

19. It can also be important to know for which unpublished indicators the input data – data needed to produce the indicator – is available to the responsible agency. For example, for an internal assessment, for an analysis of which data could be made available to academia, or what statistics and custom tables could be provided upon request.

20. It may also be relevant to identify who produces the indicator. For example, if there is interest in assessing the statistical capacity of the National Statistical System (NSS) to produce SDG indicators, it may be important to identify those indicators produced outside the NSS. Categories of producers that may become relevant include the National Statistical Office (NSO), other public sector bodies, international organizations, academia, or civil society organizations.

21. It should be emphasized that the producer of the indicator could be different from the producer of the underlying data. For example, the NSO can still be considered the producer of an indicator if it uses source data from the public sector. However, the nature and source of the underlying data may still be important contextual information for some indicator availability assessments.

2.2 Timeliness and frequency

22. An important quality dimension for statistics is timeliness and punctuality (UN NQAF Principle 16). "Timeliness refers to how quickly after the reference date or the end of the reference period, the outputs are made available to users. Punctuality refers to whether outputs are delivered on the promised, advertised or announced dates." Related to that is also how frequently indicators are published.

23. Depending on the purpose of an assessment, different requirements for timeliness and frequency may be appropriate. For some, simply assessing whether at least one observation exists since 2015 may be sufficient. Other purposes may have different requirements. For example, if the purpose is to assess availability for measuring progress in achieving the target you may require at least two observations. It may also be important to assess the time coverage of indicators. The availability of a 2015 baseline observation can also be important contextual information for the purpose of measuring progress.

24. An in-depth assessment of timeliness and frequency, for a small number of indicators, could, in principle, assess each indicator separately and evaluate whether they are published sufficiently timely, frequently and punctually. What constitutes sufficient is, however, difficult to define objectively.

25. How timely and frequently an indicator should be published, depends on the indicator. For some indicators, publication every five years may be acceptable, but for others, a higher frequency may be ideal. Timeliness should comply with international standards or other relevant targets (NQAF, Requirement 16.1). The same is true for frequency where standards or targets exist. Both timeliness and frequency should take into account user requirements as much as possible.

2.3 Accuracy and reliability

26. Principle 15 of the UN NQAF states that "Statistical agencies should develop, produce and disseminate statistics that accurately and reliably portray reality. The accuracy of statistical information reflects the degree to which the information correctly describes the phenomena it was designed to measure, namely, the degree of closeness of estimates to true values." (United Nations National Quality Assurance Frameworks Manual for Official Statistics).

27. As an important dimension of quality, accuracy and reliability is also relevant for indicator availability. Depending on the purpose of the assessment, taking into account the accuracy and reliability of the indicators may be important, in particular for indicators that are not published as official statistics.

28. Official statistics are published following international standards, are obtained by applying sound methodologies and comply with statistical principles. Using the label official statistics implies a high degree of accuracy and reliability. The Handbook on the Management and Organisation of National Statistical Systems defines official statistics as follows:

> "Official statistics are defined as statistics produced according to the Fundamental Principles of Official Statistics by a national statistical office or by another producer of official statistics mandated by the national government or certified by the national statistical office to compile statistics for its specific domain." (Handbook on the Management and Organisation of National Statistical Systems)

29. However, not all published SDG indicators are necessarily official statistics. The existence of the global indicator framework encourages developing and publishing statistics that may otherwise not have been produced:

i. Some national agencies, without a history as a producer of official statistics, have become responsible for providing SDG indicators. These indicators may fall short of the label of official statistics.

ii. In addition, some national agencies with a long history of producing official statistics, such as NSOs, sometimes publish statistics without the official statistics label. To improve timeliness and granularity or when developing new indicators, statistical agencies may opt to produce statistics for which no established methodology exists or that use non-official data sources. These statistics are often published without the label official statistics and are instead called statistics in development, experimental statistics, or similar.

iii. In some cases, a country may publish statistics produced outside of the national statistical system (for example by international organizations or academia as discussed in subsection 2.1). Without a clear mandate by the national government or certification by the NSO to compile statistics for its specific domain, these statistics are not considered official.

iv. As described in 2.1, some indicators or disaggregations of an indicator may only be available upon request. As they are not published as official statistics, there is also no implication of sufficient accuracy and reliability.

30. In all these cases, it may be important to know if the responsible national agency has undertaken a quality assessment of the accuracy and reliability of the indicator.

2.4 Conceptual and methodological consistency with the global metadata

31. Global indicators can be produced with varying degrees of consistency with their global metadata. Differences with the global metadata discussed in this subsection are conceptual differences with the definition and/or methodological differences in the measurement.

32. Depending on its purpose, an assessment of the national availability of global indicators may want to include only those in compliance or partial compliance with the global metadata. Indicators are produced in partial compliance if basic concepts such as definitions, classifications and methods of computation are followed, while data sources and other aspects can vary.

33. Other assessments may want to assess the availability of indicators used in place of global indicators that do not follow the global metadata.

Proxy and national indicators

34. An important term in this context is *proxy indicator*. While there is no internationally agreed definition, the Oxford A Dictionary of Statistics (3 ed.) defines proxy variables as follows: "A measurable variable that is used in place of a variable that cannot be measured." There are various ways in which the term proxy becomes relevant in the context of SDG indicators.

35. Indicators in the global framework are sometimes referred to as proxies of their target if they do not fully measure it. For example, indicator 3.6.1 "Death rate due to road traffic injuries" is a proxy for target 3.6 "By 2020, halve the number of global deaths and injuries from road traffic accidents". The indicator excludes injuries and only considers deaths to become more feasible to measure.

36. In the context of SDG statistics, the term proxy is mostly used for indicators that are used as proxies of an indicator of the global indicator framework. There are two important types of proxies replacing global indicators:

i. *Global proxy indicators* are included or considered for inclusion in the global indicator framework to (temporarily) substitute an indicator in the framework due to a lack of data or a lack of internationally agreed-upon methodology. An example is indicator 2.4.1 "Proportion of agricultural area under productive and sustainable agriculture", for which as of 2024, proxies of the original sub-indicators are included in the global indicator framework.

ii. *National proxy indicators* are produced nationally in place of a global indicator. They deviate either methodologically or conceptually from the global metadata in a way that the indicator (or underlying data) cannot be submitted to the custodian agency. Because it cannot be submitted for global reporting, one of the main reasons to produce a national proxy indicator should be to inform national policies.

National indicators

37. A/RES/70/1, the core UN General Assembly resolution on the SDGs, envisions in paragraph 75 that the global indicator framework will be complemented by national indicator frameworks. National indicators capture their respective targets in a way that is particularly relevant for their national implementation.

38. Some national indicators are published in place of a similar global indicator. This makes them, in the context of indicator availability, similar to national proxy indicators.

39. In theory, the rationale behind replacing global indicators with national proxies and replacing them with national indicators differs. A proxy is replacing a global indicator because of measurement challenges, and a national indicator is replacing a global indicator due to its relevance in the country. In practice, this delineation is difficult, and the two terms are not always used consistently. Many countries publish indicators as national indicators that would be considered proxies by other countries and vice versa. In addition, not all countries have a national indicator framework[1]. Without it, labeling an indicator national is not common practice. These countries may use the label proxy even if the global indicator was not replaced because of measurement challenges.

40. If international comparability of statistics on availability is important, assessments must take this ambivalence between the two terms into account.

41. While section 2 focuses on the availability of indicators in the global indicator framework, it is important to note that assessments can also include (or be done specifically for) national or regional SDG indicators in general – independent of whether they are produced in place of a global indicator. For example, this type of assessment may be useful if the goal is to assess how many of the SDG targets have any indicators available in a region or country.

2.5 Availability of disaggregation

42. The lack of availability of disaggregated SDG indicators is, as of 2024, one of the most relevant gaps in SDG statistics. Therefore, availability of disaggregation may be relevant in many assessments. Indeed, it is possible to undertake targeted assessments that focus solely on one disaggregation dimension (for example assessment of the number of population-based SDG indicators that can be disaggregated by disability).

43. The global indicator framework (A/RES/71/313) includes the following chapeau statement on disaggregation: "Sustainable Development Goal indicators should be disaggregated, where relevant, by income, sex, age, race, ethnicity, migratory status, disability and geographic location, or other characteristics, in accordance with the Fundamental Principles of Official Statistics."

44. In addition to this general statement, more specific information on which disaggregations are required can be found in the name of the indicator, which is inherited by the formulation of the target. An example is **Target 8.5**: By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value which points to disaggregation by sex, age, type of occupation and persons with disabilities.

45. The IAEG-SDGs calls the disaggregation dimensions specifically mentioned in the target or indicator name the "Minimum disaggregation set". The availability of these disaggregation on the SDG global database was analysed in 2018.

46. Another source of information on the required or recommended disaggregations is the section on disaggregation in the global metadata.

[1] See which countries have implemented national indicator frameworks in the table Progress in implementing Road Map recommendations for UNECE countries on the UNECE Statistics Knowledge Hub on SDGs)

2.6 Availability at subindicator-level and series-level

47. Some indicators in the global indicator framework include subindicators. There is, however, currently no guidance on what constitutes a subindicator from the Inter-agency and Expert Group on SDG Indicators, nor is there an official list of subindicators in the global indicator framework. In this publication, the following working definition of subindicator is used:

> *Indicators in the global indicator framework include subindicators if the indicator cannot be captured in its entirety on the level of the entire reference population using only a single statistical indicator.*

48. An example is **Indicator 1.4** Proportion of population living in households with access to basic services. This indicator has two subindicators: Proportion of population using basic drinking water services & Proportion of population using basic sanitation services. These indicators cannot be aggregated and are both required to be reported on to capture the indicator in its entirety.

49. Further confounding the issue, is the notion of "series" and how it is used in the SDG parlance. The term series is used in the context of the global SDG database and in the global metadata of many indicators to describe the individual time series that fall under an indicator. Some series refer to the underlying data needed to calculate the indicator (for example to allow for the calculation of regional or global aggregates) and some series can be considered subindicators, while others may constitute a disaggregation of the indicator.

50. In principle, distinguishing subindicators from other series can be valuable for availability assessments. Series that constitute a disaggregation should also be treated like any other disaggregation and those that only serve a supplementary purpose (such as population estimates required to create regional aggregates) can largely be ignored in availability assessments. The availability of subindicators is, however, tied fundamentally to the availability of the indicator. An indicator should, ideally, only be considered fully available if all its subindicators are available.

51. In practice, it may be easier to consider the availability of series in general instead of taking into account only subindicators.

52. When assessing availability on the indicator level, a decision must be made on how subindicator- or series-level availability translates to indicator availability. A given assessment could, for example, consider an indicator available if at least one series is available – which may often be the only feasible option. Another important issue that must be considered is how to deal with information that is different across subindicators, for example, if timeliness differs across subindicators.

2.7 Relevance, applicability and other reasons for non-availability

53. When discussing indicator availability, it is also important to understand the reason why an indicator is not available.

54. An important reason in the context of availability is whether the indicator is applicable. An indicator is not applicable if it is impossible to compile it in the country. There are various reasons why an indicator may not be universally applicable. Some indicators observe characteristics of statistical units that do not exist in a country. For example, an indicator on marine acidity does not apply to a

landlocked country, and indicators on mountain biodiversity are not applicable to countries without mountains.

> **Indicator 14.3.1** Average marine acidity (pH) measured at agreed suite of representative sampling stations
> **Indicator 15.4.1** Coverage by protected areas of important sites for mountain biodiversity

55. Indicators can also be not applicable if they are intended only for specific countries such as developing countries or WTO members:

> **Indicator 13.b.1** Number of least developed countries and small island developing States with nationally determined contributions, long-term strategies, national adaptation plans and adaptation communications, as reported to the secretariat of the United Nations Framework Convention on Climate Change
> **Indicator 2.b.1** Agricultural export subsidies

56. Some indicators in the global indicator framework are measured on the global level. They should be considered applicable on the national level, as their national equivalent can still be published. Many of these indicators are what the UNECE Road Map on Statistics for Sustainable Development Goals calls *non-statistical* – indicators that are qualitative at the national level. An example is:

> **Indicator 17.16.1** Number of countries reporting progress in multi-stakeholder development effectiveness monitoring frameworks that support the achievement of the sustainable development goals.

57. A related but more subjective reason is if a country considers an indicator not relevant because it serves no (urgent) national information need, for example, if:

- The country considers the respective target met.
- The country does not currently intend to meet (or make policies to meet) the specific target.
- The country produces a different national indicator that serves a similar purpose.

58. It should be noted that even if an indicator is considered not relevant by the country, it does not justify, to the same extent as applicability, that the indicator is not produced. Its availability can still be important – in particular on the global level. For example, if data is unavailable on the global database for countries that have met a specific target, it can bias the global estimate of the respective indicator(s).

59. While *non-applicability* is limited to indicators that are logically impossible to measure for a country, the categories under non-relevance are reasons why countries assign a low priority to compile the indicator. In the context of indicator availability, these categories should in most cases be treated like other reasons for non-availability, such as:

- Lack of a legal mandate to produce the indicator.
- Lack of different types of resources.
- Specific data collection efforts are not consistent with the vision of the office.

- The indicator is not suitable in the national context for probabilistic reasons (for example, if small changes in the indicator, that would still be considered relevant for the country, cannot be measured accurately).

60. Getting a clear picture of whether countries have the statistics they need to monitor the national implementation of the SDGs can be an important use case for an availability assessment. In these cases, it is highly relevant whether a national indicator is produced that serves a similar purpose as a not available global indicator.

61. Without considering applicability[2] and other reasons for non-availability, the number of available global indicators does not necessarily reflect the progress countries have made in monitoring the SDGs nationally nor how well official statistics enable policy makers to make informed SDG implementation decisions.

[2] See this recent analysis from UN ESCAP on the relevance of SDG indicator applicability for understanding data gaps: https://unescap.org/blog/understanding-sdg-data-gaps-based-national-realities

Box 1: Differences between national availability and availability on the SDG Global Database

Internationally, it is important to recognize that a global agenda, such as the SDGs, needs global follow-up and review. For the SDGs, there are two core mechanisms: Voluntary national reviews and the SDG global database. While voluntary national reviews can have a strong focus on national relevance, the global database requires that the indicators are internationally comparable.

Producing internationally comparable statistics is, of course, also important from a national perspective, but trade-offs with national relevance sometimes cannot be avoided. Resources for SDG statistics are limited, and NSOs and other producers of SDG indicators must weigh between producing indicators that are highly relevant for the national implementation of SDGs and producing global indicators fully following international standards. In this context, it should be highlighted that the 2030 agenda, from the beginning (see A/RES/70/1 paragraph 75 and reaffirmed in A/RES/71/313 paragraph 1), recognized that the global indicator framework will be complemented with indicators on the national level.

Indicators available nationally but not available globally

The most prevalent reason why an indicator may be published nationally but not globally is that the indicator does not follow the global metadata. In these cases, the indicator or its underlying data is not accepted by the custodian agency. See Subsection 2.4 for criteria that constitute an indicator a national proxy indicator. Similarly, national indicators are also, by definition, not available in the global database.

It should also be highlighted, that there is an inherent lag between national publication and global publication of an indicator. An indicator that is published nationally may, therefore, not be published globally simply because the custodian agency did not yet have the time to process the data.

Indicators available globally but not available nationally

Data from national statistical systems constitute the basis needed for the global indicator framework (see A/RES/71/313, paragraph 6). If data from national statistical systems is unavailable, custodian agencies often produce the indicator themselves.

Besides Country and Country adjusted data, data on the global database can be labelled as Estimated, as Modelled or as Global monitoring data (for more details see the Frequently Asked Questions on the global database). In all of these cases, it is likely that the member state did not provide the indicator following the global metadata.

In principle, countries can choose to publish indicators produced by custodian agencies, but many countries feel uncomfortable especially if they are not able to validate the data.

3. Assessing national indicator availability

What are realistic and cost-effective ways to assess availability for different purposes?

62. As shown in the last section, many details may be relevant when communicating or assessing indicator availability. Depending on the purpose of an availability assessment, some of these details may be more relevant than others. As it is rarely possible to assess all dimensions discussed in Section 2, prioritization can help determine what type of assessment is required and where to focus assessments.

63. This section discusses the practical limitations of assessments and provides examples for different use cases, focusing on the national availability of SDG indicators.

3.1 Designing indicator assessments

64. Four important factors are discussed below that have a large impact on the complexity and burden of an assessment. Depending on the purpose, tradeoffs between these factors will be necessary to make the assessment feasible.

Mode of data collection

65. There are various ways to collect data on indicator availability. On the international level, national availability could, for example, be assessed by:

- Analysing the data available on the SDG global database
- Analysing countries' national reporting platforms
- Requesting the information from the countries through a questionnaire.

66. The mode of the assessment will influence which of the characteristics discussed in Section 2 can be considered. For example, the availability of proxy or national indicators cannot be observed by analysing the data available on the global database.

67. However, regardless of the type of assessment, there are implicit questions underlying each assessment. How to choose this set of questions depends on the purpose of the assessment, the mode of the assessment, which parts of the conceptual discussion in Section 2 are relevant, and the acceptable complexity of the assessment.

Number and type of indicators to be assessed

68. An obvious factor that influences how onerous undertaking an assessment will be is directly correlated to the number of indicators being assessed. For some purposes, it may be more appropriate to assess the availability of a single indicator or a small group of indicators rather than the entirety of indicators for the SDGs. For example, a custodian agency may wish to assess the availability of the indicators for which they are the custodian, or an assessment of country-level indicator availability may be conducted in preparation for a discussion on the indicator.

69. In addition, it is important to choose whether the assessment should be limited to global indicators or whether it includes regional and national indicators.

Operational definition, relevant context and disaggregated availability statistics

70. The core result of every assessment is some level of information on indicator availability. Depending on the purpose, the operational definition of availability may vary. While not all dimensions discussed in Section 2 have to be relevant for such an operational definition, many can be. At a minimum, the following need to be considered:

Timeliness and frequency

71. Timeliness and frequency will, in some form, always be part of an operational definition of availability, for example, by requiring at least one observation within a specific timeframe (e.g., "since 2015").

Conceptual and methodological consistency with the global metadata

72. For assessments of the national availability of global indicators, an important question is whether indicators that do not follow the global metadata but serve a similar purpose on the national level (i.e., proxies or similar national indicators) count as available.

Availability at subindicator- and series-level

73. When dealing with indicators with multiple subindicators and measuring availability at the indicator-level, it must be clear how subindicator or series-level availability translates to indicator-level availability.

74. A very unrestrictive operational definition of the availability of indicators in the global indicator framework is:

> *An indicator is considered available if at least one observation since 2015 of at least one subindicator is available and the subindicator either follows the methodology outlined in the global metadata or is published as a proxy or similar national indicator.*

75. Additional detail can then be provided by disaggregating this statistic or by giving contextual information, such as:

- The X available global indicators amount to Y percent of the Z global indicators applicable to the country.
- Of the X available indicators, Y are published as experimental statistics.
- Of the X available indicators, Y are produced by international organizations.
- For Y of the X available indicators, at least one observation is available for every subindicator.

76. In principle, an approach that starts with an unrestrictive definition of availability and then disaggregates this statistic will allow the production of availability statistics with more restrictive definitions as well. Such an approach does, however, require more detail in the assessment than to collect information suitable to the use case directly.

77. Consider, for example, if the purpose of the assessment is to get a picture of the statistical capacity within the NSS to produce SDG indicators. In this case, the operational definition of availability would include that the indicator must be produced within the NSS. This can be done by 1) producing the statistic on the less restrictive definition above and disaggregating it by the producer or by 2) collecting only information on the indicators produced by the NSS. In a questionnaire, corresponding questions under both approaches could look as follows:

1. How many indicators published are produced by ...

	Number
... the NSS	_____
... an International Organization	_____
… a different producer	_____

2. How many indicators produced within the NSS are published?

_____

78. The complexity and burden of the assessment increases with how much detail (disaggregation and contextual information) needs to be provided. A way to control this is to be very mindful of which details are worth the increased burden.

Assessment on indicator-, subindicator-, or target-level

79. An important consideration is whether the unit in the information on availability is on the indicator-, subindicator- or target-level.

80. An assessment of the availability at the SDG target level can be a suitable option for internationally comparable assessments that take into account global, regional and national indicators. An appropriate statistic could be:

> *Number of SDG targets for which at least one observation of at least one subindicator of a national, regional or global indicator (including proxies) is available.*

81. Related to this, and an important consideration for the overall complexity of the assessment, is whether a single question requests information on all indicators – like the example questions above – or for targets, individual indicators or subindicators.

82. While the (implicit) questionnaire becomes very long if indicator-level questions are used, the effort for undertaking the assessment may not be influenced as drastically. Answering a question on a group of indicators may require an indicator-level analysis anyway. At the same time, the usefulness of the indicator-level data increases drastically.

83. Subindicator- or series-level questions will lead to high complexity when assessing the availability of a larger number of indicators. If a subindicator-level analysis is not feasible, the operational definition may then require that only one subindicator/series needs to be available for practical reasons.

3.2 Example Assessments

84. This subsection presents examples of feasible indicator availability assessments designed for different use cases.

Example 1 – Self-assessment tool for indicator availability

85. The 2024 Self-Assessment tool for indicator availability has been developed in parallel to this publication and is based on the discussions of the CES Steering Group on Statistics for SDGs on the issues in Section 2. It has been pilot-tested and finalized by Germany, Poland, Sweden and UNECE. For more information on the history of the tool, see the Statistics Poland country case study in the Annex.

86. Many NSOs use project management tools to assist in their SDG work to plan and coordinate the work on SDG statistics within their countries. The Self-Assessment tool is such a project management tool, with the added functionality of producing very detailed information on the availability of SDG statistics. Undertaking an assessment of SDG indicator availability thus becomes a side effect of using the tool for project management with comparatively small extra effort.

87. A strength of the tool is that it can accommodate both highly detailed and basic assessments, which may be interesting for countries that use it solely for the purpose of assessing indicator availability.

88. The most basic assessment that the tool can facilitate is to only use a single column (Published nationally) for all global indicators which asks whether at least one subindicator of the indicator is published nationally. This column reflects the baseline definition of national availability provided in Section 2 and the very unrestrictive operational definition in Section 3.1.

89. From there, countries can opt to add more detail to the assessment by using more columns, and/or by adding rows for national indicators, or subindicators/series. By adding the rows, the tool moves from indicator- to subindicator-level questions and by using more columns more disaggregated availability statistics and context can be provided.

90. At its most in-depth, the tool can effectively take into account all issues that were discussed in Section 2. In addition to facilitating availability assessments, it can double as a project management tool. The predecessor of the tool, developed in 2017, has been widely used by countries in this way. In these cases, an availability assessment can become a side effect of using the tool for project management. Limited additional effort can then justify a highly in-depth national assessment.

91. Based on the entries in the main sheet, the tool provides basic tables, statistics and summary sentences on the availability of SDG indicators.

92. While primarily intended for SDG teams in countries, (a simplified version of) the tool can also be used internationally to request information on availability from countries if an assessment is limited to a small number of indicators. For example, if a custodian agency wants to assess the national availability of its indicators.

Example 2 – Approximating national availability using the global SDG database analytics

93. Both countries and international organizations may be interested in analysing the availability of SDG indicators on the global database. While national availability (i.e. publication by a mandated public sector body) cannot be observed directly on the global database, it can be approximated, by considering the "Nature" of the data available on the global database (see FAQ on the global SDG database). Observations marked as country data or country adjusted data are likely published nationally.

94. A limitation is, however, that the availability of any indicators that are published nationally but are not submitted to or accepted by the custodian agency cannot be accessed. This means all national, proxy or alternative indicators are excluded. The national availability of indicators can also not be assessed, if custodian agencies use exclusively global monitoring data and do not collect information from the countries. Overall, such an analysis would underestimate the national availability of SDG indicators, but can still provide valuable insights into the minimum of what is likely available nationally.

95. The benefit of using the global SDG database to assess indicator availability is that it can be automated, for example by accessing the API.

96. Another possibility is to use the SDG Analytics tool developed by the United Nations Statistics Division (UNSD). As of April 2024, SDG analytics allows assessments on the indicator level by country. The tool does, however, limit (on top of the limitations inherent to global data) which of the nuances discussed in Section 2 can be considered. It is not possible to analyze the availability of disaggregated data on the country level, series-level availability, or detailed information on timeliness and frequency.

Example 3 – An international assessment of the national availability of all global indicators using a country questionnaire

97. Some international organizations, such as regional commissions, may be interested in information on national availability for all global indicators.

98. To make such an assessment using a questionnaire feasible, it may be necessary to control the burden on countries by collecting only some contextual information and using questions on a group of indicators.

99. The biggest challenge is ensuring that questions are interpreted the same by all countries and avoiding questions that only appear to be simple but for which an answer requires an extensive analysis of indicator availability from the respondent.

100. A suitable baseline question may be the following:

1. For how many of the 231 global indicators is at least one observation of at least one series (including proxies or similar national indicators) published nationally? Please avoid double-counting duplicate indicators

101. Depending on the purpose of the assessment, additional follow-up questions as described below may be considered. These example questions are intended to capture important aspects of the discussions in Section 2 in a simple way. While not all issues discussed in Section 2 can be captured like this, the assessment can still be tailored to most use cases.

102. The selected questions will need to be accompanied by explanations of the relevant concepts (e.g., published nationally, applicability).

Production and publication

2. Of the indicators in question 1, how many are produced by:
   - The NSO _____
   - Another public sector body _____
   - Another entity _____

Timeliness and frequency

3. Of the indicators in question 1, for how many is the reference period of at least one observation in the last four calendar years?

Accuracy and reliability

4. Of the indicators in question 1, for how many is at least one observation considered "official statistics"?

Consistency with global metadata

5. Of the indicators in question 1, for how many indicators is at least one observation of at least one sub-indicator either fully or partially following the global metadata?

Availability at series level

6. Of the indicators in question 1, for how many does your country publish at least one observation of all subindicators (please include indicators without subindicators)?

Relevance, Applicability and other reasons for non-availability

7. Of the 231 global indicators, how many (if any) are not applicable to your country?

Example 4 – International assessment of the national availability of indicators on target level

103. Often, it can be important to have a clear picture of how well the national statistical systems can inform the public and policy-makers on the state of the SDGs in their country.

104. In these cases, it may prove useful to assess the national availability of SDG indicators on the target level. With the target becoming the observation unit, the distinction between national and global indicators is not central.

105. A baseline question for this type of assessment can be:

1. For how many of the 169 SDG targets, is at least one observation of at least one indicator published nationally? Please take into account any global (both as a proxy or following international metadata), regional and national indicators.

106. Similar to example 3, follow-up questions can be designed to request information on any issues discussed in Section 2 that may be important for the use case.

Example 5 – Statistical Capacity Indicators

107. The Open Data Inventory (ODIN) Coverage Index is one of the subindicators of Indicator 17.18.1 Statistical capacity indicators. It aims to measure the capacity of countries to produce a set of official statistics from national databases to support the SDGs. The index is, as of 2024, available for the vast majority of UN member states.

108. This set of official statistics includes 65 important statistical indicators in 22 categories of social, economic, and environmental statistics. The overall availability is expressed as an index from 0 to 100, with 0 expressing no availability and 100 expressing complete availability. The score takes into account the availability of disaggregations (including geospatial disaggregations) and the timeliness of the last data point.

109. Open Data Watch assesses the availability of the indicators on the NSO website and any official government websites or portals linked to the NSO website. This means they are focusing entirely on national availability.

110. While the index does not measure the availability of SDG indicators, there is likely a large correlation between the index and the national availability of SDG indicators, given its purpose of measuring the statistical capacity of countries to support the SDGs. Many of the 65 indicators are also either SDG indicators themselves or are a prerequisite to produce SDG indicators.

111. In addition to the ODIN Coverage Index by Open Data Watch, the Statistical Performance Indicators produced by the Worldbank (also under indicator 17.18.1), may be useful if there is a specific interest in either the availability of data sources or data infrastructure.

4. Conclusion

National SDG data drive the global success of the 2030 Agenda.

112. As a global agenda, the progress towards the Sustainable Development Goals needs to be measured globally. Internationally comparable country data made available on the SDG global database are a cornerstone of the global follow-up and review of the SDGs. Given the global adoption of the SDGs by UN member states, understanding the national availability of SDG indicators is critical for the success of the agenda.

113. The main role of SDG statistics within countries is to inform the public and enable policy makers to make informed decisions. This applies also to the implementation of policies to help achieve the SDGs. The Sustainable Development Goals are implemented in the UN member states, which makes national availability of SDG indicators critical for the success of the agenda.

Availability of data on the global database does not equate to availability of national data.

114. To better inform the public and policy makers, countries often produce (additional) national or subnational indicators that capture the target in a way that is particularly relevant within the region or country. For the same reason countries that do not have the resources to produce internationally comparable data, may still publish a global indicator as a proxy.

115. How well-positioned countries are to inform their policy makers also depends on the availability of disaggregations that are relevant in the country and that are not included in the global database. For example, the availability of disaggregation on vulnerable groups and geographic disaggregation within countries (subnational) may be critical for the national implementation of the SDGs, and to develop targeted policy actions to ensure the “leave no one behind” principle. At the same time, data on the global database is often not based on information supplied by countries.

116. Overall, while much easier to assess, the availability of data on the global database can be very different from the availability of SDG data in countries.

Assessments should aim to inform on the national availability of SDG indicators.

117. There is currently a lack of data on how well countries can support the national implementation of the SDGs with SDG indicator data. Analyses of indicator availability largely focus on indicator availability on the global database.

118. The mandate of many international organizations in the international statistical system includes assisting countries in the production of official statistics. Without a clear picture of the data

gaps within countries, it is much more difficult to provide this assistance efficiently. When planning these assessments, international organizations should avoid placing additional burden on NSOs.

119. Countries should also have a vested interest in assessing and communicating the national availability of SDG indicators. In-depth analyses considering the availability of not only global but also regional or national indicators as well as proxies, are only feasible within countries. Such information can be used to, for example, identify structural issues in SDG data gaps and identify cost-effective ways to close them.

Careful planning is required to design feasible, fit for purpose availability assessments.

120. Collecting data on SDG indicator availability is a complex topic. Details and contextual information can make availability statistics more actionable – but assessments that consider these details can become time-intensive.

121. There are several ways to ensure that assessments are feasible. The purpose of the availability statistic and the acceptable level of effort will inform how to collect data on availability, the operational definition of availability, and how to prioritize disaggregations and necessary contextual information.

NSOs can use efforts already invested in SDG project management to produce detailed statistics on national indicator availability.

122. In most countries in the ECE region, NSOs have a coordinating role in the national statistical system.[3] Often countries use project management tools to track the roles and responsibilities of various national stakeholders involved in the production of SDG statistics. Such tools can be designed to double as an availability assessment tool, keeping the additional effort to collect very detailed information on availability to a minimum.

123. For that purpose, UNECE and the CES Steering Group on Statistics for Sustainable Development Goals have produced a self-assessment tool for countries.

Data availability is challenging from a communications perspective.

124. Many reasons make communicating statistics on national indicator availability challenging. From the difference between global and national availability to the operational definition of availability, many dimensions are difficult to explain without going into great detail.

125. Like any other statistic, it is recommended to provide metadata that provides a sufficiently detailed explanation. The metadata can make use of the structure of this publication and provide information on the four dimensions to design feasible assessments in Subsection 3.1, and the categories of issues relevant in the context of availability discussed in Subsection 2.1.

[3] See in which countries the NSO is the coordinator of the NSS in the table Progress in implementing Road Map recommendations for UNECE countries on the UNECE Statistics Knowledge Hub on SDGs)

References

Goessmann, Christoph, et al. (2023). *Pulse of Progress: The State of Global SDG Data in 2023*. ETH Zürich; United Nations.

Open Data Watch (2023). *Open Data Inventory (ODIN)*.

United Nations Economic Commission for Europe (2022). *Road Map on Statistics for Sustainable Development Goals – Second Edition*.

United Nations Economic Commission for Europe (2024). *Self-Assessment Tool for SDG Indicator Availability*.

United Nations Economic Commission for Europe (2024). *UNECE Knowledge Hub on SDGs*.

United Nations Economic Commission for Latin America and the Caribbean (2024). *Availability of comparable data of the indicators for the follow-up of the 2030 Agenda in Latin America and the Caribbean*.

United Nations Economic and Social Commission for Asia and the Pacific (2024). Understanding SDG data gaps based on national realities.

United Nations Economic and Social Commission for Asia and the Pacific (2024). SDG Data Availability.

United Nations Statistics Division (2019). *United Nations National Quality Assurance Framework Manual for Official Statistics. Including recommendations, the framework and implementation guidance*.

United Nations Statistics Division (2021). *Handbook on Management and Organization of National Statistical Systems*.

United Nations Statistics Division (2024). *The Sustainable Development Goals Report 2024. Technical Note for Progress Assessment*.

United Nations Statistics Division. *SDG Analytics*.

Upton, Graham, and Ian Cook (2014). *A dictionary of statistics 3e*. Oxford University Press, USA.