



PRACTICAL GUIDE FOR EVIDENCE-BASED VOLUNTARY NATIONAL REVIEWS

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ADVANCE VERSION

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1. Introduction

1.1 The importance of VNRs in tracking progress towards the SDGs

The 2030 Agenda is based on a universal development agenda articulated around 17 Sustainable Development Goals (SDGs) for the period 2015-2030. To meet this important agenda by 2030, it is recommended that national governments undertake systematic reviews of their progress towards sustainable development¹. These systematic reviews are particularly critical given current challenges – building back better from the COVID-19 pandemic, climate change and conflicts– while advancing the full implementation of the 2030 Agenda.

One such SDG monitoring and reporting mechanism is the [Voluntary National Review \(VNR\)](#) – a cornerstone of the follow-up and review framework of the 2030 Agenda that governments present at the UN [High-Level Political Forum for Sustainable Development](#) (HLPF). VNRs are most meaningful when they involve an inclusive, participatory, transparent and thorough review process at the national and sub-national levels, when they are evidence-based, produce tangible lessons and solutions, and when they are followed by concrete action and collaboration that drives SDG implementation². They are meant to be voluntary self-assessments for governments that provide a snapshot of the Goals and targets that have been realised, as well as those that are still in progress. They are also designed to uncover capacities and facilitate peer learning among governments. VNRs are meant to balance successes and challenges and explain next steps. In terms of evidence, they can demonstrate country-level efforts to improve data for tracking progress towards the Goals, but also identify data challenges. The process of preparing a VNR can be valuable, if not more important, than the end report itself as a means for governments to examine and enhance their data and statistical capacities for SDG monitoring.

1.2 How data and statistics can support evidence-based VNRs

The follow-up on the SDGs by national governments is vital to implement the Goals at country level and according to the 2030 Agenda, monitoring of SDG progress should be “rigorous and based on evidence”, which is also an essential component of VNR preparation.

National data and statistical systems play a key role to ensure that VNRs are underpinned by evidence. Governments that prioritize the use of statistics in tracking their SDG progress benefit in several ways.

They can:

- ✓ Use indicator baseline data to help them track SDG performance over time;
- ✓ Focus on progress in specific areas to hold public agencies, private sector and other stakeholders accountable for their SDG commitments;
- ✓ Design data-directed policies and allocate resources for the SDGs;
- ✓ Use data to communicate with other in-country development stakeholders;
- ✓ Identify data challenges to improve their statistical systems for sustainability planning;
- ✓ Use statistical reports to increase trust in the transparency and utility of official data.

¹ [A/RES/70/1](#) United Nations. Transforming our world: The 2030 agenda for sustainable development. s.l.: United Nations, 2015.

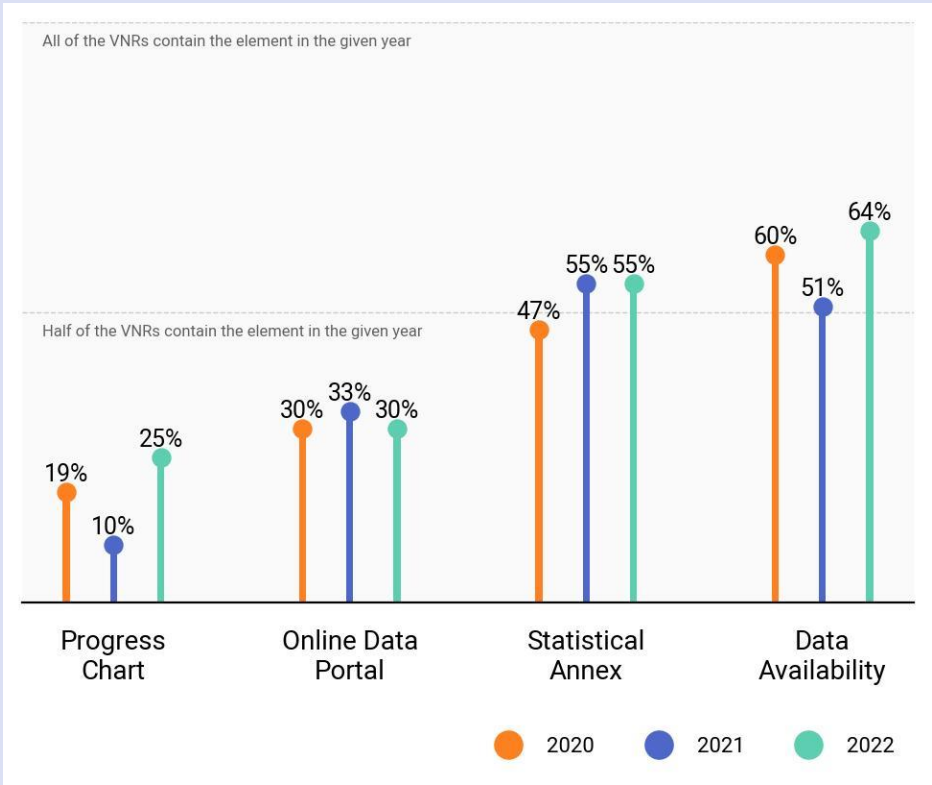
² UN DESA. [Voluntary common reporting guidelines for voluntary national reviews at the HLPF](#)

However, the data demands of SDG planning and review may be beyond the current capacities of the statistical systems of many countries. It is vital, therefore, to consider the role data currently plays in measuring country progress, and to identify data constraints, and consider solutions for SDG data and statistics.

Box 1: Incorporation of data and statistics in the VNRs³

Since 2016, the inclusion of data and progress assessments in VNRs has improved as countries have strengthened their monitoring frameworks for SDGs. In the 2022 VNRs, countries highlighted not only the increasingly important role of data and statistics for evidence-based policy making, but also documented their progress in progressively monitoring more of the indicators in the SDG agenda. All countries incorporate data into their reviews, and an increasing percentage of countries are including Statistical Annexes, progress charts and online databases for information on SDG progress. In addition, VNRs continue to demonstrate how countries are addressing data availability and collection issues. Moreover, they include steps taken to modify and adapt the global indicator framework to fit national contexts, conditions, and priorities. Limited evidence and data availability, disaggregation and collection as well as human and financial constraints remain challenges for many countries.

Figure 1: Proportion of Countries Incorporating Data Elements in VNRs (2020-2022)⁴



Note: Data availability refers to the provision of the proportion of global or national SDG indicators with available data. Progress chart refers to the visualization of a trend analysis on the SDG progress. Online data portal refers to an open data source through which national SDG data are disseminated. Statistical annex refers to the documentation of SDG data.

³ UNDESA [2022 Voluntary National Reviews Synthesis Report](#) (input provided by UNSD in section on Data and monitoring)

⁴ Source: Yip, 2022, based on review of data elements from the 2020, 2021 and 2022 VNRs

1.3 The practical guide

VNRs are meant to support governments in reviewing implementation of the Goals of the 2030 Agenda through the opportunity to mutually share experiences among Member States. The VNR process is expected to be transparent to show accountability of governments to their citizens in terms of development progress. Several resources have been developed to support Member States in different aspects of the VNR. This guide is meant to serve as a complementary resource for Member States on how to use data and statistics on SDGs to support evidence-based VNRs.

Data are being widely recognized as strategic assets in building back better and accelerating the implementation of the SDGs. Therefore, data and statistics are a vital element of VNRs to accurately demonstrate SDG commitment and progress. There are steps governments can take to ensure their VNR process is data driven and evidence based. Using a roadmap approach and good practice examples, this guide suggests key stages in the national VNR process that can enhance the use of data for evidence-based VNRs. It explains all stages in VNR data preparation and presentation, from identification of needs and planning to post-evaluation of the data aspects of the VNR process.

The guide is designed as a practical resource to help governments make their VNRs more evidence based. It provides recommendations for what should be reported in VNRs, how to compile and present statistics in VNRs and what information to include in these reviews. Using examples from VNRs (primarily from 2020 to 2022) and VNR workshops, the guide presents good practice examples of solutions to data challenges involved in preparing VNRs. The guidance demonstrates how the VNR process can be more data-directed based on country experiences. This focus on evidence for SDG reporting can help governments use the VNR process to also identify strengths and weaknesses of the statistical systems and areas for which statistical capacity building is needed.

Please note that the Advance Version (October 2022) is made available for countries currently developing a VNR. A final version will be forthcoming.

Authors: *The initial draft Guide was developed by consultant Lynn Wolfrey. Heather Page and Yongyi Min, SDG Monitoring Section of the United Nations Statistics Division, finalized the Guide by editing, updating and adding additional sections. Cheuk Wing Travis Yip also significantly contributed research, writing and analysis to the final Guide.*

UNSD welcomes feedback on the Guide to best tailor this resource for countries developing their VNR. Please send any comments to Heather Page at pageh@un.org.

Roadmap illustration in Chapter 4 is adapted from Roadmap infographics template available at [Slidesgo](#) and [Freepik](#).

2. SDG Data Reporting Frameworks

This chapter focuses on the main available types of data reporting frameworks that can be useful for VNR data preparation. It discusses the UN Global SDG indicator framework, national SDG indicator frameworks, other national or regional data reporting and measurement and evaluation (M&E) frameworks as well as local voluntary reviews and sub-national reviews. In this regard, it is recommended that governments have agreed data frameworks and processes for preparing evidence-based VNRs. For VNR reporting, governments can draw on the mandates of the 2030 Agenda, global data frameworks, any national or regional policy data frameworks as well as coordination mechanisms within government and with stakeholders to help them use data and statistics effectively in VNRs.

2.1 Global SDG indicator framework

The global SDG indicator framework⁵ was adopted by the UN to track performance related to the SDGs from a global perspective. This framework consists of a list of standardised indicators to measure progress towards the targets related to each of the 17 Goals and can also be used by governments as a guide for national monitoring of SDG progress. Ultimately, governments are encouraged to prioritise the indicators from the global framework that align with the country's development priorities and measure their progress against the national indicator lists that have subsequently been developed. This global SDG indicators prioritisation and complementary national indicators will guide data reporting in VNRs.

Box 2: Global Indicator Framework for the SDGs

The global indicator framework for the SDGs was developed by the Inter-Agency and Expert Group on SDG Indicators (IAEG-SDGs) and adopted by the General Assembly on 6 July 2017 and is contained in [A/RES/71/313](#). According to the resolution, the indicator framework will be refined annually and reviewed comprehensively by the United Nations Statistical Commission at its fifty-first session in March 2020 and its fifty-sixth session in 2025. The global indicator framework is complemented by indicators at the regional and national levels, to be developed by Member States.

Annual refinements of indicators are included in the indicator framework as they occur. In line with the mandate of the group, the IAEG-SDGs proposed 36 major changes to the framework in the form of replacements, revisions, additions and deletions as part of the 2020 Comprehensive Review, which were approved by the 51st Statistical Commission in March 2020. The full list of global indicators is available [here](#).

Prioritising and adapting global SDG indicators and creating national frameworks can demonstrate ownership of the SDGs at the country level, while mainstreaming the 2030 Agenda into national development policies and prioritising the Goals and targets that are most relevant to national policy approaches. Without this policy integration, governments will not be able to monitor their SDG progress since monitoring requires an evaluation of progress based on policy priorities. The SDGs and related targets were reflected in national priorities in 24 (about 51 per cent) of country VNRs in 2020, including 17 per cent where the National Development Strategy (NDS), vision or plan provided the framework for

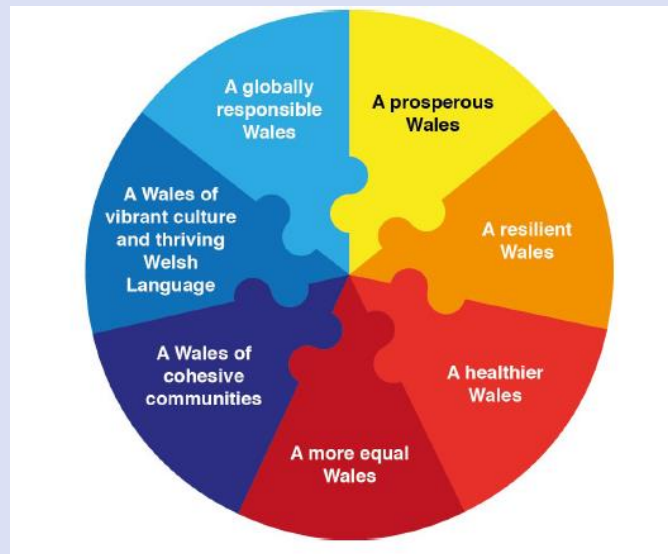
⁵ Developed by the [Inter-Agency and Expert Group on Sustainable Development Goal Indicators](#). The global SDG indicator framework was adopted by the UN General Assembly in July 2017 as [A/RES/71/313](#). Indicator list available [here](#).

setting SDG priorities⁶. Nearly three-quarters of countries (32 out of 44) presenting their 2022 VNR detail efforts to localize the global SDG indicator framework to the national context and national priorities.

Box 3: Country examples on the alignment of SDGs with national priorities^{7,8}

United Kingdom

In Wales, the 17 SDGs have been incorporated into the country's 7 Sustainable Development Goals ("well-being" goals) and legislation that binds government bodies to work to achieve the 7 well-being goals. The government has also added goals related to cultural heritage along with the economic, social, and environmental dimensions of sustainable development. The integrated policy includes both institutional and legal mechanisms for review, such as a Future Generations Commissioner⁹.



Bulgaria

The Bulgarian government explains in their 2020 VNR how they have aligned their national priorities to the aims of Agenda 2030. The main national development strategy in Bulgaria is the National Development Programme: Bulgaria 2020 which has 8 priority areas linked to the Goals of Agenda 2030. The main priorities of the Bulgarian government are: (i) improving education and training; (ii) reducing poverty and ensuring social inclusion (iii) sustainable integrated regional development (iv) agricultural sector development and sustainable management of natural resources (v) innovation and investment for economics competitiveness (vi) strengthening institutions for better public services and businesses (vii) energy security and resource efficiency, and (viii) better transport connectivity and market access.

(continued on next page)

⁶ See: https://www.partners-for-review.de/wp-content/uploads/2020/12/P4R-2020-VNR-Analysis_FINAL-Nov.-2020.pdf

⁷ United Kingdom of Great Britain and Northern Ireland, Voluntary National Review, 2019 (graph pg. 11)

⁸ Bulgaria, Voluntary National Review, 2020 (graph pg. 20)

⁹ Well-being of Future Generations (Wales) Act 2015. UK Government. 2015.



2.2 National SDG indicator frameworks

In addition to the Global SDG Indicator Framework for measuring and monitoring progress, Member States are encouraged to develop national implementation strategies and country-specific indicator frameworks that reflect national priorities related to the achievement of the Goals. Governments have taken the global SDG indicators as a starting point and selected indicators for national priority goals and targets. VNR-reporting governments note that the global indicators are useful for cross-national comparisons, but nationalised indicators better guarantee ownership and understanding of the Goals at the country level.

Having one nationally-agreed data framework for all country stakeholders to consult is essential to coordinate data provision and data assessments for national SDG progress monitoring. Cooperation around national frameworks can also help policymakers to exploit interlinkages among SDGs to identify data reporting priorities.

Governments have also based their national SDG indicator frameworks on existing data collection systems or used indicators that are already being used to monitor globally-aligned national development strategies. When translating the global measures into a national SDG indicator framework for SDG follow-up and review, governments are expected to:

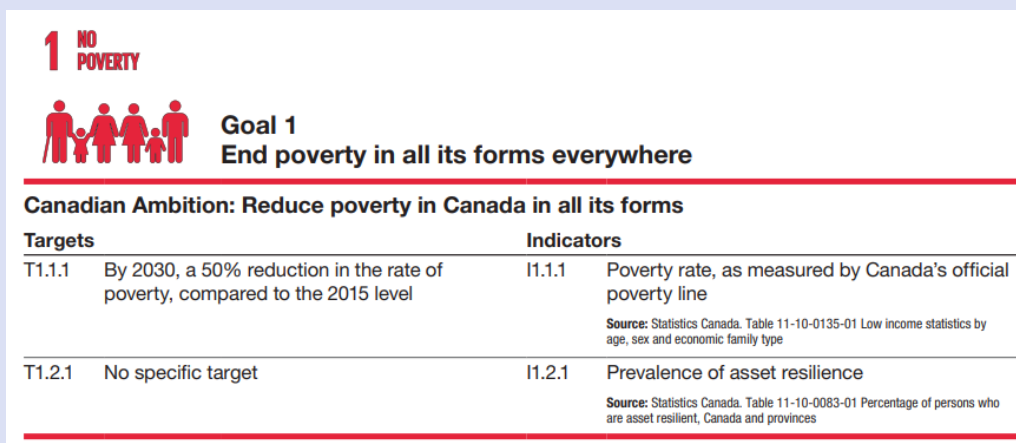
- Link national development plans with the Goals and targets from the 2030 Agenda e.g., excluding coverage of SDGs that are not applicable to the country (e.g., landlocked countries can consider excluding marine ecology targets);
- Develop national SDG indicators to be relevant to nationally-specific agendas, while aligning them with the global indicators to the extent possible;

- Cater for inter-linkages and inter-dependence among Goals and targets and balance the interests of all groups in their implementation;
- Consider international and regional cooperation agreements which may influence priority targets;
- Conduct data readiness assessments, data mapping, and gap analyses, to determine availability of data to compile SDG indicators for priority targets; and
- Communicate about and advocate for the SDGs at the country level.

Box 4: Country examples of national SDG indicator frameworks

The Canadian Indicator Framework for the SDGs¹⁰

To complement the global indicators, in collaboration with federal departments and agencies, Statistics Canada has developed the Canadian Indicator Framework (CIF) for the Sustainable Development Goals (SDGs), which allows Canada to track and report on progress on its priorities for achieving the 2030 Agenda for Sustainable Development. The CIF includes 76 indicators specific to Canada to measure progress on the Canadian SDG ambitions identified in Canada's 2030 Agenda National Strategy (Moving forward together: Canada's 2030 Agenda National Strategy). The Canadian Indicator Framework for the SDGs is an example of how Statistics Canada supports the reporting on the 17 Goals.



Targets		Indicators	
T1.1.1	By 2030, a 50% reduction in the rate of poverty, compared to the 2015 level	I1.1.1	Poverty rate, as measured by Canada's official poverty line <small>Source: Statistics Canada. Table 11-10-0135-01 Low income statistics by age, sex and economic family type</small>
T1.2.1	No specific target	I1.2.1	Prevalence of asset resilience <small>Source: Statistics Canada. Table 11-10-0083-01 Percentage of persons who are asset resilient, Canada and provinces</small>

Botswana: Mainstreaming the 2030 Agenda¹¹

Botswana developed the SDG Planning Guidelines to facilitate a systematic mainstreaming of relevant SDG targets and indicators into national and sector level plans, policies and strategies as well as planning frameworks. Through the five stages of the Guideline (see figure), Botswana has established baseline data for 88 of 209 relevant indicators and set national annual SDG targets. The Guidelines have also demonstrated how administrative data can be harnessed to improve SDG monitor capacity in the country.

(continued on next page)

¹⁰ See: <https://www150.statcan.gc.ca/n1/daily-quotidien/210622/dq210622c-eng.htm> and graphic (portion of the list of indicators: <https://www150.statcan.gc.ca/n1/pub/11-26-0004/112600042021001-eng.htm>)

¹¹ Botswana, Voluntary National Review, 2022 (graphic page 14)



2.3 Other data reporting frameworks

Aside from the Global SDG indicator framework and national SDG frameworks, countries can also use, for VNRs reporting, other data and statistics and M&E reporting frameworks that have been developed for tracking progress towards national or regional development strategies and the SDGs. Some examples include:

- In Jamaica, an integrated evidence- and results-based management (IERBM) framework has been developed to provide evidence needed to inform the implementation of Vision 2030 of Jamaica. This includes empirical evidence from data, statistics, and reports of scientific and systematic research findings covering the three dimensions of sustainability. The monitoring and evaluation framework also applies to the SDGs, where deliberate steps were taken to integrate the Goals¹².
- The EU SDG Indicator Set¹³, which is a regional SDG indicator framework, is used to monitor progress towards the Goals in an EU context. This EU data framework is the basis for Eurostat’s annual monitoring report on progress towards the SDGs and in conjunction with national data frameworks can be a basis for SDG reporting for European countries.
- In Vanuatu, a monitoring and evaluation framework of the National Sustainable Development Plan (NSDP) for 2016-2030 (NSDP M&E Framework) was developed as a complement to the *Vanuatu 2030: The People’s Plan*. The results-based framework also includes alignment with the SDGs and critical elements of the framework include: baseline data to describe the problem or situation prior to the NSDP; indicators aligned to targets and policy objectives; ongoing data

¹² See: <https://www.vision2030.gov.jm/monitoring-and-evaluation-me-framework-vision-2030-jamaica-national-development-plan-ndp/>

¹³ EU SDG Indicator set 2021, Result of the review in preparation of the 2021 edition of the EU SDG monitoring report, Eurostat, 2021 (https://ec.europa.eu/eurostat/documents/276524/12239692/SDG_indicator_set_2021.pdf/)

collection on indicators to relate to achievement; systemic reporting with qualitative and quantitative information; M&E matrixes completed in coordination with line ministries and other stakeholders; and information on success or failure reaching targets and achieving policy objectives¹⁴.

2.4 Voluntary Local Reviews (VLRs) & sub-national reviews

The reporting of granular data in VNRs is increasingly important and sub-national data frameworks can be very useful to provide necessary evidence on SDG progress. In addition, countries may follow a decentralized approach for the implementation of the 2030 Agenda and therefore reporting of SDG progress may fall to the sub-national level. This was the case for Switzerland and therefore the reporting on SDG implementation for the 2022 VNR needed to consider this reality and allow space for authorities at the sub-national level.

Some data frameworks have been developed to track and follow SDG progress at the sub-national level. In India, apart from the national SDG indicator framework, which consists of 297 nationally-defined indicators across all 17 Goals, 60 per cent of the State Governments have developed a state indicator framework (SIF), which significantly vary in terms of the number of indicators. About 30 per cent of the states have developed district indicator frameworks (DIFs), which would enable addressing local aspirations and capturing details of ground-level performance¹⁵.

Sub-national reviews of SDG implementation or more formal Voluntary Local Reviews (VLRs) can complement and contribute to the national reviews conducted by countries for the VNRs. These reviews, conducted by cities and regions since 2015, aim to localize the SDGs even further and can be used as a framework tool for planning and policy execution¹⁶.

Box 5: Voluntary Local Reviews¹⁷

In some countries, SDG progress tracking has devolved to sub-national levels. For example, in Mexico municipalities prepare local agendas and strategies. VLR are an emerging trend among countries and in 2020 were undertaken by local and regional governments in Finland, Kenya, and Uganda. Many cities and regions historically had sustainable development agendas but not linked to the SDGs. These city and regional municipalities are now using the SDG framework to prepare their own VLRs.

[The Global Guiding Elements for Voluntary Local Reviews¹⁸](#), developed by UN DESA, is a starting point for local and regional governments when developing VLRs, with an overview of useful focus areas for the review and report. The [UN DESA VLR website](#) also contains additional guidance materials and a repository of VLRs from different cities and regions.

¹⁴ See: <https://www.nab.vu/document/nsdp-monitoring-and-evaluation-framework> (page 6)

¹⁵ India, Voluntary National Review, 2020

¹⁶ See: <https://sdgs.un.org/topics/voluntary-local-reviews>

¹⁷ Partners for Review. Voluntary national reviews 2020: A snapshot of trends in SDG reporting. s.l. : United Nations, 2020.

¹⁸ See other languages: <https://sdgs.un.org/topics/voluntary-local-reviews>

Other guidance material available for the development of sub-national reviews of SDG implementation include:

[UN-Habitat VLRs website](#): includes resources such as guidelines, learning modules and handbooks for the development of local reviews as well as a repository of VLRs and technical cooperation and SDG localization resources.

[Guidelines for the Development of Voluntary Local Reviews in the ECE Region](#)¹⁹: *endorsed by the UNECE Committee on Urban Development, Housing and Land Management to assist local and regional governments in the region in developing VLRs.*

[Asia-Pacific Regional Guidelines on Voluntary Local Reviews](#): *builds on existing resources to provide practical tools, checklists and templates for local governments' use when developing a VLR.*

¹⁹ See also: <https://unece.org/housing-and-land-management/press/unece-endorses-guidelines-development-voluntary-local-reviews>

3. Data and Statistics Guiding Principles

This chapter discusses the main data and statistics guiding principles to be considered during the collection, analysis and while incorporating the data needed in VNRs.

Apart from the global SDG indicator framework, which governments can translate to their national and local contexts, there are internationally agreed data and statistics principles that can guide the use of data in VNRs. The [Fundamental Principles of Official Statistics](#) and [data quality principles](#) have been developed for National Statistics Systems (NSS) to ensure that official statistics are as reliable and usable as possible. [Open government data principles](#) were created to make official data more transparent and accessible. Data development principles were produced to ensure, in particular, the accessibility, coherency and interoperability of data used for SDG data. The objective of referring to these data and statistics principles is to ensure the use of the most relevant data and statistics with good quality in VNRs.

Table 1: Principles for the use of data and statistics in VNRs²⁰

Date	Name	Principle						
		Accountability (institutional responsibility)	Accessibility (availability)	Accuracy	Interoperability	Primacy (disaggregation)	Timeliness	Interpretability (presentation)
1992	Fundamental Principles of Official Statistics²¹	✓			✓		✓	✓
2010	Ten Principles for Opening up Government Information		✓		✓	✓	✓	✓
2013	Open Data Charter²²		✓		✓	✓	✓	✓
2014	Principles for the Data Revolution for Sustainable Development	✓	✓	✓	✓	✓	✓	✓
2019	Quality Guidelines		✓	✓	✓	✓	✓	✓

²⁰ Source: Woolfrey, 2020, harmonised from the 1992, 2010, 2013, 2014, and 2019 principles

²¹ UNECE. Fundamental Principles of Official Statistics. s.l. : UNECE, 1992.

²² ODC. International open data charter. s.l. : Open Data Charter, 2015.

3.1 Official statistical principles and quality frameworks

The Fundamental Principles of Official Statistics (FPOS) were adopted by the Statistical Commission in 1994, endorsed by the Economic and Social Council (ECOSOC) in 2013 and adopted by the General Assembly in 2014 ([A/RES/68/261](#)). This recognition at the highest political level underlines that official statistics - reliable and objective information - are crucial for decision making. Whilst the Fundamental Principles primarily outline features of an institution, each principle provides a guide on the characteristics of an official statistic. **A significant part of the data and statistics used in VNRs are recommended to be compiled from official statistics and the National Statistical Offices (NSO) should play a key role in the preparation of VNR data.**

Quality Frameworks

In addition to the FPOS, the international community has adopted different quality frameworks. These quality guiding principles include sound methodology; appropriate and cost-effective statistical procedures; statistical confidentiality; the avoidance of excessive burden on respondents; relevance, completeness, accuracy, reliability, consistency, timeliness, coherence, comparability, accessibility and clarity that frame the different institutional, methodological and related products' aspects of official statistics.

The principles of quality frameworks should be considered during VNR data reporting, given that VNRs include data produced both within and outside the NSS, as well as due to the need to include data that meet quality requirements.

In this regard, different quality frameworks, mainly code of practice²³ and quality assurance frameworks²⁴, have been developed by national, regional and international institutions to ensure the use of high-quality statistics within national statistical systems. These data quality frameworks can also be used to guide the production and use of data outside the NSS.

Additionally, the [United Nations National Quality Assurance Frameworks Manual for Official Statistics \(UN NQAF Manual\)](#) can also be used to develop and implement a National Quality Assurance Framework (NQAF) for an NSS. The Manual also provides guidance for engagement with statistics producers and data providers outside of the NSS that cooperate with members of the NSS in the production of official statistics.

For example, in the European Statistical System (ESS), the quality of statistics is managed in the framework of the [European Statistics Code of Practice \(CoP\)](#), which sets the standards for developing, producing and disseminating European statistics. Many national and regional organizations or statistical systems were inspired by the ESS CoP to develop their own Codes of Practices (for example, the Code of good practice in statistics for Latin America and the Caribbean²⁵, ASEAN Code of Practice²⁶, and The Statistics Code of Practice for the European Neighbourhood South countries)²⁷.

²³ See for example the [National Code of Good Practice for Official Statistics of Colombia](#)

²⁴ See for example the [National Quality Assurance Framework](#) of the Republic of Rwanda

²⁵ See: <https://www.cepal.org/en/publications/16423-code-good-practice-statistics-latin-america-and-caribbean-november-2011>

²⁶ See: <https://www.aseanstats.org/wp-content/uploads/2017/02/Code-of-Practice-ADOPTED-CLEAN.pdf>

²⁷ See: <https://ec.europa.eu/eurostat/web/products-catalogues/-/ks-32-11-955>

3.2 Other data principles

Other data principles, such as open data and development data principles, can be used to frame the handling of data used for VNR reporting.

Open Data principles

In general, open government data principles state that, to be accessible, data must be free, based on open standards, machine-readable and distributed with clear open licenses. Commitment to open data models can demonstrate government transparency and increase trust in government data.

The international Open Data Charter²⁸, as example of these open data principles, was developed to make data open and freely available, while protecting the rights of people and communities. The Open Data Charter is a collaboration between over 150 governments and organisations working to open up data based on a shared set of principles.

Development data principles

Relating to the 2030 Agenda, there are some principles that are important for development data, like: Interoperability, Accessibility and Accountability.

Interoperability²⁹ relates to the ability to compare and combine data across domains. In the context of the 2030 Agenda, interoperability also implies *policy coherence* around SDG data. Coherent data policies mean government agencies and other stakeholders must agree to implement one agreed SDG data framework. The principle of interoperability must also be built into the design of technical and methodological tools for data, to maximise their use and prevent data silos.

Accessibility relates to the availability of data, and considerations around data gaps, data collection, and data exchange. The principle of **accountability** means that there must be clear institutional responsibility for preparing and reporting data. The principles also concern the need for timely and well-presented data and data disaggregation.

The [Cape Town Global Action Plan for Sustainable Development Data](#) endorses open data governance models as a way to modernise national statistical systems to make them more responsive to data users' needs³⁰. Moreover, the UN's [Principles for the data revolution for sustainable development](#) apply to official statistics and other data that can be used for SDG reporting and implementation. The data revolution principles also endorse open data models to make data more accessible for reviewing SDG progress³¹.

²⁸ See: <https://opendatacharter.net/principles/>

²⁹ See: <https://doi.org/10.1038/sdata.2016.18>

³⁰ HLG-PCC. Cape Town Global Action Plan for Sustainable Development Data. High-level Group for Partnership, Coordination and Capacity-Building for Statistics for the 2030 Agenda for Sustainable Development, UN. Cape Town: United Nations, 2017.

³¹ IEAG-SDD. A world that counts: Mobilising the data revolution for sustainable development. s.l: United Nations, 2014.

3.3 The 2030 Agenda principles and VNR data practicalities

The 2030 Agenda lays out core principles for the systematic follow-up and review of the SDGs. Along with international data principles, these principles can be used as a starting point for reporting statistics in VNRs.

Box 6: 2030 Agenda principles and VNR data practicalities

Principle 1: National Ownership and Commitment to the SDGs

VNRs should provide information on how governments have aligned their national policies with the SDGs and the SDG indicators using statistics from country-level data. For example, some VNRs compare global targets and goals with aligned or complementary national counterparts for a country.

Principle 2: Universality and Inclusion

The Goals are meant to be achieved for all, and VNR statistics should show how governments plan to include those who are vulnerable to being left behind in SDG planning in the country. Data presented in VNRs should address those furthest behind, but also cover all vulnerable groups in the country. Statistics should then be presented on government efforts to include the vulnerable in SDG monitoring and implementation.

Principle 3: A Human Rights Approach

This principle aligns with the principle of universality and can also help governments understand the SDGs in context with other human rights agendas, such as the [Universal Declaration of Human Rights](#). VNRs should consider human rights related to data such as privacy rights and sensitivity in data collection; accurate and transparent data reporting; and an open approach to data sharing.

Principle 4: Integration and Indivisibility of the Goals

This principle relates to the interrelatedness of the three dimensions of sustainable development: economic, social and environmental, such as the link between human well-being and a healthy environment. Data gaps can hinder policy planning in countries, such as for environmental policies when environmental statistics are not as readily available. VNRs should report on how the government is integrating social, economic and environmental aspects of sustainable development.

Indivisibility also refers to interlinkages among the Goals and their targets. The VNR Handbook encourages governments to report on all 17 SDGs, with more detailed coverage of national priority goals and targets. However, in reality, for some governments VNR reporting may involve trade-offs, a decision to focus on key Goals and targets and report data on their indicators rather than the full global SDG framework. However, by recognizing interlinkages among the SDGs, policymakers may be able to focus on achieving Goals and targets which will have the greatest positive impact. Data reporting should make these interlinkages clear and demonstrate how they are being accounted for in national indicators.

(continued on next page)

Principle 5: Collaboration and Transparency

SDG progress monitoring is expected to be open, participatory and transparent and SDG indicator values must be openly available. For transparency, VNR statistics should include references and links to original data used to compile the statistics. Some NSOs have made efforts to report using publicly available data sources so that their VNR statistics are easily reproducible, which is a good transparency practice.

Principle 6: Building on Existing Monitoring and Reporting Platforms and Processes

To avoid duplication, VNRs must make use of existing platforms and processes for SDG follow-up and review. Therefore, current data reporting institutions and processes must play a dominant role in delivering data for VNRs. Data is therefore not collected solely for the purpose of the VNR, but instead the VNR is a by-product of existing monitoring of the SDGs. At the same time, in many countries, existing data infrastructure (institutions, policies, legislation, and technologies) need to be strengthened to contribute a reliable and timely evidence base for VNRs.

Principle 7: Evidence-Based Monitoring and Review

The format and content of VNRs should show that these reviews are data driven, such as the inclusion of progress charts, data tables and graphs and a Statistical Annex. VNR teams can also include a dedicated data section or chapter, as well as a next steps section that includes future data plans. This data section or chapter can briefly outline sources used to clearly identify the evidence base of the VNR. It can explain whether all VNR data comes from the NSO, or if other agency data was incorporated into the review. It can also indicate whether data from stakeholders were used to obtain a different perspective and/or to cover gaps in data held within the NSS. The data section or chapter can also describe any online indicator reporting platforms that provide access to indicator data and whether these were used as a data source in VNR preparation.

These core data principles align well with the needs of data reporting in VNRs and can be drawn on when considering what data to use as an evidence-base for SDG reporting in VNRs and how to present the data in the reviews. Governments could also adopt these principles as “Sustainable Data Goals” for building their statistical capacities to provide quality data for SDG reporting and implementation going forward.

3.4 Common reporting guidelines for VNRs

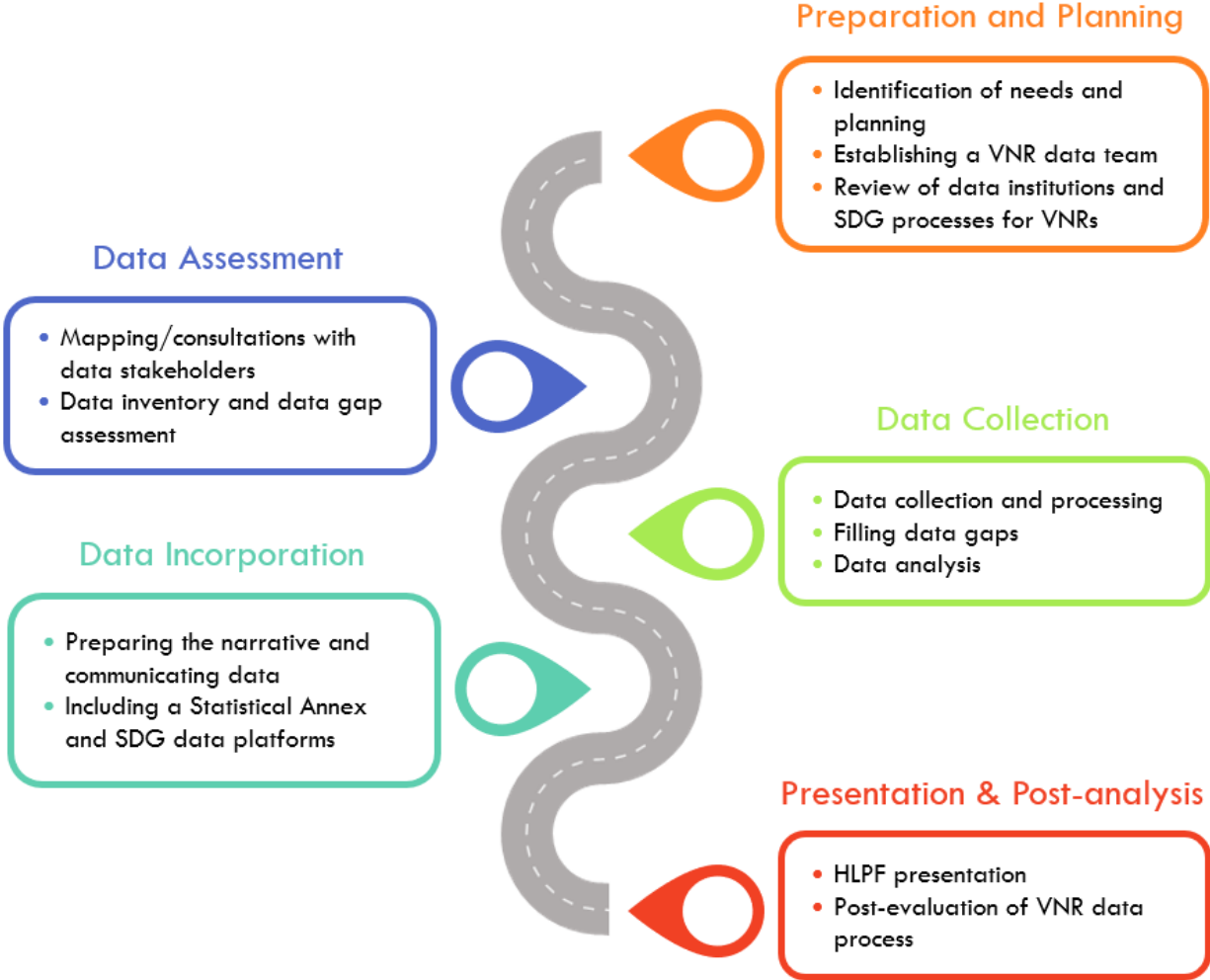
The Secretary General has developed *Voluntary common reporting guidelines for VNRs* for compiling VNRs, providing a framework for elements to include and largely summarising the principles of the 2030 Agenda. The guidelines are included as Annex 2 in the *Handbook for the preparation of Voluntary National Reviews*, which provides the building blocks and practical information on the steps needed for preparing VNRs³². The common guidelines reiterate that it is necessary to include statistics in VNRs and that these statistics should be based on high-quality country data. The Guidelines also reiterate the principles concerning SDG monitoring and review presented in the 2030 Agenda.

³² See: [Handbook for the preparation of Voluntary National Reviews 2022](#) (other languages: <https://hlpf.un.org/vnrs>)

4. Developing a Data Roadmap for VNRs

This chapter details the steps the VNR team can follow during the preparation of VNR data and elaborates on each stage of a proposed data roadmap (see below). Data road-mapping - directed plans with stages - can be used to scale up and improve the use of data for sustainable development planning overall. For more long-term planning within an NSS, these roadmaps can help identify data issues that need to be resolved within national data ecosystems or in cooperation with partners from outside official statistics. For VNR purposes, a VNR Data Reporting Roadmap should reflect more immediate stages for sourcing reliable data to report indicators and statistics in VNRs.

Figure 2: Data roadmap for VNRs³³

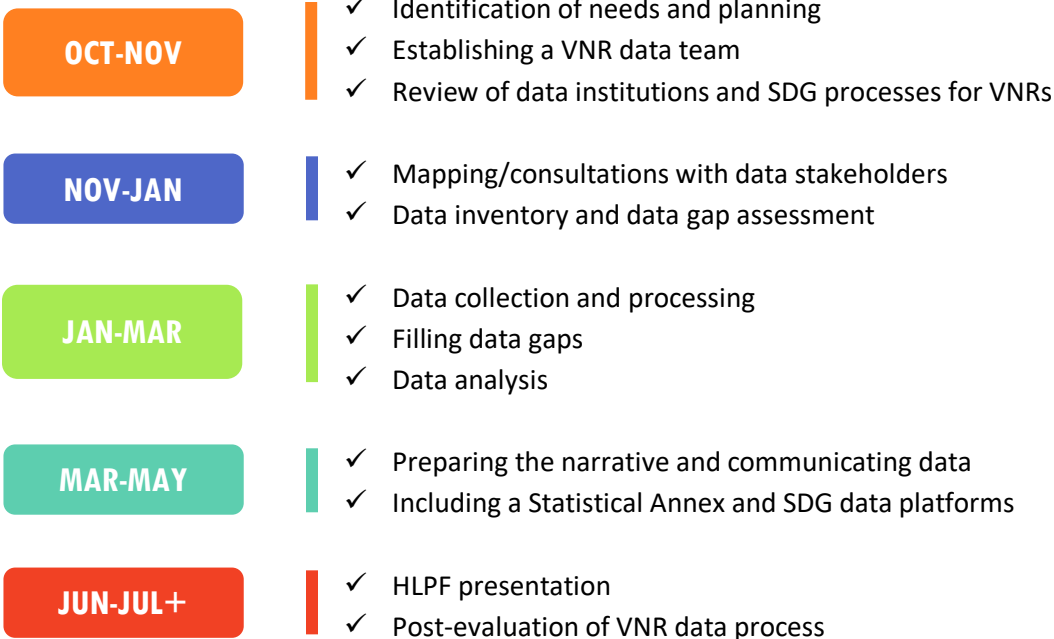


³³ Adapted from UNSD [Workshop on Preparing Evidence-based Voluntary National Reviews \(VNRs\) for 2021 HLPF](#)

The VNR data Roadmap will have a much shorter timeframe than data roadmaps for ongoing implementation of the Goals, but the advantage of a roadmap is that it is systematic and stage-focused and can easily highlight omissions. The use of the roadmap concept can also draw attention to how NSS agencies can strengthen country data ecosystems for SDG planning and follow up. The data roadmap for the VNR can also complement other VNR roadmaps developed by teams when preparing the VNR.

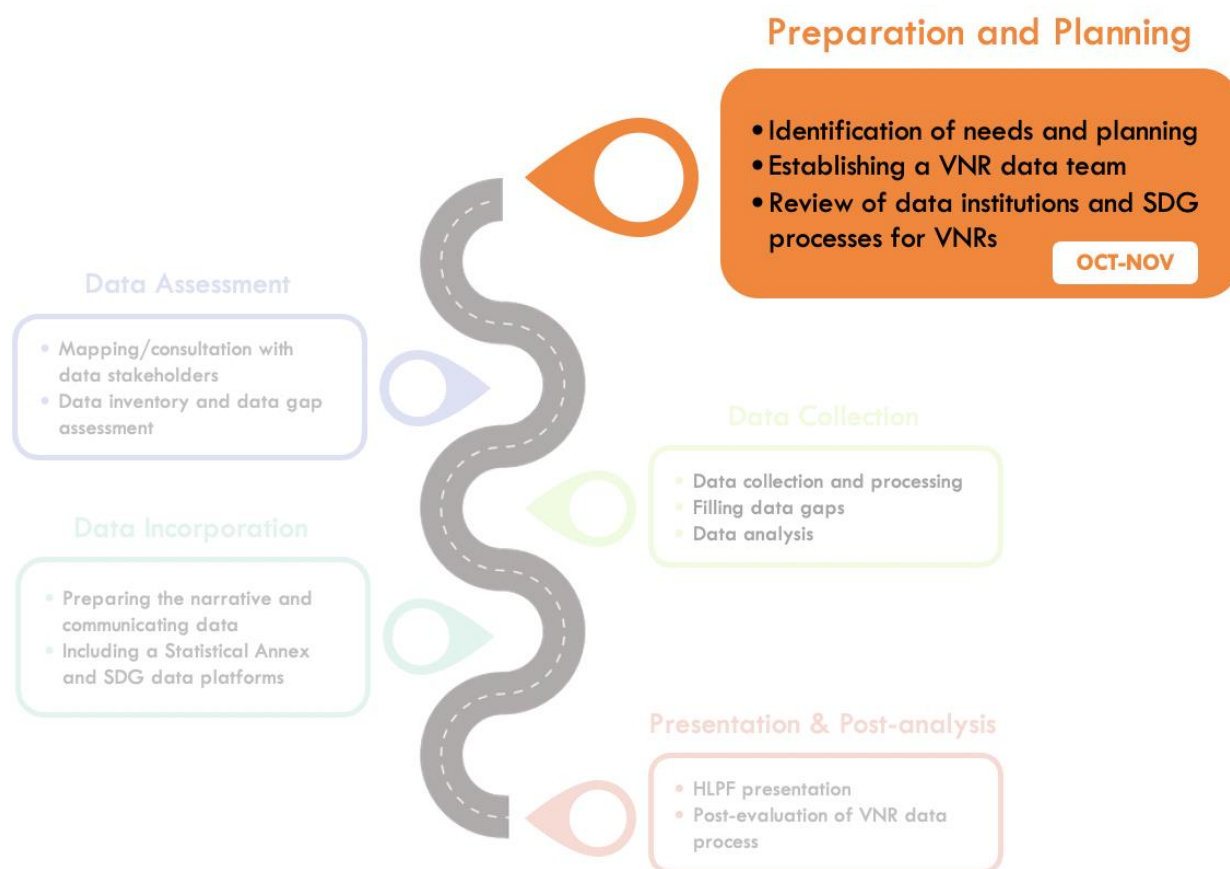
Recent VNRs show examples of VNR preparation stages (e.g., 2021 VNRs of Marshall Islands, Tunisia and San Marino), but few have documented detailed stages of data collection, data collation, and interactions with potential data suppliers.

Suggested stages for the VNR data roadmap (as listed in the illustration above) with a proposed timeline:



The data roadmap provides an example of the sequence of steps that a country could undertake, but will likely not reflect each countries’ experience, considering the myriad approaches to collecting and processing SDG data. For some countries, many of these steps will be addressed concurrently or could perhaps take much longer than the estimation provided. The steps of the data roadmap are intended as a guide to getting started and would need to be tailored to each countries’ unique experience and circumstances concerning SDG data.

Preparation and Planning



4.1 Identification of needs and planning

Most roadmaps begin with an assessment of needs. In this case, the needs assessment is linked to policy decisions around priority areas related to the SDGs selected for the country, so these priorities become those of the SDG monitoring team. In addition, at this stage the institutions in charge of coordinating the VNR process start to plan all the necessary steps for the accomplishment of VNR data work.

The objective is to ensure that sufficient time and resources are available to plan and organize the work, prepare the necessary data and develop the content utilizing an inclusive and participatory process³⁴.

Box 7: Examples of VNR planning

- **Azerbaijan- Preparation and data process for its third VNR³⁵**

In Azerbaijan, the process of formulating and drafting the VNR started with the development of the review plan and methodology, in accordance with the requirements of the HLPF and based on best practices. The review process included a request to stakeholders (mainly from government agencies) to provide information on the

³⁴ A Guide to Report on SDG 16 in Voluntary National Reviews, Global Alliance, June 2020

³⁵ Azerbaijan, Voluntary National Review, 2021

status of actions taken to achieve the SDGs. Review data were compiled from the National Information Portal (NIP) on SDGs, managed by the State Statistical Committee (and supported by UNDP) and also from the annual statistical report on SDGs provided by the State Statistical Committee.

- **The Road to San Marino VNR³⁶**

The Road to the San Marino VNR (below) depicts the stages for VNR development by the country, including a full seven months of departments' work on an SDG implementation status report.

	OCT 2017 / SEP 2020	JUN 2020	JUL 2020	AUG 2020	SEP 2020	OCT 2020	NOV 2020	DEC 2020	JAN 2021	FEB 2021	MAR 2021	APR 2021	MAY 2021	JUN 2021
PRELIMINARY STEPS	█													
DEPARTMENTS WORK ON SDGs IMPLEMENTATION STATUS REPORT		█	█	█	█	█	█	█						
REQUEST FOR CANDIDACY TO PRESENT VNR						█								
REQUEST FOR VNR SUBMISSION ACCEPTED						█								
COORDINATOR FOR VNR REDACTION APPOINTED								█						
REVIEW, STANDARDISATION, DISCUSSION OF VNR DRAFT								█	█	█	█			
CONFRONTATION WITH STAKEHOLDERS											█	█	█	█
FINISHING WORK, GRAPHIC, IMAGE, LAYOUT											█	█	█	
REDACTION OF MAIN MESSAGES											█	█	█	
PREPARATION OF VISUAL MATERIALS FOR THE VNR PRESENTATION												█	█	█
VNR SUBMISSION														█

4.2 Establishing a VNR data team

This stage includes the creation of the team to lead the VNR data process, with National Statistical Offices (NSOs) proposed as playing a lead role as primary data holder and the coordinating institution for the National Statistical System (NSS)³⁷. The team will include other NSS agencies and representatives of key ministries. In addition, other participants outside the NSS, including representatives from academia and other stakeholders, can enhance this group.

4.2.1 The essential role of NSOs

NSOs should be given a key role in VNR preparation, given their importance for overall SDG monitoring. For instance, in most countries several line ministries may be involved in SDG monitoring, however, in most cases, NSOs are given a major role as national SDG focal points. Therefore, it makes sense for

³⁶ San Marino, Voluntary National Review, 2021

³⁷ National Statistical Systems (NSS) are government agencies that jointly collect and distribute official statistics. NSOs are generally responsible for coordinating data flows within the NSS to avoid discordant data reporting.

governments to draw on the traditional role of NSOs and assign them to coordinate VNR statistics. Identifying data sources involves knowledge of data producing agencies and their readiness to provide SDG data. In this regard, NSOs are best placed to build on cooperative arrangements for data supply. In addition, and in order to have access to other types of data produced outside the NSS, other partnerships and collaboration agreements can be established with the providers of these data (for instance with academia, the private sector, civil society organizations, etc.).

Given that NSOs constitute a well-established data reporting infrastructure in countries, giving NSOs primary responsibility for VNR production also complies with the 2030 Agenda principle to build on existing institutions and processes for SDG follow-up and review. The VNR process can further be an opportunity to showcase the importance of NSOs in development planning and reporting.

Moreover, VNRs are expected to report trustworthy statistics. Agencies within the NSS, however, have diverse collection methods and provide data in different formats. Because they are responsible for putting an official stamp on data produced within national statistical systems, NSOs can play a critical role in the consistency and accuracy of data used in VNRs. Governments have reported that data prepared for VNRs was more likely to be quality checked if NSOs were included in multi-stakeholder SDG forums. In some countries, such as the UK (2019 VNR) and Jordan (2022 VNR), an NSO representative was included in each drafting group or SDG taskforce to validate data during the VNR review. In the case of Jordan, it was noted that by ensuring NSO representation in the task forces, it contributed to activating the data ecosystem and providing accurate, sustainable and national data sources. Additionally, past VNRs have stated that giving Finance ministries (who can leverage budgets) and NSOs (who can provide data) a lead role in SDG progress tracking has helped to coordinate SDG monitoring. The 2020 VNRs showed that NSOs played a central role in mobilizing within government for VNR preparation in many countries, including for gathering data and publishing statistics. In a few countries for the 2022 VNR round, NSOs were even leading the preparation of the VNRs.

4.3 Review of data institutions and SDG processes for VNRs

Before beginning data inventories, VNR teams should include a data stage in which they assess existing data institutions and SDG processes. The institutional environment of data includes institutions and their data governance policies, as well as data legislation. The objective is to understand the mandates for the collection, processing and dissemination of the various data in the NSS, as well as the various laws and regulations that govern the production and use of data and statistics. This is useful, in particular for micro-data which are relevant for the follow up of the SDGs at a more disaggregated level. These statistical processes will determine how well NSOs and other agencies within the NSS can report data for SDG review and implementation. Adaptations to data processes may be necessary to provide data more efficiently for SDG monitoring and review. **VNR teams can consider how data institutions and processes can be adapted and streamlined for SDG reporting.**

4.3.1 Legislative frameworks

Countries' national legislation regulating the production of official statistics will aim to ensure high quality statistics and data that meet users' needs and are considered trustworthy. An effective NSS will need to have flexibility in order to respond to changing circumstances³⁸. In the case of the SDGs,

changes to data collection mandates and processes may involve updating legislation or introducing new laws to give government agencies unambiguous mandates to collect and share data for SDG monitoring and review. However, in many countries data legislation dates back to the 1980s or even earlier. Pre-information age data legislation is inappropriate for modern statistical systems and may prevent data collection and data flows to deliver SDG data. New and adapted legislative frameworks should be part of a coherent approach to making more and better data available for SDG planning.

The 2020 VNRs showed that in many countries policy and legislation have been adapted for SDG data collection and reporting. In addition, the 2020 VNRs showed that in some countries, data collection and data protection laws have been updated to support more efficient collection of country data for SDG reporting. The 2020 VNRs also reported that in many countries, traditional data collection instruments have been adapted or more frequent data collection efforts have been introduced for SDG data. However, some VNR presenters have raised concerns around the lack of policies for statistics in their country for mandatory data collection and reporting on the SDGs.

Where these do not exist, NSOs and other agencies should design and implement clear data governance frameworks documented in policies. Data governance policies can articulate plans to strengthen the NSS and can also improve data flows by delineating clear "ownership" of official data.

Box 8: Country examples of SDG- relevant data legislation

- **United Kingdom**

The devolved administration of Wales in the UK has enacted a dedicated law for SDG review. The [Well-being of Future Generations \(Wales\) Act 2015](#) requires Welsh government bodies to set "well-being" objectives in line with the SDGs, create well-being indicators, and report annually on their progress towards meeting their well-being goals. The UK Government has also enacted laws to make data more available for SDG reporting. For example, in the UK the [Digital Economy Act of 2017](#) increases the type of data available to the NSO for compiling official statistics, including administrative data and big data³⁹.

- **Costa Rica**

The Costa Rican [Executive Decree 40203-Plan-Re-Minea](#) of 2016 established institutional mechanisms for SDG monitoring and planning. The Decree legislated a governance structure for the implementation of the SDGs in the country. The law established an SDG Technical Secretariat to coordinate data collection with government institutions and other stakeholders⁴⁰.

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³⁸ Handbook on Management and Organization of National Statistical Systems, 4th Edition, UNSD (See [here](#))

³⁹ UK Government. *Voluntary National Review of progress towards the Sustainable Development Goals*. United Kingdom Government. London : s.n., 2019.

⁴⁰ Sustainable development goals Costa Rica 2020. Government of Costa Rica. 2020.

▪ **Ukraine**

A mechanism for coordinating institutions to supply data for SDG monitoring in the country is the Cabinet of “Data collection issues for the monitoring of the SDG achievement”. This order institutionalised data collection by the NSO that includes data from public agencies and scientific institutions in the country, as well as from UN agencies and other international organisations⁴¹.

4.3.2 Institutional mechanisms for SDG monitoring

It is important for governments to negotiate an agreed institutional agenda for SDG follow-up and review. Coordinating all relevant government entities around one monitoring agenda takes effort, but it can ensure effective systems for tracking progress on the Goals at the country level. These institutional mechanisms benefit from including and designating a coordinating role to NSOs to keep data at the forefront of SDG reporting. Communication between NSOs and other responsible agencies can also prevent data silos among reporting institutions, avoid duplication of data collection efforts, and ensure that reported statistics are comparable. In essence, data governance frameworks are most effective if based on a holistic view of infrastructure and processes to address organisational issues and skills.

Recent VNR rounds have demonstrated progress in the establishment of institutional infrastructure for monitoring and review of strategic national goals. However, these institutional frameworks for SDG progress tracking vary across countries. The 2021 and 2022 VNRs showed a large majority of reporting governments have established institutional mechanisms to coordinate SDG monitoring and review. These are usually inter-ministerial or multi-stakeholder forums and are usually headed by Prime Ministers’ offices or Planning or Finance Ministries. Parliament is sometimes included in review arrangements, along with supreme audit institutions, which can strengthen oversight. For instance, in Botswana, SDG focal points were appointed within line ministries. These focal points are liaisons between the Secretariat headed by the Ministry of Finance and sectors. Their tasks involved advocating for the collection, compilation, analysis and dissemination of SDG data at the respective ministry⁴².

Box 9: SDG Task Forces in Jordan⁴³

During Jordan’s first VNR in 2017, the institutional framework for SDG monitoring included task forces as part of the monitoring and evaluation level of work. Each task force included a Department of Statistics representative to ensure accurate, sustainable and national data sources. During the VNR preparation process, the task forces were considered very effective in reviewing efforts to achieve the SDGs, especially given that the membership included all relevant parties to achieve the Goals, including stakeholders. Based on the success of the task forces, the government amended their governance framework to make the task forces permanent. This change aims to strengthen the capacity to monitor and evaluate implementation of the 2030 Agenda in a continuous manner.

⁴¹ Ukraine, Voluntary National Review, 2020

⁴² Botswana, Voluntary National Review, 2022

⁴³ Jordan, Voluntary National Review, 2022

4.3.3 Building on existing reporting processes

The 2030 Agenda recommends that existing reporting infrastructure should be used and built on for SDG monitoring and review. For example, processes that were set up to report on the MDGs or other international agreements have been used by governments for SDG progress tracking. In Bulgaria, for instance, the 2020 VNR drew on data from the National Statistical Institute, including a 2019 SDG summary which used statistical indicators developed in line with Eurostat's sustainable development indicator system. The VNR also made use of country statistics reported in environmental assessments of the European Council, documents of the UN Human Rights Committee and the UN Committee on the Rights of the Child, as well as a UNICEF situational analysis on the state of child protection in the country⁴⁴. In Italy, the NSO (ISTAT) publishes an annual SDG Report, including information on the data capacity and availability for monitoring the SDGs. This report provided a bedrock for the 2022 VNR process, supplying a dedicated chapter in the VNR based on content of this publication.

Box 10: Malawi VNR⁴⁵

Key documents gathered for the preparation of the 2020 VNR in Malawi included: MGDS III and sectoral policies and plans; 2018 Population and Housing Census; Integrated Household Survey 4; Traditional Practices Survey; 2015 MDG end-line survey; 2018 SDG progress report; National Child Poverty Report; SDGs National Audit; Multidimensional Poverty Report; Equity Analyses; and Research and evaluation reports, others.

4.3.4 Data management and data sharing

Data management includes preparing data for re-use, quality and confidentiality checks, documenting the data (adding metadata) and storage of data in such a way that it is easy to find and retrieve. Clear and documented management processes can ensure that NSOs and other NSS agencies know what data they hold so that choosing data for SDG reporting does not become a guessing game.

The VNR process can highlight the need for data management teams in NSOs to steward data and work with data users, including for VNR preparation. Data management departments are able to work with IT staff and statisticians to focus on documenting, preserving, and sharing data according to the needs of diverse user groups. **A data manager can be invaluable for guiding VNR teams on what data is available within the NSS and where data sources can be located.**

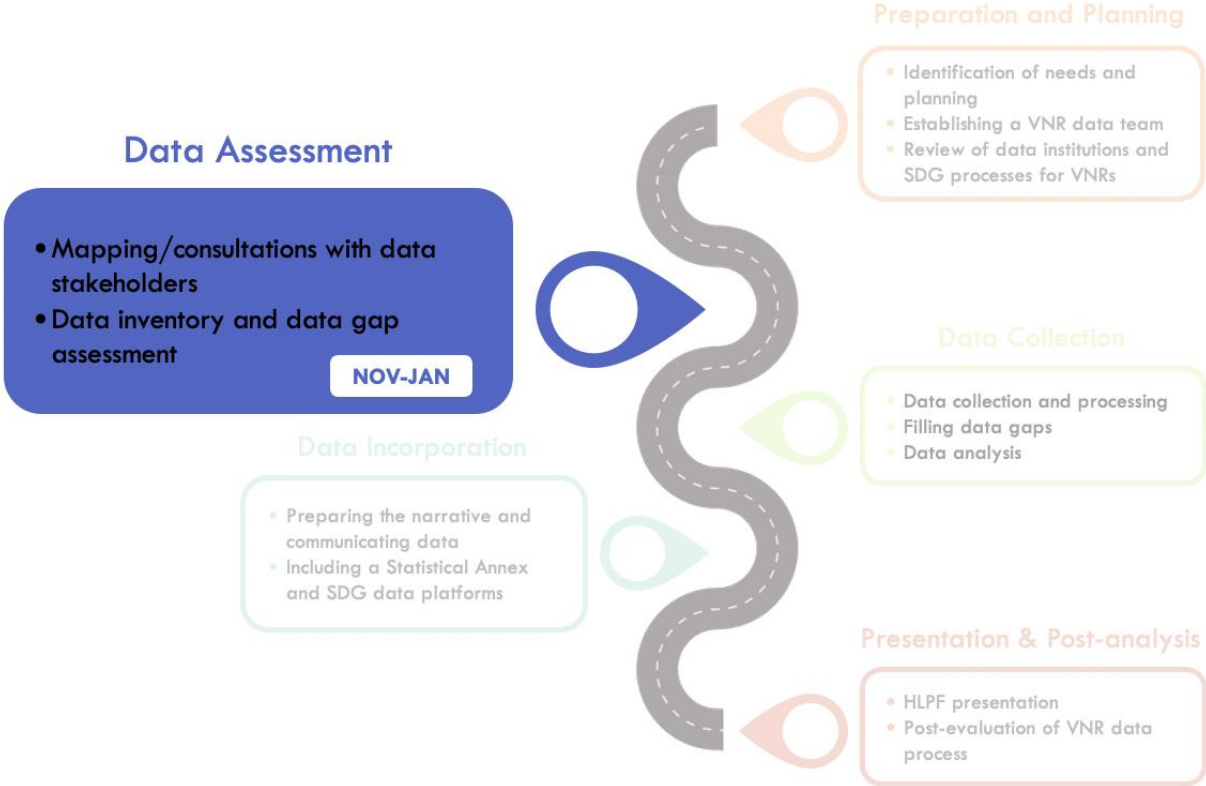
The 2030 Agenda encourages governments to make accessible the SDG progress tracking data. VNR teams can investigate how data and statistics are being shared for SDG reporting. **NSOs as key team members will need to consider data sharing models that enhance access for SDG reporting in VNRs.** Data sharing refers to effective cross-agency exchange of data as well as the sharing of indicators, aggregated data and microdata with data users.

Formal and efficient NSS data exchange mechanisms can greatly ease the process of SDG reporting in VNRs. Governments who have established robust data governance models with formal inter-agency agreements will be unlikely to struggle to discover and obtain VNR data where the data exists in government databases. SDG data demands and changes wrought by the COVID-19 pandemic mean that setting up online systems for interagency data exchange has become vital.

⁴⁴Bulgaria, Voluntary National Review, 2022

⁴⁵ Malawi, Voluntary National Review, 2020

Data Assessment



4.4 Mapping/consultations with data stakeholders

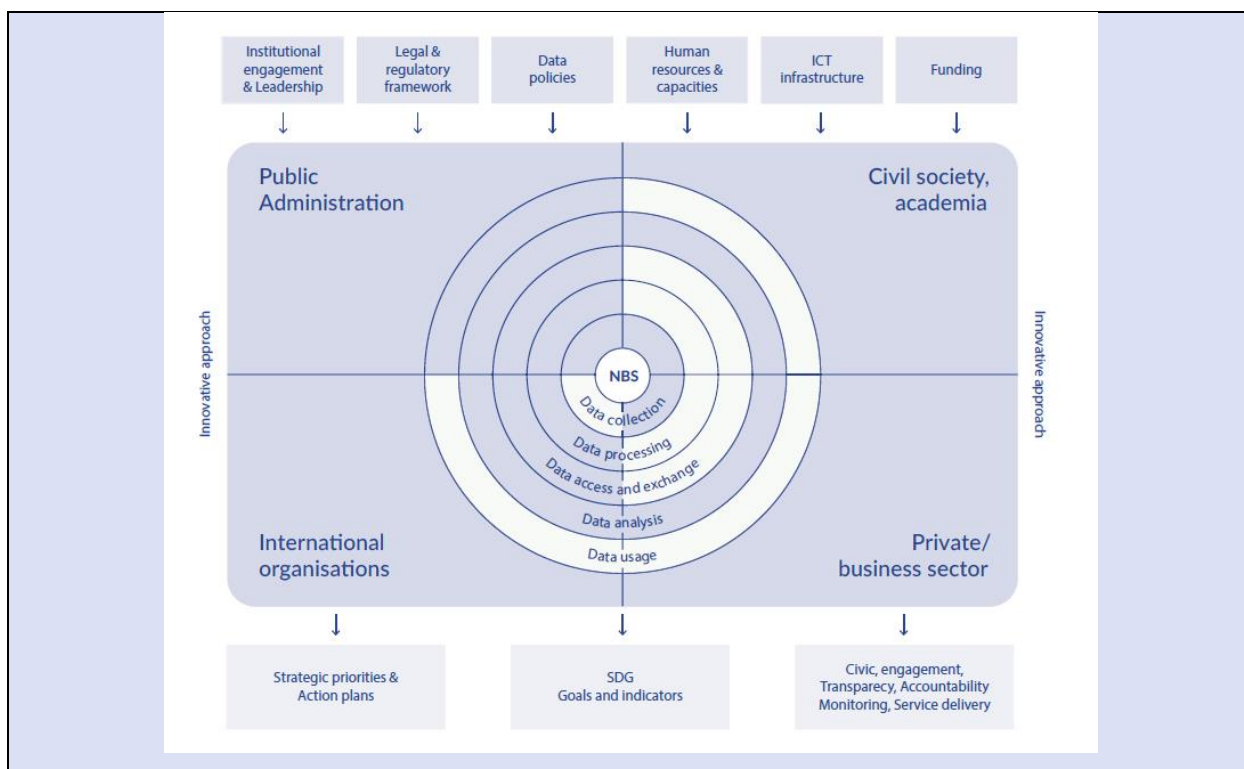
Accurate and timely data reporting of the SDG cannot happen without regular and formal cross-agency and multi-sectoral communication and data exchange. **Mapping of and consultations with data stakeholders based on the nationally agreed SDG data framework (see section 2.2 National SDG indicator frameworks) is therefore a key step in the data roadmap.** This will ensure that VNRs are informed by a wide array of data sources and that key data holding institutions are not overlooked. A data ecosystems approach can be adopted in this step which draws on data sources from the whole of society (see Moldova example below). This approach will consider forming data partnerships with institutions outside of government to fill data gaps for SDG reporting.

Box 11: Data ecosystem model in Moldova⁴⁶

The VNR of the Republic of Moldova situates their National Bureau of Statistics in the center of a larger national data ecosystem for SDG monitoring and review. The model shows internal NSO data processes as well as other data producers as options for SDG statistics. This type of ecosystems approach can be useful for showing processes and linkages, with all actors in data collection and data use.

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⁴⁶ Republic of Moldova, Voluntary National Review, 2020



4.4.1 *Within-Government mapping/consultation*

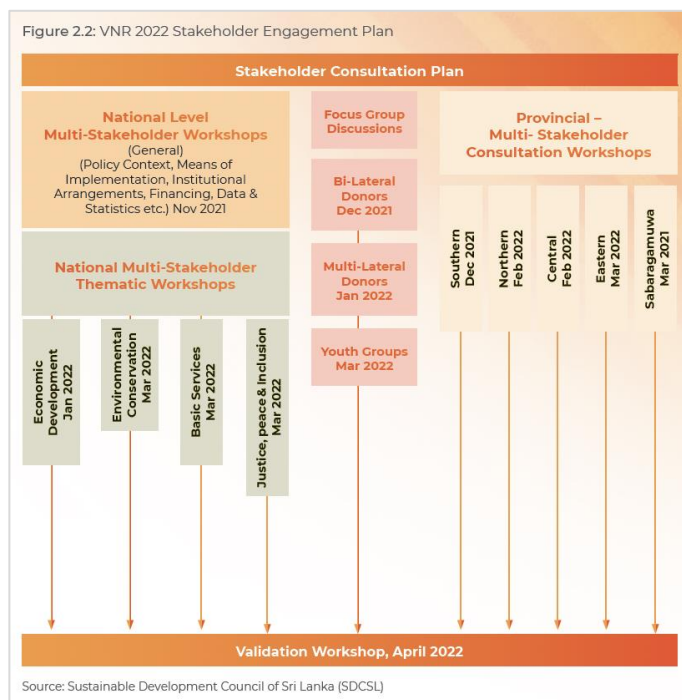
The practical guide encourages a “whole-of -government” approach to drawing up VNRs. Taking this approach, VNR preparation should involve stakeholder participation at every level, mapping and consulting with the main institutions involved in the process of monitoring the SDGs. Communicating with all government stakeholders throughout the VNR preparation process can ensure the reports are relevant to the different areas of government, which may also lead to new government data sources for reporting.

Stakeholder consultations

The organization of consultations and validation meetings or workshops can be used to establish direct discussions, consultations and validation of the contents of the VNR, in particular for data and statistics. Therefore, it is recommended to organize consultative meetings with stakeholders throughout the period of VNR data preparation, and most importantly, to organize a meeting or workshop in order to validate the final draft narrative.

Prior to data gathering and analysis, in Eritrea (2022 VNR), for example, the Eritrean National SDGs Taskforce and thematic working groups conducted various multi-stakeholder consultations to assess the general availability and quality of data. These sessions helped to identify possible sources and mechanisms for collecting data and estimations to fill data gaps. Detailed collection and reporting instruments were also set up to guide the thematic working groups. The preparation framework seeks to engage multiple stakeholders while ensuring the consistency and quality of the output from the working group.

Sri Lanka⁴⁷: To ensure that the 2022 VNR captured a shared narrative in the progress of the implementation of the 2030 Agenda, a stakeholder mapping process was conducted. This process which identified key stakeholders, including women, children and persons with disabilities to be included in the VNR preparation process. The inclusion of key stakeholders was governed by the Stakeholder Engagement Plan (SEP) developed based off the experience from preparing the first VNR and from recommendations outlined in UN DESA’s VNR 2022 guide and UN ESCAP’s guidelines for developing SEPs⁴⁸.



Box 12: Communication between statisticians and policymakers

NSOs should ensure that policymakers are consulted during the VNR process. VNR reporting involves monitoring progress towards the SDGs and targets at the policy level, based on policy priorities. Policymakers are expected to play a lead role in this aspect of SDG monitoring. By contrast, the production of statistics for measuring progress must be led by statisticians responsible for identifying relevant data sources and methodologies to compile statistics for SDG indicators. National SDG progress monitoring should therefore involve close collaboration between statisticians and policymakers.

Engagement between NSOs and politicians is vital to meet reporting goals such as data-informed VNRs. In countries where NSO-policymaker dialogue is absent, policymakers may not appreciate the value of statistics and NSOs are not involved in the VNR process. The result is that their VNRs are not data informed even when relevant data exists. Poor communication between NSOs and policymakers can have other negative outcomes for data-directed SDG reporting, such as:

- *Decision-makers may not be aware of what data is available for country reviews.*
- *Politicians may not provide the necessary funding support for data collection to address data gaps, despite the need to report reliable statistics.*
- *Dialogue between statisticians and politicians can keep the SDG process on track across electoral cycles.*
- *NSO-policymaker communication can secure political commitment to strengthening statistical capacities to provide a strong evidence base for VNRs.*

⁴⁷ Sri Lanka, Voluntary National Review, 2022 (chart pg. 31)

⁴⁸ See UNESCAP [Effective Stakeholder Engagement for the 2030 Agenda](#) and [Partnering for Sustainable Development Guidelines for Multi-stakeholder Partnerships to Implement the 2030 Agenda in Asia and the Pacific](#)

Mapping/consultation at the local level

SDGs were agreed at the global level, and are being implemented at the national level, but many of the Goals must be achieved at the sub-national level, e.g., in cities and local municipalities. All the SDGs have targets in which local governments must play a role making localising SDG planning and review key to successful achievement of the Goals. National institutional arrangements for VNRs should therefore incorporate all levels of government, including regional and local governments.

VNR teams should map out any processes of localisation or sub-national data frameworks for incorporating in the VNR, where possible. This would allow for including indicators at a sub-national level, which is especially important in countries with significant regional differences. Collecting data at the local level is also important to ensure inclusion of uncounted populations in remote locations. Both outcomes reinforce the SDG principle of inclusivity and LNOB in sustainable development.

For this reason, national governments are increasingly making space for sub-national perspectives in their VNRs. Around 70 per cent of VNRs presented in 2020 provided updates on localisation efforts. However, governments have also reported challenges around SDG progress monitoring and review at the sub-national level, including awareness of the SDGs, useful indicators, institutional capacities for data collection, and limited involvement of stakeholders in local development. [See section 2.4 for additional information and resources on Voluntary Local Reviews and sub-national reviews and data frameworks.](#)

4.4.2 Broader stakeholder mapping/consultation

VNR preparation should be transparent and participatory beyond government institutions. Therefore, statisticians are encouraged to go beyond a “whole-of-government” approach to engage with other communities in a “whole-of-society approach” for VNR preparation. By way of example, several governments have involved civil society, the private sector, the media, and faith-based organizations in SDG working groups during the VNR process. In some countries, NSOs have also engaged with journalists to improve visibility of the SDGs and promote the importance of data-driven SDGs. For instance, Pakistan’s 2022 VNR described the exploration of data sources and mechanisms for disability-related information with civil society organizations, to then feed into the SDG monitoring dashboard.

Engagement and mapping between statistics agencies and a broad range of stakeholders around VNRs can help identify and fill data and skills gaps for VNR reporting. VNRs from several countries report that their NSOs have benefitted from data and analysis supplied by non-governmental entities. VNR collaborations can include partnerships with academia to leverage researchers’ subject knowledge and analytical skills and obtain feedback on data quality. For this reason, some governments include academia on their official multi-stakeholder SDG forums. For instance, Papua New Guinea’s 2020 VNR process engaged the scientific community to give advice, research, and data for SDG implementation and VNR preparation. Research institutions and think tanks in the country were involved in consultations and workshops with government and other stakeholders to make use of the knowledge, resources, and existing partnerships within these institutions⁴⁹.

⁴⁹ Papua New Guinea, Voluntary National Review, 2020

Box 13: Examples of strengthening stakeholder engagement for the 2030 Agenda⁵⁰

- *Improving mechanisms to measure stakeholders' contributions to the SDGs: For Norway's 2021 VNR, stakeholders wrote several chapters or sub-chapters, providing new perspectives and relevant examples. Norwegian civil society performed an assessment of progress on all the SDGs.*
- *Strengthening stakeholders' consultations:*
 - *In Sierra Leone, intensive consultations were held with all relevant stakeholders from both governmental and non-governmental institutions, while covering all vulnerable population groups as well. These consultations took place at the national level and also local levels, which facilitated the data collection processes, data analysis and the preparation of reports contributing to the 2021 VNR. Through these workshops, awareness of the 2030 Agenda was also improved and served as a channel to gather financial resources and the input from relevant stakeholders to update the SDGs Results Framework.*
 - *In Egypt, multiple sessions of public consultations took place online in which the VNR process was discussed. In addition, a template for gathering feedback from stakeholders was also developed and disseminated to streamline information collection processes for the development of the VNR. This template provides a guide for the corresponding stakeholder for their relevant inputs, including initiatives contributing to the SDGs, their achievements and challenges.*
 - *In Antigua and Barbuda, a "SDG/VNR" questionnaire was developed and sent to stakeholders to collate information for the evaluation of SDG progress. The government also provided an online review by stakeholders of the draft of the VNR, where they also collected feedback to ensure that the VNR was representative of the status of the national SDG progress.*

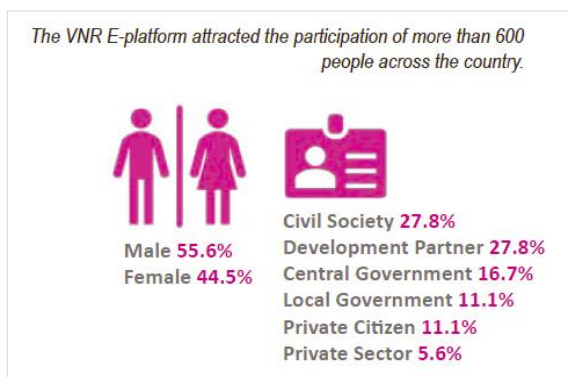
The private sector can also play a role. Recent VNRs note that monitoring teams can draw on corporate social responsibility and sustainability reports from private sector companies for statistics. They also suggest that the participation of businesses in VNR processes should be encouraged as a way to advocate for changes toward more sustainable business practices. For example, the VNR team for the government of Bulgaria conducted focus groups with business representatives to obtain data on corporate attitudes to the SDGs and progress towards the Goals in that sector⁵¹.

⁵⁰ Norway, Voluntary National Review, 2021; Sierra Leone, Voluntary National Review, 2021; Egypt, Voluntary National Review, 2021; Antigua and Barbuda, Voluntary National Review, 2021

⁵¹ Bulgaria, Voluntary National Review, 2020

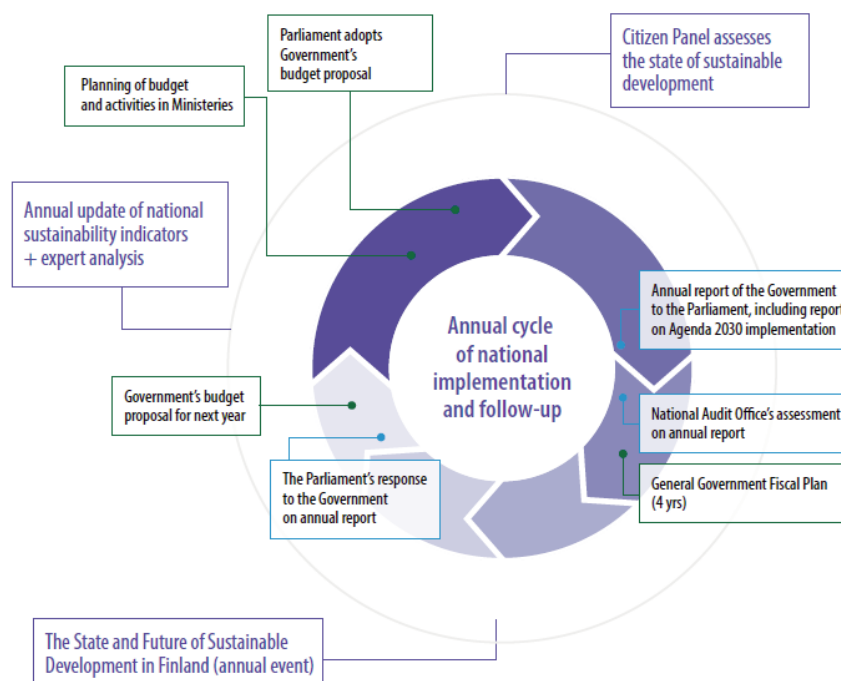
Some innovative approaches

Uganda⁵²: In some countries, VNR teams have used innovative approaches and online engagement to involve a broad range of stakeholders, especially during the COVID-19 pandemic. For example, in Uganda, an E-Platform was established to elicit opinions as well as was promoted on social media and other media. Over 600 responses were received on how well the Ugandan government is doing on the SDGs and how to include local areas and means to support SDG inclusivity.



Finland⁵³: Institutional mechanisms for SDG follow-up in Finland include a 2030 Agenda Youth Group established in 2017 to represent the views of children and youth on the SDGs and to promote the SDGs among the Finnish youth. A Citizen Panel of around 500 volunteers also participates in an annual assessment of the state of sustainable development in Finland based on national indicators. The 2020 Finnish VNR also tracked progress in awareness-raising among private companies in Finland. Based on a consultant study of coverage of the SDGs in public information from the 120 largest companies in Finland during 2018 and 2019, the assessment shows some increase in the amount of alignment of business priorities and the Goals.

In 2020, the Finnish government also set up a VNR Peer Dialogue with their counterparts in Mozambique and Switzerland. The Governments of Mozambique and Switzerland reviewed the VNR and the preparatory process. A peer learning session was also conducted between the National Commissions on Sustainable Development of Finland and Estonia.



⁵² Uganda, Voluntary National Review, 2020

⁵³ Finland, Voluntary National Review, 2020 (chart pg. 96)

4.5 Data inventory and data gap assessment

Following the mapping of stakeholders, it is important to conduct a data inventory and data gap assessment. This will help governments understand what data exist for VNR statistics and to locate where investments need to be made to collect additional data. Data processes within the NSS may need to be upgraded based on assessment outcomes.

Data assessment is an important step because it is not always known what data is held within governments. Inventories must be undertaken of existing data sources to make clear what data exists and what must still be collected. Audits of administrative databases and management information systems (MIS) of NSS agencies must be performed. Databases of institutions that partner with government for data production may also hold data (e.g., universities). NSOs with well-organised administrative databases and micro-databases will have an advantage at this stage.

Some countries (UK, Ghana), in advance or in preparation of the VNR, have conducted a baseline SDG report, which can be used to specifically identify where data are held and/or missing. In the case of the UK, as data were identified for perceived gaps in their baseline report, it also helped to improve collaboration and coordination.

4.5.1 Data Sources

In some countries, statistics reported in VNRs have come mostly from census and survey data. However, there is general agreement among VNR-compiling institutions that other data must be sourced to close SDG data gaps, in particular administrative data and data produced by non-traditional data sources. Thus, NSOs have begun to draw on data collection efforts of the business community, civil society and other stakeholders for VNR reporting.

For instance, Ethiopia's 2022 VNR noted its VNR was informed by data from research findings and reports, surveys and census data from its NSO and administrative data from line ministries. To address LNOB and existing data gaps, the government also implemented various surveys to collect data on poverty, employment, housing, education and access to basic services. The specific types of surveys included: household consumption expenditure surveys; welfare monitoring surveys; national labour force and migration surveys; agricultural sample surveys; demographic and health surveys; child force surveys and urban employment and unemployment surveys.

Administrative data

One avenue for VNR data is to make better use of administrative records. Censuses and surveys may not be conducted often enough to provide regular data for VNR reporting. In some countries there has been a move from almost exclusive use of survey data for SDG progress reporting to increased use of administrative data. For example, the 2020 VNR of Nigeria states that data for about 70 per cent of the SDG indicators for the country comes from administrative data sources, and 30 per cent from surveys⁵⁴. Also, in Zimbabwe, about 64 per cent of data sources used for SDG indicator reporting are administrative sources⁵⁵.

⁵⁴ Nigeria, Voluntary National Review, 2020

⁵⁵ UNSD-DFID Project on SDG Monitoring. UNSD. 2018.

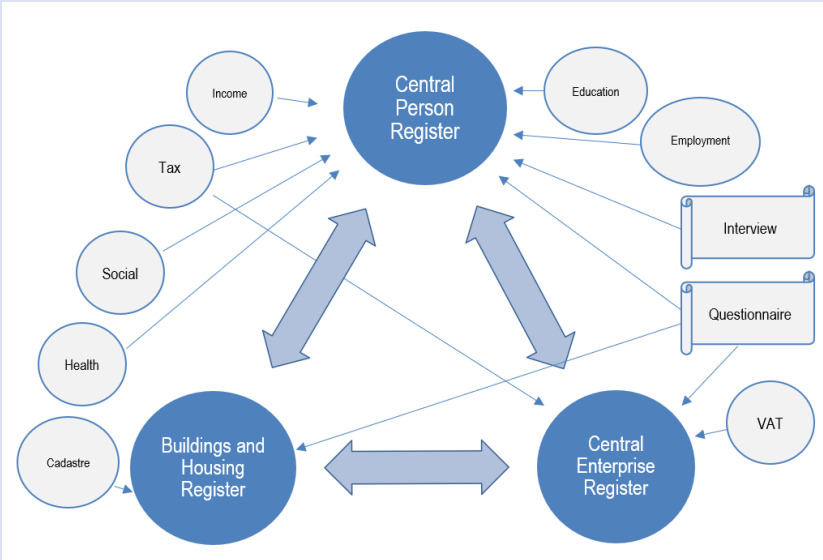
Governments report that using administrative records for SDG progress monitoring is cheaper as the data have already been collected for other purposes. Administrative data is also more frequently collected and has better coverage of many social phenomena. Systematically collected administrative records can provide long-range coherence. Comparable statistics and data from administrative records is also often finely disaggregated.

However, some NSOs have reported concerns around the quality of their administrative records. In many countries the collection of administrative data is erratic. A lack of clear mapping of the data to statistical concepts and classifications means administrative records are not always comparable⁵⁶. In any case NSOs could use administrative records more frequently for VNRs and set up formal management and exchange processes for administrative records. Frequent use and assessment could improve the collection of administrative records. In some countries efficient administrative data systems are entrenched, and this type of data is invaluable as the primary input to their VNRs.

The [Collaborative on the Use of Administrative Data for Statistics](#) is a multistakeholder collaborative of countries and regional and international agencies which aims to strengthen the capacity of countries to use administrative data sources for statistical purposes. Its webpage includes resources for countries that could also be helpful for VNR preparation.

Box 14: Administrative data sources for VNRs in Denmark⁵⁷

Statistics Denmark mainly uses administrative data sources for VNR statistics. The NSO links data from person, building/housing, and enterprise registers for reporting on the SDGs. The NSO has created an open SDG indicator website reporting indicator data based on their administrative data. The NSO cites the advantages of administrative sources over survey data, including low cost and wide coverage, comparability and better disaggregation.



⁵⁶ As reported by NSO staff during data-readiness assessments in Zambia and Zimbabwe 2018 for the [UNSD-DFID Project on SDG Monitoring](#).
⁵⁷ [UNSD Workshop on preparing evidence-based voluntary national reviews for the 2021 HLPF](#). Statistics Denmark. Integrating new data sources and data innovations for official statistics and partnership with stakeholders.

4.5.2 Data Availability and Data Gaps

No country has data for all the global SDG indicators. Unavailable data is frequently cited as a constraint to data-informed SDG progress tracking in VNRs. For instance, some governments lack baseline data for many indicators, and/or data are not available at the level of granularity needed to report on multiple indicators.

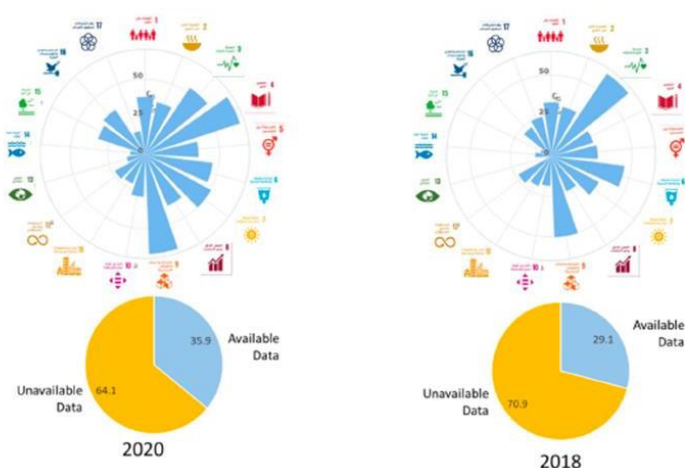
Data mapping exercises are used to identify existing data sources for VNRs and to detect gaps in national data collections that mean indicators cannot be reported. Gap analyses should include data inventories to distinguish between data gaps (when data does not exist, and new data collection plans need to be developed) and when data are already existing but are inaccessible for some reason (inventories can help locate this kind of data).

To prepare VNRs, some governments have mapped their indicators to country-level data. They have also investigated data sources, methodologies, as well as frequency and disaggregation of in-country data sources.

Box 15: SDG Indicator Mapping in Sao Tome and Principe⁵⁸

In 2018, the National Institute of Statistics (INE; Sao Tome and Principe's NSO) conducted a national SDG indicator mapping exercise. During the process, INE identified existing data source from within the Institute but also other sectoral public institutions. In the following years, INE has continued to work on improving the quality of SDG indicators. In 2019, a Follow-up Plan was elaborated to interpret the methodology for the computation of SDG level II indicators. In 2020, a Statistical Follow-up Report was published in which several SDG level I indicators were updated and in 2021, it published a Statistical Report on SDG level II indicators.

Iraq⁵⁹: VNR countries presenting for a subsequent time are encouraged to include information in the VNR on the progression of filling data gaps for SDGs. For instance, in Iraq's 2021 VNR, it noted that between 2018 and 2020, the percentage of available data for SDG indicators increased from 29 per cent to 36 per cent and the coverage of indicators among the Goals increased. Over the period, Iraq identified existing data gaps and has attempted to increase analytical capabilities to produce data for assessment and monitoring of SDG progress.



⁵⁸ Malaysia, Voluntary National Review, 2021

⁵⁹ Iraq, Voluntary National Review, 2021 (chart pg. 24)

4.5.3 Data Quality Assessment: Accuracy, Comparability and Timeliness

Data assessments should consider other quality attributes of official data apart from data availability. The accuracy, comparability and timeliness of data sources can affect their usefulness for inclusion in VNRs. NSOs have formal frameworks in place (legislative frameworks, principles of official statistics and quality frameworks) to ensure they produce accessible, accurate, comparable, reliable and suitably disaggregated data for the generation of official statistics. But NSOs may need to update their quality frameworks to remain relevant for SDG data efforts. Updates should consider the adaptations required by NSOs to cover the data demands of SDG monitoring and review, such as the use of non-traditional data sources.

Reporting statistics from accurate and reliable data sources can ensure VNRs give a realistic picture of SDG progress in the country. Accuracy and reliability of data for VNRs should be confirmed against standard quality frameworks, user feedback and comparable sources from within and outside government. For instance, in the United Arab Emirates, a Data Maturity Index- a framework for all statistical offices and data providers- was developed to ensure quality of the data pipeline. The Index included 85 data producers and established a national data team to govern data production, quality and accuracy⁶⁰.

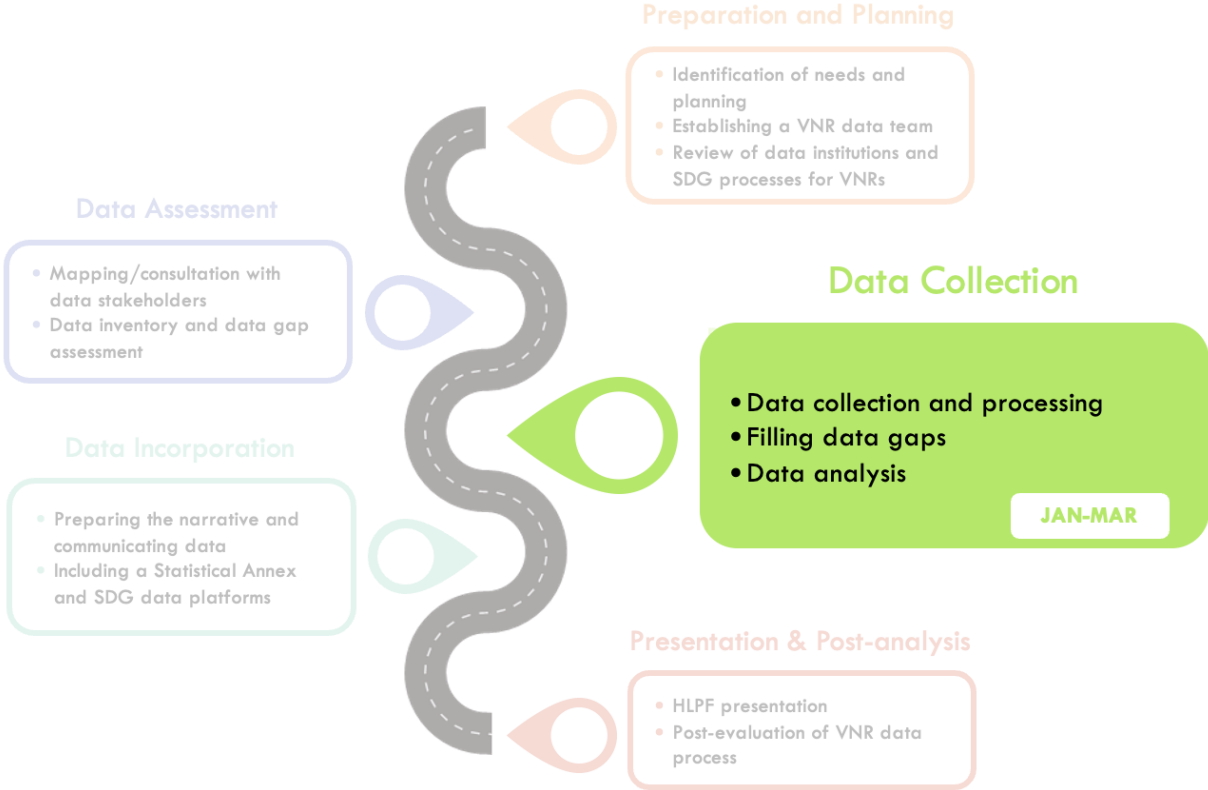
Comparability⁶¹ is important because it enables data interoperability (the linking of data or metadata for new insights). This integration of different data sources can provide more meaningful statistics for VNRs. NSOs should ensure that standard methodologies, concepts, definitions, and classifications are being adopted for data collection and processing within national statistical systems for the production of comparable data. NSOs should also make clear any local or regional adaptations of targets and indicators. Joined-up policies and interoperable technical platforms can also improve the comparability and coherence of official data for VNR statistics.

NSOs and other NSS agencies will need to consider how to provide more timely data in their VNR statistics. SDG progress monitoring requires data with greater frequency and shorter time lags than is necessarily available in countries. Some national statistical systems suffer from long time-lags between data collection and data availability. Data gaps also mean that VNRs sometimes have to report using outdated statistics. The 2020 and 2021 VNRs showed that governments are mostly not able to report recent indicator data for the targets and Goals.

⁶⁰ United Arab Emirates, Voluntary National Review, 2022

⁶¹ Comparable data is data that can be compared and combined with other statistical data.

Data Collection



4.6 Data collection and processing

The data collection stage of VNR preparation is key to building a VNR evidence base. VNR teams must make efforts to fill data gaps and improve their data collection frameworks and procedures. NSS agencies can also introduce non-traditional methods and new partnerships with new data providers to collect data needed for reporting in VNRs. The 2020 VNRs also reported that in many countries, traditional data collection instruments have been adapted or more frequent data collection efforts have been introduced for SDG data. Additionally, the 2020 VNRs showed that in some countries, data collection and data protection laws are being updated to support more efficient collection of country data for SDG reporting.

VNR data teams usually organise the VNR data collection process through the use of one or a set of different mechanisms, mainly: distributing data collection tasks among team members (i.e., based on their fields of work, expertise or per Goal); using existing institutional mechanisms (i.e. statistical coordination mechanisms, SDG tracking and follow-up mechanisms or others); taking advantage of the role of the NSO within the NSS; exploiting the VNR consultative meetings with stakeholders, and/or using national and/or international expert support.

This data collection process can start with traditional sources of data (*as described in section 4.5.1 Data Sources*), followed by filling gaps with the collection of data from non-traditional sources. All data collection and processing mechanisms and procedures should be carried out in accordance to existing, updated or new memorandums of understanding (MOUs) or other recognized agreement among the NSS and with stakeholders. These MOUs or agreements should delineate the framework and format for data collection and processing, so that all parties adhere to the same standards.

Box 16: System of VNR data collection in Angola⁶²

Building on the SDG Platform developed in June 2020, four Working Groups were established under the Ministry of Economy and Planning and responsible for a thematic pillar of the SDGs. The working groups regularly reported to the Ministry and developed systems for knowledge exchange for SDG monitoring progress. Each Working Group was also responsible for the collection and compilation of data from the National Statistical Institute (INE), relevant ministries and bodies and all other reliable sources. Together, the Working Groups gathered 80 per cent of the information required for an evidence-based VNR.

Table 2. Working Groups and respective SDGs addressed

Group	Topic	SDG				
Group 1	Economy and production	SDG 1	SDG 2	SDG 8	SDG 9	SDG 10
Group 2	Social welfare	SDG 3	SDG 4	SDG 5	SDG 6	SDG 11
Group 3	Democracy and Stability	SDG 16		SDG 17		
Group 4	Environment	SDG 7	SDG 12	SDG 13	SDG 14	SDG 15

New and emerging challenges in VNRs

Governments are expected to also address new and emerging challenges in the VNR⁶³. Many VNRs since 2020 have documented the impacts of the pandemic on national SDG progress and monitoring, especially given its far-reaching effects. Additional challenges could also include food insecurity, migration, violent conflict, climate change, among others.

The following questions could be addressed in the VNR when focusing on COVID-19 impacts, but should be adapted to address any other new and emerging challenges or crises that countries are facing:

- *Progress made in implementing national priority goals in the 5 years previous to the COVID-19 pandemic (2015-2020).*
- *What impact the pandemic has had on this progress?*
- *Which Goals will be most affected by the pandemic?*
- *How the most vulnerable in the country have been impacted?*
- *Recovery efforts towards SDG achievement?*
- *How has the pandemic affected availability of SDG data?*
- *What measures have been introduced for pandemic-era data collection?*

⁶² Angola, Voluntary National Review, 2021 (chart pg. 6)

⁶³ Annex 2: Secretary-General's Voluntary common reporting guidelines for VNRs in the [Handbook for the preparation of Voluntary National Reviews 2022](#)

Jordan⁶⁴: Jordan’s 2022 VNR included a section on socio-economic impacts, including the COVID-19 pandemic and impacts of the Syrian conflict across the Goals.



Statistics included in VNRs can help to demonstrate the pandemic or other crises’ effects and effective follow-up by governments. During the pandemic operations of many NSOs were severely disrupted just when such data were most needed. This has led to adaptations in statistical systems and data collection to include telephone and internet surveys as well as Big Data sources. More automated systems can improve data quality. Data collected straight into computers and tablets is likely to be more accurate and is available for analysis even during collection.

For instance, in South Africa, The National Income Dynamics Study – Coronavirus Rapid Mobile Survey (NIDS-CRAM) aimed to inform policy using rapid, reliable research on the socioeconomic effects in South Africa of the pandemic. NIDS-CRAM is a nationally representative mobile phone survey. In the survey, 7,000 South Africans were phoned monthly and asked a range of questions on their household welfare, income and employment, and their knowledge and behaviour related to COVID-19. Survey results and data were openly available for use and independent review. NIDS-CRAM shows the possibilities of adapting to cost-effective and fully online close to real-time methods of data collection while maintaining data quality and reliability⁶⁵.

4.7 Filling data gaps

The 2030 Agenda (paragraph 74) states that global SDG monitoring and reporting will mostly be based on official statistics⁶⁶ from national government⁶⁷. However, the data reporting requirements for SDG monitoring are substantial and there are gaps in official data records of some countries for some of the Goals and targets. Additionally, some indicators are on topics for which data has never been collected and/or data must be collected at new levels of disaggregation.

⁶⁴ Jordan, Voluntary National Review, 2022 (charts pgs. 30, 33)

⁶⁵ NIDS-CRAM. Coronavirus Rapid Mobile Survey (CRAM). [Online] 2021. [Cited: 02 14, 2021.] <https://cramsurvey.org/>.

⁶⁶ Official statistics based on data from traditional sources (censuses, surveys, administrative data). However, some countries are including ‘experimental indicators’ as part of their official statistics.

⁶⁷ United Nations. Transforming our world: The 2030 agenda for sustainable development. s.l. : United Nations, 2015.

Data innovations

NSOs are using or are moving towards modern technologies for data collection, such as tablet, mobile phone and satellite-driven data collection. In countries with more advanced statistical systems, innovative data collection methods have been adopted to fill data gaps, including to collect suitably disaggregated data. The use of non-traditional data has been driven also by restrictions placed on traditional methods by COVID-19 pandemic control measures.

Data innovations in NSOs are being driven by the increased need for data for SDG monitoring, including the production of data informed VNRs. One motivator is the need to collect data disaggregated by specific characteristics to identify vulnerable populations to “leave no one behind” in sustainable development. In 2020, NSOs were further motivated to consider new methods and sources because the COVID-19 pandemic stalled traditional face-to-face data collection. NSOs in several countries are investigating novel methods and data for producing SDG statistics. VNRs should report on any data innovations to help share experiences and encourage similar approaches in other countries.

Institutionalization of new methods and data and their integration into VNRs is dependent on skills available within national statistical systems. Statisticians must have the knowledge to select good alternatives and to demonstrate how incorporating non-traditional sources and methods will benefit SDG plans. They must be able to calculate the data quality implications of innovations for official data for SDG progress reports.

Statisticians can investigate what novel methods their counterparts are using and consider these options to fill SDG data gaps in their NSS. There have been efforts in both high- and low-income countries to adopt innovative methods to obtain reliable disaggregated SDG data from hard-to-reach populations and locations. NSOs in countries as diverse as Tonga and Canada have used methods such as **small area estimation** to produce disaggregated data, such as on disability status, for those in geographically isolated regions.

“Nowcasting” is another new approach which is being used by statisticians to supply almost real-time official data. The technique originated in meteorology and uses algorithms - complex statistical analysis techniques – to make “predictions” for the present, recent past, and near future. Until recently Nowcasting was used mostly by economists for calculations on economies, for example, to estimate inflation. Eurostat has promoted the development of Nowcasting techniques and these techniques could offer statisticians a way to deal with data gaps and data delays for SDG indicator reporting. However, algorithm-driven approaches need strict quality control to account for the lack of human intervention in these methods.

Non-traditional data

Outside of government, there is rapid growth in the production of data. This alternative data can enhance VNR reporting to compensate for gaps in official data and there are advantages to statistical systems exploring data options. Non-traditional data will need to be carefully quality controlled, though, to ensure official data reporting does not lose its trustworthiness. These are constraints in some country settings.

Box 17: Examples of non-traditional data

- *Data from international NGOs, e.g., Transparency International's Corruption Perceptions Index*
- *Data from Civil Society Organizations, academia and other stakeholders*
- *Private sector data e.g., statistics in company sustainability reports*
- *Big Data – large scale process-collected data from different sources (social media platforms, mobile phone data- citizen-generated or from mobile phone companies), satellite or sensor-collected data, e.g., geospatial data, earth observation data, smart-meter data*

NSOs have begun to explore the use of alternative sources such as Big Data in official statistics, including for monitoring progress on the SDGs. NSOs in over 80 per cent of OECD countries have used or have considered using scanner data and web-scraped data. Some NSOs are utilising mobile phone data to support official statistics although this type of data is used less often because of privacy concerns. By way of example, to supplement the effort of collection of disaggregated data that is governed by the Community-Based Monitoring System, the Philippine Statistics Authority is piloting the use of non-traditional data sources, such as citizen-generated data. Generated by civil society organizations and non-governmental organizations, these data were gathered mainly for non-statistical purposes; however, the incorporation of these data could help fill data gaps and provide a more comprehensive view of the SDG progress. In addition, the Authority believes that the use of big data is cost-efficient and is considering the incorporation of big data to monitor the SDGs⁶⁸.

Ensuring data quality for non-traditional data

NSOs that plan to use alternative data for official statistics must address quality concerns with this type of data. The Fundamental Principles of Official Statistics mandate that NSOs must choose data sources with regard to their quality and legitimate quality concerns of statisticians have prevented the exploration of novel data as potential official statistics. These data sources must be proved to be trustworthy, or made trustworthy, to be used as an SDG data source. NSOs must establish formal transparent and collaborative processes for quality review of novel data, based on official data quality frameworks.

Government statisticians must be aware of quality issues to deal with them. For example, if household survey data is to be linked with smart-meter data it must be stripped of personal information to ensure the privacy of data subjects. Privacy protection can be managed with agreed data privacy and security protocols for data handling and data sharing. Teaming up with commercial entities may introduce profit motives and change the public good nature of official statistics. Social media data have particular quality challenges, given the absence of control at the input stage, e.g., the non-human (“bot”) driven element of Twitter content.

⁶⁸ Philippines, Voluntary National Review, 2022

Box 18: Quality control of non-traditional data sources: United Kingdom

In the UK, [the Digital Economy Act 2017](#) allows the Office for National Statistics (ONS) to use data from businesses for official statistics. The ONS is collaborating with a UK company to use the company's cashpoint data to report on financial inclusion indicators that the ONS has not been able to cover with other data sources.

[The UK Code of Practice for Statistics](#) is a standards framework for evaluating the quality of official data in the UK. The UK ONS assesses non-traditional data according to the Code to make sure it is trustworthy⁶⁹.

In 2022, the UK ONS also developed a [protocol for the use of non-official data sources](#). The protocol is used to assess the quality and suitability of non-official sources for reporting progress on the SDGs⁷⁰.

While quality hurdles around social media data may be insurmountable, other big data sources are a viable option to extend official statistics if the data is properly quality assessed. UN agencies have played a key role in developing data assessment tools for Big Data as a viable complement to official data sources for statistical reporting. For instance, the UN Statistical Commission's [Global Working Group on Big Data for Official Statistics](#) (GWG) was established to investigate issues around the use of Big Data by NSOs, including for SDG monitoring. The GWG supported a UNECE task team to develop a [Data Quality Framework for Big Data](#) as a source for official statistics based on the transparency and reliability of the data provider and the completeness of the metadata provided with the data. The quality framework for Big Data aligns with the framework of data principles covered in Section 2.3⁷¹

Box 19: "Experimental data" projects in Colombia⁷²

Innovative linkage of night-light firm data

In Colombia, the NSO (DANE) is working on several "experimental data" projects that either have new data sources, new methodologies, or new subject-matter. The projects are in partnership with various UN agencies. Project teams have linked data from Colombia's Manufacturing Survey with data from energy consumption registers and Google Trends data for early estimations of manufacturing production in the country.

DANE is also using satellite night-light data (available from NASA as open data) integrated with firm-level data and manufacturing statistics as a proxy for economic activity during the COVID-19 pandemic. The experience of DANE shows that NSOs with adequate capacity can benefit from partnering with UN agencies to extend their data options for SDG monitoring and review.

(continued on next page)

⁶⁹ UK Government, Voluntary National Review, 2019

⁷⁰ UNSC53 side event Jan. 2022: [Preparing evidence-based Voluntary National Reviews \(VNRs\): best practices and experiences \(UNSD\)](#)

⁷¹ UN Global Working Group on Big Data for Official Statistics. A Suggested Framework for National Statistical Offices for assessing the Quality of Big Data. 2021.

⁷² [UNSD Workshop on preparing evidence-based voluntary national reviews \(VNRs\) for 2021 HLPF](#). DANE. Integrating new data sources and data innovations for official statistics.

INFORMACIÓN PARA TODOS

Night-time lights as a proxy of economic activity during COVID-19 outbreak
Integration and comparison between night-time data and socioeconomic measures from firms

We are currently working on:

<p>Currently DANE firm measures (per month):</p> <ul style="list-style-type: none"> • Production. • Total production personnel. • Power consumption. 	<p>Goal:</p> <ul style="list-style-type: none"> • Measure changes in nighttime TOA radiance on a date before the COVID-19 outbreak and on a date during the lockdown. Correlate these changes with shifts in the economic variables by means of an econometric model. 	<p>Sources:</p> <ul style="list-style-type: none"> • Monthly Manufacturing Survey. • Spatially detailed Census and firm data. • Night-time light datasets (VNP46A1 - Radiance).
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Methodology:

<p>Compile night-time light data</p> <ul style="list-style-type: none"> • Night-time light datasets from NASA's VIIRS46A1 sensor in dates before (07/02/2020) and during (27/04/2020) the outbreak lockdown. 	<p>Process and compare images</p> <ul style="list-style-type: none"> • Process the images (select suitable dates; apply cloud and vegetation masks; obtain the radiance difference between the two images, focusing on pixels with positive and negative values). 	<p>Georeference firms</p> <ul style="list-style-type: none"> • Locate the surveyed firms and for each one, calculate power consumption ratio. 	<p>Correlate</p> <ul style="list-style-type: none"> • Compare firm variables month by month and correlate them with changes in nighttime lights by building an econometric model. 	<p>Results and validation</p> <ul style="list-style-type: none"> • Assess model results.
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Using geospatial data report on SDG 11

DANE is also incorporating geo-spatial data into their statistical sources and combines satellite imagery for reporting on indicators for SDG 11 (sustainable cities). The NSO, working with and has combined geospatial data with poverty data sources for poverty mapping information. DANE's ArcGIS-based Geovisor portal is being developed to disseminate SDG indicators with spatial attributes.

Colombia's NSO, DANE, assesses "experimental data" against some, but not all, key quality attributes for official data. Statistics from novel data sources or methods must fulfil a certain number of quality requirements to be incorporated into official statistics, including accessibility, coherence, interpretability, relevance, and transparency. This type of data will continue to be improved and assessed for other quality dimensions, such as comparability. Box needs hyperlinks as mentioned in previous comments.

INFORMACIÓN PARA TODOS

Use of satellite images for computing the SDG indicators from Goal 11

Using satellite images, it is possible to obtain historical and updated data on land cover to analyze the expansion of urban agglomerations.

<p>Indicator 11.1.1</p> <p>Proportion of urban population living in slums, informal settlements or inadequate housing.</p>	<p>Indicator 11.2.1</p> <p>Proportion of population that has convenient access to public transport, by sex, age and persons with disabilities.</p>	<p>Indicator 11.3.1</p> <p>Ratio of land consumption rate to population growth rate.</p>	<p>Indicator 11.7.1</p> <p>Average share of the built-up area of cities that is open space for public use for all, by sex, age and persons with disabilities.</p>
<p>Use: satellite imagery classification to determine informal settlements.</p>	<p>Use: classification of satellite images to determine the urban area of cities.</p>	<p>Use: classification of satellite images to determine land consumption of cities.</p>	<p>Use: land cover classification using a huge remote sensing imagery collection (petabytes) to identify the urban area selected cities and their green places.</p>

Image: <https://developers.google.com/earth-engine/datasets/catalog/sentinel-2>

4.8 Data analysis

This stage of the data roadmap involves analysing data that has been collected to create statistics to be presented in the VNR. VNR formats will influence what data is used and how, e.g., coverage according to key themes (people, prosperity, planet, peace, and partnership) or by Goals and targets, including the key theme of inclusivity ("leaving no one or no region behind").

Preparing statistical tables and charts will mainly be the role of NSOs. However, VNR statistics will also come from analyses by key data producing agencies within the NSS, such as Departments of Agriculture,

Education, and Health. These agencies will be responsible for preparing statistical tables and charts related to SDGs relevant to their areas of responsibility. NSOs will coordinate data preparation and checking final statistics, and also prepare some tables and charts for inclusion in VNRs, as well as statistical annexes.

The format of the VNR will determine what data is used and how. While there is no uniform approach to how to format VNRs, the 2030 Agenda principles necessitate that certain statistics be included, such as coverage of key themes and priority goals. Governments are also encouraged to present statistics that show follow-up from any previous VNRs.

The 2020 VNRs showed that some governments report statistics on SDGs and their targets in dedicated sections for each SDG. Others follow a more integrated approach by reporting SDG indicator data linked to government policies or actions. Some presented relevant statistics in chapters dedicated to the five dimensions of sustainable development identified in the 2030 Agenda (people, prosperity, planet, peace, and partnership).

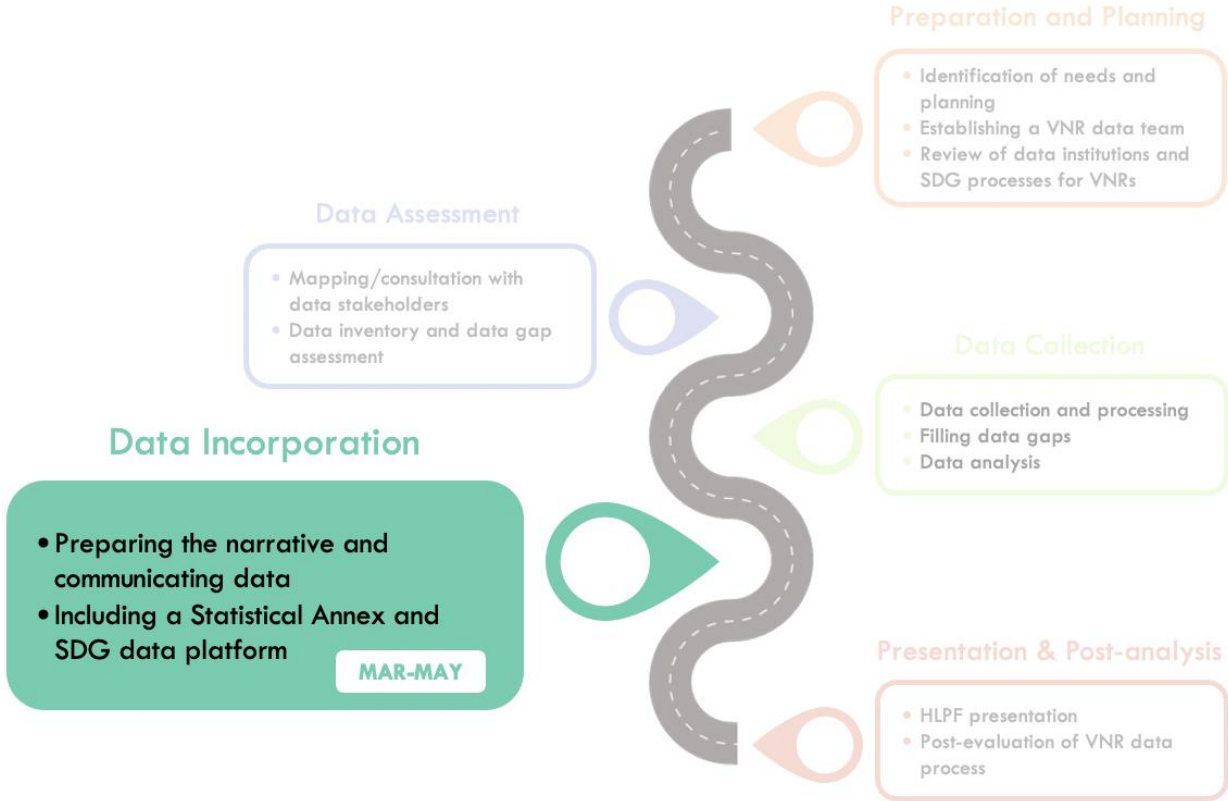
Preparing data for VNRs includes analysing and preparing sufficiently disaggregated statistics on key themes. For example, VNRs should demonstrate localisation of the SDGs through analysis of sufficiently geographically disaggregated data. Finally, VNR data teams must analyse data that is disaggregated in such a way as to reveal who are vulnerable and excluded groups in their country. They must present suitably disaggregated statistics to show how governments have attempted to include all groups in sustainable development, to “leave no-one behind”.

Box 20: Data analysis in the 2021 VNR of Indonesia⁷³

The data analysis in the VNR focused on analysing trends prior to COVID-19, presenting the progress of each of the Goals, followed by analysis on the achievements of the Goals as affected by the pandemic. The pre-pandemic trend analysis served as a benchmark for measuring the impact of the COVID-19 pandemic on Indonesia's progress so far. Also, an in-depth analysis of very relevant indicators affected by the pandemic was carried out.

⁷³ Indonesia, Voluntary National Review, 2021

Data Incorporation



4.9 Preparing the narrative and communicating data

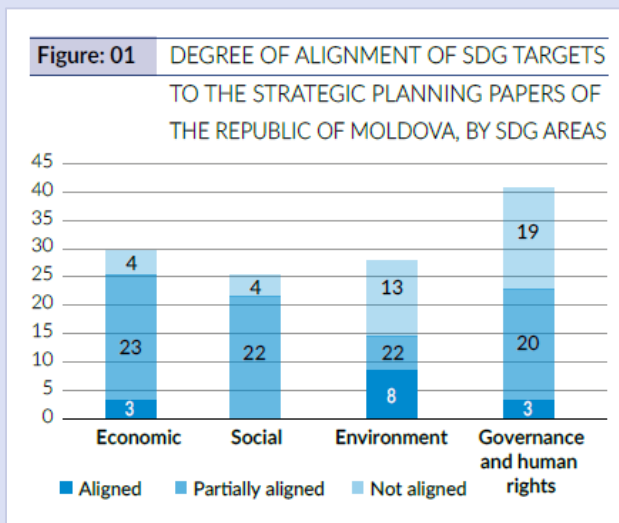
Preparing the narrative of the VNR will stem from the results of the data analysis previously carried out. How countries approach the distribution of tasks among the VNR data team will very much depend on the organizational mechanisms already in place. Some countries have core teams responsible for drafting the narrative, while others will assign the task to experts in different ministries. It is important to include a validation stage of the draft narrative with the data stakeholders in order to have time to consider feedback and incorporate changes. For instance, Eswatini’s 2022 VNR included an overview of an engaging validation process with data suppliers and for quality assurance. Based on the validated data and the draft guidelines for developing a VNR, the country’s narrative was developed by the ‘Core Team’. The narrative included key achievements, challenges and opportunities, lessons learned and areas for additional support. This draft was shared and validated by not only the SDG technical experts, but also to a wider range of stakeholders⁷⁴.

Communicating Data: Presenting statistics in VNRs

The narrative of VNRs should be supported by statistics presented in tables and charts. The best way to include statistics is to use the body of the report to give context and show general trends and supply the numbers in data visualisations. Efforts to present relevant statistics in an interesting manner can lead to more meaningful data reporting in VNRs. Good graphics make it easy to grasp the information presented.

⁷⁴ Eswatini, Voluntary National Review, 2022

Box 21: Example of well-designed stacked bar chart⁷⁵



VNR data teams should consider the need for simple and understandable statistics and data to help convey overall messages of progress and challenges in SDG implementation that the VNR aims to provide.

In this regard, statistics can be presented in tables, charts or maps, as well as infographics. Tables are a good way to highlight key statistics and present information in an orderly manner. Thematic (statistical) maps are used to show the spatial distribution of statistical characteristics. Infographics use a mixture of graphics and a small amount of text and present an easily understandable overview of a topic. Charts use symbols such as bars and lines and are a good choice to show patterns in a large amount of data, such as changes over time. They are not a good option where there is too much or too little data or the data does not vary much. For example, stacked bar charts are more complex bar charts that are used to compare parts of totals. This type of chart needs to be clearly presented to avoid confusion.

Graphics presented in VNRs should be:

- Simple and concise – no extraneous text or graphic elements
- Logically arranged (list data in tables in chronological order or according to some standard classification)
- Accurate - graphical objects in charts should be scaled to present ratios accurately
- Self-contained (they should make sense even outside the document, including source)
- Self-explanatory, with no unexplained elements (empty cells in tables, ambiguous numbering)
- Supported by the inclusion of key elements that explain everything about the table or chart

⁷⁵ Republic of Moldova, Voluntary National Review, 2020

Map and icon usage in El Salvador 2022 VNR⁷⁶

Infografía II.2. Estado de avance de medio término en la reducción de la doble carga de la malnutrición. El Salvador, 2021.

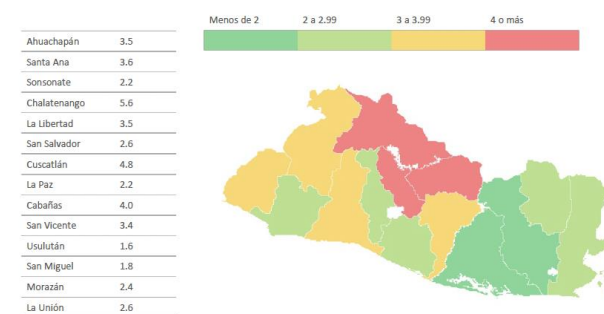
Porcentaje de población menor de 5 años.



Fuente: elaboración CNDS a partir de información oficial suministrada por DIGESTYC.

Figura II.2. Estado de avance de medio término en la erradicación de la doble carga de la malnutrición en la primera infancia, desde una perspectiva departamental. El Salvador, 2021.

Déficit de peso. Porcentaje de población menor de 5 años con bajo peso para su estatura

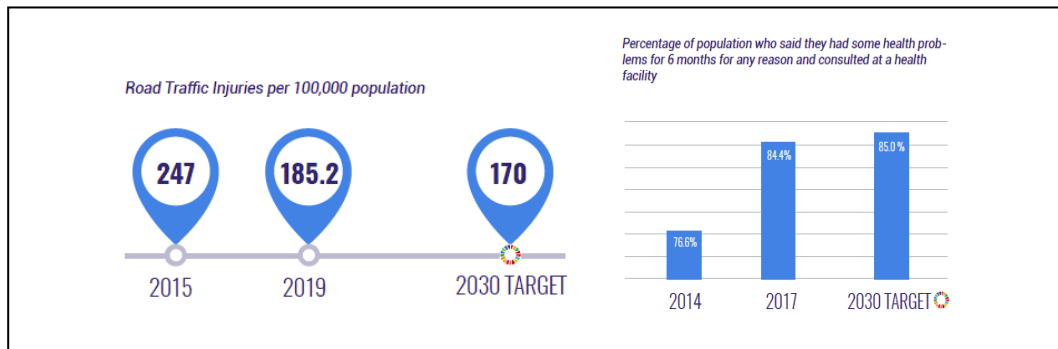


Graphics used in VNRs should be attractive and informative. Colour can be an important graphical element and should be used in a meaningful way, e.g., using darker colours to equal higher numbers, or blue to represent water on maps. Overall, however, it is better to use light colours for cells and graphic elements, as well as outlines. It is also important to use high-resolution images to avoid blurry images that are difficult to view. It is acceptable to include an artistic element in a graph, as long as it adds to rather than detracts from the meaning of the graph.

VNR teams should try and present effective imagery so that information is immediately understandable, and which supports the accompanying text. Statistics should be tied to the narrative and strengthen the messages in the review. For example, very few charts in the 2020 VNRs clearly quantified SDG progress by specifying baselines and targets for indicators. Graphs that show starting points and ideal endpoints can provide meaningful progress statistics for SDG progress tracking.

⁷⁶ El Salvador, Voluntary National Review, 2022 (chart pg. 36)

Example of charts showing progress and target statistics⁷⁷



Essential Graphic Elements

Statistics presented in VNRs should be interpretable, which depends on the inclusion of useful supplementary information to make statistics presented in graphics more understandable such as:

- Axis labels to identify the values in the chart (indicator, percentages, reference dates)
- A legend to explain symbols or colours used in the chart
- Footnotes with methodological information and information on source data
- Links to additional information on the data, e.g., methods used to calculate indicator values
- Data sources for statistics – these must be clearly cited in tables and charts. Citations should preferably include a link to the webpage from where the source data can be found and downloaded, not simply data visualisations.

Data visualization and Data storytelling in VNRs

When deciding how to offer data and information in the VNR, visual formats tend to engage audiences more effectively when compared to just numbers and text. Providing complex information and data visually can help audiences better grasp the data and stories behind the numbers. In essence, the data analysis has shown the 'what', so data visualization and data storytelling can provide the 'why' and the 'so- what'.

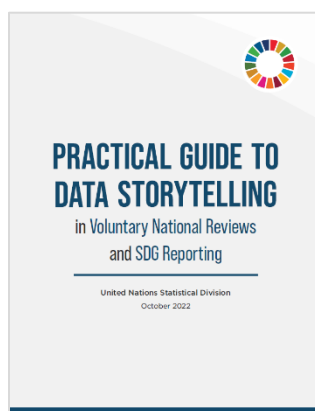
As statisticians and data analysts, this creates an opportunity to tell compelling stories with the data, so that the information created has impact and offers insight. Overall, the goal remains to provide audiences with accurate, insightful data and information in a way they can understand and connect with- where they can see themselves in the data. Visualization should therefore be grounded in ensuring it does not mislead the audience and that the data and information provided is accurate and truthful.

⁷⁷ Government of Georgia, Voluntary National Review, 2020 (chart pg. 27)

In order to do this, it is important to:

- 1) Be clear on the who, what, why of the data by exploring the data to understand different facets and facts.
- 2) It is essential to identify and understand the target audience and their statistical literacy, keeping things simple and understandable.
- 3) Understand, develop and articulate the key messages from the data.
- 4) Identify visualization objectives, technical and human constraints, style guidelines and preferred visualization tools.

For further information on tools and best practices, please see the resources and box listed below.



Resource: Statisticians and data scientists are typically skilled in data analysis and interpretation, yet many are not equally fluent in communicating their findings in a way that is not only informative but also engaging. The UN Statistics Division prepared *A Practical Guide to Data Storytelling in Voluntary National Reviews and SDG reporting*, to help countries and national statistics offices better tell data stories for their audience. This practical guide is intended to help statisticians, data scientists, policy makers, analysts, managers, and communicators tell convincing data stories in VNRs and SDG reporting, with a focus on understanding the context and constructing the narrative. It contains examples drawn from VNRs and SDG reporting as well as other external sources.

Box 22: Data Visualization Best Practices⁷⁸

Effective data visualization, where audiences can easily digest the messages and relationships in the data, can be developed in myriad ways, but the following best practice steps are useful when getting started:

- **Explore and understand the data:** This process begins by tidying or cleaning the data in order to easily explore it and ensure anomalies or inaccuracies are identified. Exploring the data leads to discovery of trends, changes over time, patterns and correlations, etc. and helps to identify the facts that should be highlighted in the data. This exploration helps to clarify the ‘what’, so that the data visualization and storytelling can provide the ‘why’ and the ‘so- what’.
- **Understand your audience:** NSOs have a broad audience for the dissemination of statistics, ranging from the general public, government agencies, policy-makers, academia and other stakeholders as well as the media⁷⁹. It is important to understand the target audience for the data visualization, along with their statistical literacy and their information needs in order to tailor the information accordingly.
- **Develop key messages:** Oftentimes the most challenging aspect to developing good data visualization is creating the key messages from the data-- the main points or context you want the audience to hear, understand and remember. These messages should be data-driven and evidence-based as well as clear, concise and tailored to your audience. They also aim to provide essential information and show the meaning of the data.
- **Choose the best visuals:** More is not necessarily better when it comes to visuals in data visualization and finding the best chart or graph is very context specific. It is important to try to strike a balance between simplicity and not losing the story behind the data. Luckily, many different chart and graph types can help to highlight the facts, key messages and context in the data.
 - *Charts:* depending on what message or data should be highlighted, choosing a chart depends on many different factors. See: [Chart Chooser](#); [Data to Viz](#); [One Chart at a Time video series](#)
 - *Icons:* often used for infographics, icons communicate information without the need for words and are a strong tool for conveying messages and grabbing users’ attention. See: [UNSD SDG & COVID-19 Data Visualization Toolkit \(icons\)](#) listed below
 - *Colours:* used to help differentiate and represent information, colour palettes and combinations should also be considered in any data visualization. See: [Overview articles \(1\) and \(2\)](#); [Adobe Color](#); [Data Color Picker](#)
 - *Clean design (labels, visual hierarchy):* follow a visual hierarchy and ensure titles, labels, axis, etc. are clear, correct and take the guess work out for the user.
- **Get feedback and review/revise:** sharing the data visualization with colleagues and even testing it with your target audience can help to ensure it clearly conveys the data and data story in a concise and understandable way.

⁷⁸ Page, 2022, as input to the [Handbook on Management and Organization of National Statistical Systems](#) (section 14.2.6)

⁷⁹ See: [User personas – Style.ONS](#)

Icons and infographics

Throughout many of the VNR reports, countries are incorporating infographics and icons to communicate data and SDG progress (see Bulgaria and Austria examples below). These elements can also be used to give a snapshot of diverse information, for a Goal or for a particular topic.

Some key considerations for these infographics and icons include:

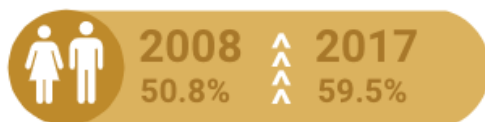
- The inclusion of data
- Showing trends and current status
- Using simple imagery to help convey messages to a wide audience

Bulgaria 2020 VNR

Challenges

	It is important to control food quality in a free market and to maintain a good care for child nutrition
	It is important to control advertising of food and beverages contributing to an unhealthy eating pattern for children
	It is important to work for the prevention of chronic non-communicable diseases caused by unhealthy eating
	More measures are needed for reallocation of unsold food and care for homeless and starving people

The proportion of overweight people aged over 18 is increasing, according to Eurostat data.



Austria 2020 VNR



The national share of renewables was **33.4%** in 2018, well above the EU-28 average of 18.0%.



Resource: The UNSD [SDG and COVID-19 data visualization toolkit](#) contains icons and templates for the development and delivery of engaging dissemination materials relating to both the SDGs and the COVID-19 pandemic. The toolkit contains over 300 icons and several templates that are open source, meaning they are freely usable by all.

SDG Progress Assessments or Charts

Another tool for providing a snapshot visualization and to measure progress to achieve the SDGs is with SDG progress assessments or charts. Increasingly, VNRs are including or linking to national progress assessments and charts, as well as including elements of progress charts into their statistical annexes. But before exploring the visualization possibilities, countries should develop the criteria for indicator

selection, baseline year, etc. and methodology for the calculation of progress. Below are some resources to explore for progress assessment or chart development⁸⁰:

i. United Nations Statistics Division

The Sustainable Development Goals Progress Chart 2022 | [webpage for chart](#) | [Technical Note](#)

The Sustainable Development Goals Progress Chart 2022 presents a snapshot of global and regional progress of selected targets under the 17 Goals of the 2030 Agenda for Sustainable Development. The progress assessment is based on the most up-to-date data and for some of the Sustainable Development Goals (SDGs) also reflect the impacts of the COVID-19 pandemic. Due to data collection challenges related to pandemic-related measures, measuring the full impact of COVID-19 is limited for the other Goals.

The progress chart presents two types of information:

- 1) a trend assessment using stoplight colours to measure progress towards the target (from a baseline year to the most recent data point), and
- 2) a level assessment using a gauge meter to measure the current level of development with respect to the distance from a target, using the latest data.

The chart is based on a limited number of indicators and information available as of June 2022. For most of the indicators, the latest available data are from 2019 to 2021. A baseline year of around 2015 or 2010 is used for the trend assessment.

Technical Note: In order to harmonize and improve the existing methodologies for the SDG Progress Chart, a proposed methodology was developed by a Task Team on SDG Progress Chart. If the methodology deviates from the proposed methodology due to the specialty of the indicator, a detailed explanation is specified in this technical note.

ii. UN ESCAP

UNESCAP progress assessment methodology | [webpage](#) | [Microlearning](#)

Having established an indicator selection criterion, ESCAP created a shortlist of Global Indicators for which trend assessments can be conducted. Based on the trajectory, estimates for the 2030 value are computed. By comparing the target value with the estimate, a relative Anticipated Progress Index for each indicator was generated.

National SDG Tracker tool | [webpage](#)

In addition, UNESCAP has developed a National SDG Tracker tool for countries to track progress on the SDGs. The tool allows countries to add their data, enter national target values, and visualize progress in a few simple steps.

⁸⁰ The resources listed below are not exhaustive of all possible SDG progress methodologies and visualizations but aim instead to help countries just starting.

iii. *UNECE*

**Halfway to 2030: How many targets will be achieved in the UNECE region?
Snapshot and insights in 2022**

[webpage](#) | [Report](#) | [Technical Note](#)

Using data generated for the UN Global SDG Indicators Database and the UNECE Statistical Database, UNECE assesses the region's performance on SDG progress based on the trend of measurable SDG targets. Referencing the Anticipated Progress Index method, an estimation of the 2030 value is generated. For each of the measurable goals, the estimated value is compared to the target value and the SDG target to produce a summary analysis on whether the region is on track to meet the SDG target by 2030.

iv. *OECD*

Measuring Distance to the SDG Targets | [webpage](#)

The Short and Winding Road to 2030: Measuring Distance to the SDG Targets (April 2022)

Using data from the UN Global SDG Indicators Database, OECD computed the arithmetic average across OECD countries with available data to determine OECD countries' status on achieving the SDGs as a whole. The assessment considers both a trend assessment and the likelihood of reaching the target.

Measure distance to SDG targets anywhere | [Working Paper](#)

The paper explores different methodological questions and possible approaches to measuring distances to the SDG targets anywhere. The paper also presents a case study of adapting the methodology in the setting of select LAC countries.

v. *UN Women*

[Are we on track to achieve gender equality by 2030?](#) (June 2022) | [webpage](#)

Looking at the indicators for SDG 5 on gender equality, UN Women assessed all the country data available to visualize the status of the world in achieving gender equality in accordance with the 2030 Agenda. UN Women also looked at the data on the country level to produce traffic light visualization that represent individual countries.

Progress chart visualization: Below are some elements to consider for inclusion in the progress chart:

- Baseline year
- Indicator and target information
- Trends
- Status
- Data sources
- Clear legend
- Link to the technical note

Montenegro Progress chart⁸¹:

Montenegro's Progress Chart includes an evaluation of the trend and target status using a traffic light visualization.

Evaluation of the trends for available indicators (2016-2021)



Target status / SDGs



The assessment for SDG 4 is presented in the figure below:

Available indicators	Trend 2016-2021	SDG targets	Status
		4.1	
Coverage of children with early education (target 4.2)		4.2	
		4.3	
4.3.1 Rate of participation of young persons and adults in formal and non-formal education and training		4.4	
		4.5	
4.4.1 Proportion of young people and adults with information and communication skills		4.6	
		4.7	
4.4.1 Proportion of young people and adults with information and communication skills		4.a	
4.c.1 Proportion of teachers that attended at least the minimum organized teacher training (e.g. pedagogical training)		4.c	
		SDG 4	

4.10 Including a Statistical Annex and SDG data platforms

The VNR will entail presenting a review of SDG progress in the country, using statistics to demonstrate achievements and show challenges. It will also involve presenting statistics on key themes such as vulnerability tracking and SDG localisation.

The VNR report may also be accompanied by themed reports containing supplementary statistics as well as a statistical annex.

Statistical Annex

The Guidelines recommend that a **statistical annex** accompany VNRs to provide more detailed statistics. Annexes allow governments to report only the most relevant information in the body of the report to keep it concise, while still reflecting a strong evidence base for the VNR by including additional, relevant indicators.

VNR reports are increasingly incorporating statistical annexes, referencing the data material in the report. This allows users to quickly find information they need for further data detail of the indicators being tracked for SDG implementation and that support the overall analysis in the VNR report.

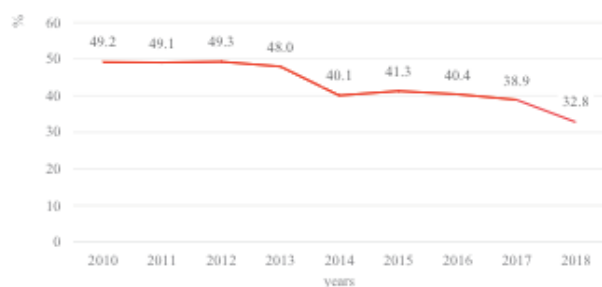
Common characteristics in the VNR statistical annexes include data tables containing:

- Baseline year and data information
- Current status and year (of the data)
- Established goals for 2025/2030
- Projections
- Disaggregated data
- Data sources
- Charts and/or other data/progress visualizations (with legends as applicable)

⁸¹ Montenegro, Voluntary National Review, 2022 (chart pg. 8)

Bulgaria VNR 2020 use of charts in the Bulgaria Annex on Statistical Monitoring⁸²

01_10. People at risk of poverty or social exclusion (% of the population)



Relative share of the population at risk of poverty or social exclusion as a % of total population. The indicator corresponds to the persons who are: at risk of poverty after social transfers; severely materially deprived or living in households with unemployed persons and with very low work intensity. Persons are counted only once even if they are affected by more than one of these phenomena

Kenya VNR 2020 statistical annex with disaggregated data⁸³

ANNEX III: STATUS OF SDGS INDICATORS

Indicator	Indicator Description	Unit	Baseline Data (2009-2014)	2015	2016	2017	2018	2019	Remarks
Goal 1: End Poverty in all its forms everywhere									
1.2.1	Proportion of population living below the national poverty line, by sex and age	Per cent	46.6 (Total); 49.7 (Rural); 34.4 (Urban)	--	36.1 (Total); 40.1 (Rural); 29.4 (Urban)	--	--	--	Refers to individuals
	By Sex	Per cent	--	--	36.2 (Female) 36.1 (Male)	--	--	--	
	By Age group	Per cent	--	--	41.5 (0-17 yrs) 29.1 (18-35 yrs) 32.5 (36-59 yrs) 36.2 (60-69 yrs) 39.1 (70+ yrs)	--	--	--	Refers to individuals

Ukraine VNR 2020 statistical information in each Goal chapter with baseline information and 2025 and 2030 benchmarks⁸⁴

TARGET	INDICATOR	2015	2016	2017	2018	2019	2020 [benchmark]	CURRENT STATUS	2025 [benchmark]	2030 [benchmark]
17.1. Mobilize additional financial resources by promoting foreign and domestic investment	17.1.1. Ratio of private remittances from abroad to GDP, %	7.6	8.1	8.2	8.5	7.8	6.0*		6.0	6.0
	17.1.2. Net foreign direct investment (according to the balance of payments), USD billions	3,012	3,268	2,593	2,360	2,422	10,000		16,000	17,500
17.2. Consistently reduce the debt burden on the economy	17.2.1. Ratio of gross external debt to exports of goods and services in annual terms, %	245.8	244.6	214.3	194.0	192.0	--		To be clarified	
17.3. Develop a partnership between government and business to achieve the SDGs	17.3.1. Number of projects of public-private partnership	177	186	191	189	187	205		To be clarified	

* Definition of this target value used preliminary 2015 data, being 5.75, as a baseline.

⁸² Bulgaria, Voluntary National Review, 2020

⁸³ Kenya, Voluntary National Review, 2020

⁸⁴ Ukraine, Voluntary National Review, 2020



Meta ODS	Nombre del Indicador	LB 2015	Último dato disponible	Meta linealizada	Tipo de acumulación	% de avance	Meta 2030
1.1	Porcentaje de población que vive por debajo del umbral internacional de pobreza extrema	5,60 %	6,0 % 2019	4,73 % 2019	Reducción	0,0 %	1,7 %
1.1	Incidencia de la pobreza monetaria extrema	7,90 %	7,20 % 2018	7,90 % 2018	Reducción	100,0 %	4,0 %
1.2	Incidencia de la pobreza monetaria	27,80 %	27,00 % 2018	25,0 % 2018	Reducción	28,6 %	18,70 %
1.2	Índice de pobreza multidimensional	20,20 %	17,50 % 2019	17,02 % 2019	Reducción	-	8,4 %
1.3	Porcentaje de población ocupada afiliada a administradora de riesgos laborales	95,7 %	95,64 % 2020	97,33 % 2020	Flujo	98,3 %	99,0 %
1.3	Porcentaje de población ocupada cotizante al sistema de pensiones	34,3 %	37,00 % 2020	38,92 % 2020	Flujo	95,1 %	48,0 %
1.3	Hectáreas de pequeña y mediana propiedad rural formalizadas	0	1.973.979,2 2019	1.866.667,7 2019	Acumulado	100,0 %	7.000.000 (2026)
1.4	Mortalidad nacional causada por eventos recurrentes	89	92 2020	85,8 2020	Reducción	0,0 %	80
1.5	Tasa de personas afectadas a causa de eventos recurrentes	989,79	381,00 2020	958,45 2020	Reducción	100,0 %	890,82

Some statistical annexes are provided separately online to accompany the report and developed by the Statistics institute (for example Norway 2021 VNR, see below). Other VNRs include reference to an online platform, database or dashboard with the SDG indicators (for example Czech Republic 2021 VNR and India 2020 VNR).

Excerpt from the [Statistical Annex to the Norwegian Voluntary National Review 2021](#)

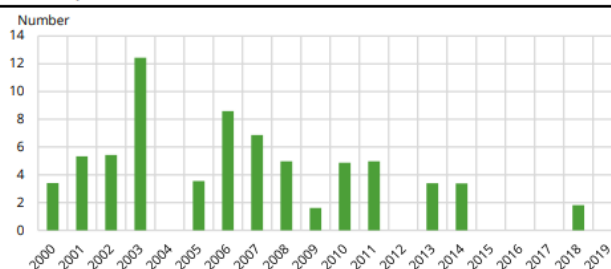


GOAL 3
Ensure healthy lives and promote well-being for all at all ages

Target 3.1 By 2030, reduce the global maternal mortality ratio to less than 70 per 100,000 live births

Indicator 3.1.1 Maternal mortality ratio

3.1.1 Maternal deaths per 100 000 births



Source: Norwegian Institute of Public Health

⁸⁵ Colombia, Voluntary National Review, 2021

Additionally, countries are including data visualizations on the progress of the indicators, such as Seychelle’s traffic light approach to indicate the status of progress included in the Statistical Annex of its 2020 report (see below).

Seychelle’s Statistical Annex with traffic light status⁸⁶

Statistical Annex

Key
● Trailing ● On Track ● Achieved

Goals & Targets <i>(from the 2030 Agenda for Sustainable Development)</i>	Indicators	Baseline <i>(year)</i>	Baseline <i>Data</i>	Current <i>year (Period)</i>	Current <i>Progress (2020)</i>	Status
Goal 1. End poverty in all its forms everywhere						
1.1 By 2030, eradicate extreme poverty for all people everywhere, currently measured as people living on less than \$1.25 a day	1.1.1 Proportion of population below the international poverty line, by sex, age, employment status and geographical location (urban/rural)				(See Goal 1)	●
1.2 By 2030, reduce at least by half the proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions	1.2.1 Proportion of population living below the national poverty line, by sex and age	2013	39%			●
	1.2.2 Proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions	2018 (Q4)	0.09	2019 (Q3)	0.04	●
1.3 Implement nationally appropriate social protection systems and measures for all, including floors, and by 2030 achieve substantial coverage of the poor and the vulnerable	1.3.1 Proportion of population covered by social protection floors/systems, by sex, distinguishing children, unemployed persons, older persons, persons with disabilities, pregnant women, newborns, work-injury victims and the poor and the vulnerable	2014	17%	2016	21%	●

Malawi’s 2022 VNR included a statistical annex which included the baseline value, data source, some levels of disaggregation and target for 2030. In addition, it included a snapshot visualization on the rating of progress on achieving the indicator.

Malawi Statistical Annex with multiple features⁸⁷

Indicator Code	Indicators	2020 Value	Progress Value	Progress Year	2030 Target	Rating	Source
Goal 1. End poverty in all its forms everywhere							
1.1 By 2030, eradicate extreme poverty for all people everywhere, currently measured as people living on less than \$1.25 a day							
*1.1.1	Proportion of population below the international poverty line \$1.90 per day	71.4	73.9	2021	0	●	World Bank
1.2 By 2030, reduce at least by half the proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions							
1.2.1	Proportion of population living below the national poverty line, by residence, sex of household headship and age	51.5	50.7	2021	0	●	NSO
*1.2.1	Urban	17.7	19.2	2021	0	●	NSO
*1.2.1	Rural	59.5	56.6	2021	0	●	NSO
*1.2.1	Males	49.3	48.5	2021	0	●	NSO
*1.2.1	Females	58.3	56.8	2021	0	●	NSO
*1.2.1	Proportion of the population-ultra-poor based on the national poverty line	24.5	20.5	2021	0	●	NSO
*1.2.1	National Human Development Index (HDI)	0.476	0.483	2021	1	●	NSO
1.3 Implement nationally appropriate social protection systems and measures for all, including floors, and by 2030 achieve substantial coverage of the poor and the vulnerable							
1.3.1	Proportion of population covered by social protection floors/systems, by sex, distinguishing children, unemployed persons, older persons, persons with disabilities, pregnant women,		7%	2021	21.1	●	Ministry of Gender

Colour Coding
● Significant progress/likely to meet
● Moderate Progress
● Little or no progress
● No data

⁸⁶ Seychelles, Voluntary National Review, 2020

⁸⁷ Malawi, Voluntary National Review, 2022

National Data Reporting Platforms

VNRs can only provide a snapshot of the data available for reporting on SDG monitoring and indicators. The full complement of SDG statistics and indicators should be available for SDG planning and long-term reporting, which is where SDG indicator data platforms can be vital.

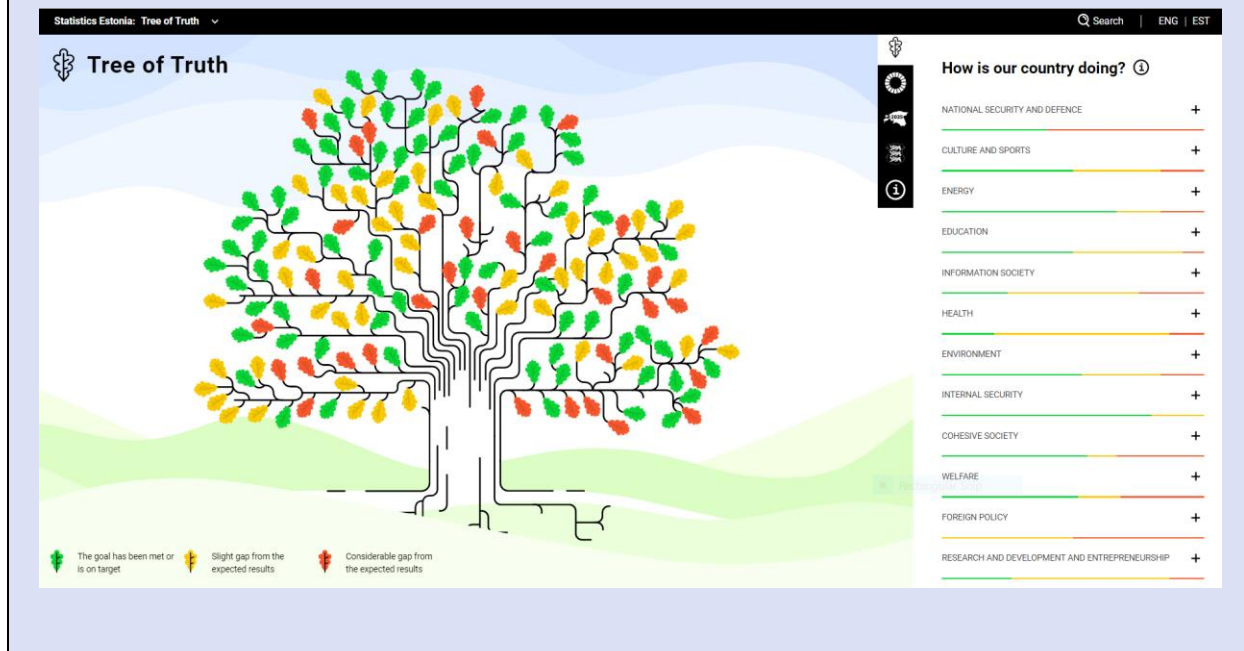
Centralised SDG information platforms have been created by international groups such as the OECD, UNSD, and the World Bank. However, VNR teams should consider setting up local platforms. These platforms have been launched in many countries to make SDG data easily accessible.

Several governments stated that creating SDG information (SDGI) platforms was important for country commitment and to ensure country-collected data is the main source for global reporting.

VNR teams also stressed that digital platforms could facilitate collaborative collection and dissemination of data and the effective contribution of all stakeholders, which could implement an effective and efficient visualization and communication way of SDG indicators.

Box 23: Tree of truth SDG data dissemination platform of Estonia⁸⁸

The Estonian NSO have created an interactive platform for disseminating the country's SDG indicators. Estonia's "[Tree of Truth](#)" platform went live in 2019. The indicators on the platform relate to the SDGs and Estonia's policies and strategies. The country's SDGs include an 18th goal devoted to Estonia's cultural heritage.



Such platforms may be the only way for stakeholders to know where the country stands on indicators of SDG progress and where to access relevant indicator data. They can be an excellent way of raising the profile of NSOs and demonstrating the key role of data in wellbeing policymaking. They can also be an important communication tool between government SDG teams and data users. Data users include

⁸⁸ Estonia, Voluntary National Review, 2020 and Statistics Estonia. Statistics Estonia: Tree of Truth. Statistics Estonia. [Online] 2021. [Cited: 02 14, 2021.] <https://tamm.stat.ee/>.

ministries who utilize the data for reporting purposes, but also UN agencies, academics and open data groups, as well as the general public.

Box 24: SDG India Index & Dashboard⁸⁹

India’s SDG monitoring agency is the National Institute for Transforming India (NITI-Aayog). The Institute has built the SDG India Index & Dashboard. This platform publishes statistics on 16 of the SDGs and qualitative information on SDG 17. The index collates data on all 37 States/Union Territories in India and ranks their SDG progress. The rankings are covered extensively in the media and this raises awareness of the SDGs. It also allows local governments to benchmark their progress and gives them information on data gaps. Finally, the high-profile index pushes them to implement the SDGs at the local level.



Monitoring progress of localization: SDG India Index
 First comprehensive measure of SDG performance and localisation with national and State/UT ranking

Goal-wise ranking of States/ UTs and overall ranking based on performance on all goals	Promotes competition among the States/ UTs in line with NITI Aayog’s approach of competitive federalism	Enable States/ UTs to learn from peers
	Supports States/ UTs in identifying priority areas	Highlights gaps in statistical systems
Baseline report – 2018	V2.0 report – 2019-20	V3.0 report – 2020-21
13 goals	16 goals + qualitative analysis on goal 17	16 goals + qualitative analysis on Goal 17
39 targets	54 targets	70 targets
62 indicators	100 indicators	115 indicators
Goal-wise ranking on States/ UTs	Goal-wise ranking on States/ UTs + State/ UT profiles	Goal-wise ranking on States/ UTs + State/ UT profiles
Preceded National Indicator Framework (NIF)	Aligned with NIF: 68 indicators completely aligned, 20 refined, 12 new to cover goals 12, 13, and 14	Aligned with NIF: 76 indicators completely aligned, 31 refined, 8 in consultation with the line ministries

Not all NSS have such platforms, though, and a review of existing SDG indicators platforms reveals that some are attractive and easy to use, while others are not. Some provide indicator data and others do not. Human capital and technology challenges may limit the use and usability of some of these sites.

⁸⁹ National Institute for Transforming India (NITI-Aayog). See: <https://sdgindiaindex.niti.gov.in/#/>

VNR teams and NSS agencies should consider ways to build platforms to make SDG data and other SDG information readily available and to use existing options where feasible if it can ensure sustainability of the platform.

Some suggestions for creating or improving SDG indicators dissemination platforms include:

- Plan dissemination platforms as part of a holistic data sharing strategy within clear data governance frameworks.
- Collaborate with country experts and technical teams (including UN support teams) for platform design.
- Back up sharing on platforms with dissemination policies and data legislation.
- Consider institutional changes that are needed to improve the functioning of platforms (staff training, Statistician-IT Manager forums, formal user communication channels).
- Upgrade technological infrastructure.
- Provide staff with necessary skill sets – they will only be able to take advantage of short-term training offers from UN agencies if they already have core competencies in IT and other data science skills.

NSOs can also exchange technologies and skills concerning dissemination platforms for SDG indicators and other data. For example, the United Kingdom’s [Open SDG platform](#) was developed by teams from the US Government, the UK Office for National Statistics, and the non-profit Center for Open Data Enterprise. Platform software is freely available and has been used to set up Open SDG platforms in other countries including Ghana, Poland, Armenia and Rwanda⁹⁰.

Box 25: Open data platform enabling Somalia’s first VNR in 2022⁹¹

Somalia presented its first VNR in 2022. Honouring the principle of transparency, the Somalia National Bureau of Statistics (SNBS) developed an online data visualization tool- [The Goal Tracker Somalia](#)- which allows the public to access Somalia SDG data. In the development process of the data portal, the SNBS also conducted a data availability analysis, revealing data gaps in the SDG monitoring framework.

Data availability visualization and analysis: *Referencing the global indicator framework, SNBS mapped out data availability and data gaps within its data ecosystem in monitoring the implementation of the SDGs. The interactive visualization tool highlights the indicators for which SNBS currently has data. The visualization also highlights the indicators for which proxy data exist. The data availability analysis was also disaggregated by the Tiers of the indicators as established by the IAEG-SDGs. Focusing primarily on filling the data gap for Tier I indicators, the Somalia database covers 54.8 per cent of Tier I indicators and 21.0 per cent of Tier II indicators.*

(continued on next page)

⁹⁰ UK Government, Voluntary National Review, 2019

⁹¹ UNSC53 side event (Jan. 2022): [Preparing evidence-based Voluntary National Reviews \(VNRs\): best practices and experiences \(UNSD\)](#)

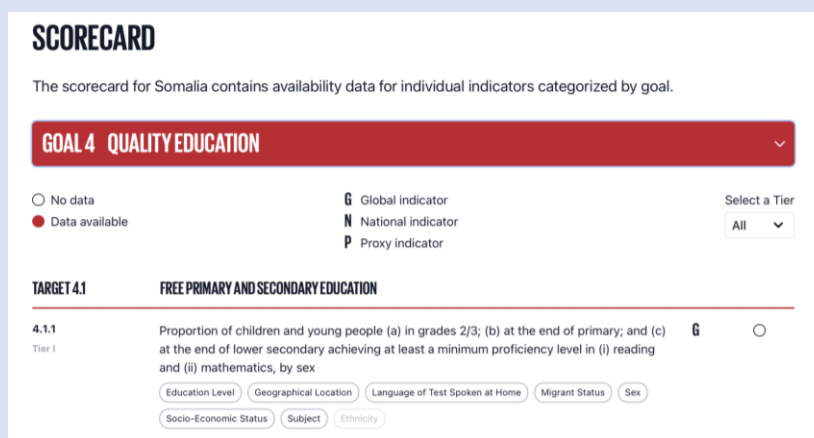
Visualization on Data Availability (Goal Tracker Somalia)



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Scorecard – disaggregation dimension: SNBS listed all relevant disaggregation dimensions for each indicator. This scoreboard visualization tool also highlights the gaps in data disaggregation. This facilitates future revisions for an inclusive data collection process and policy designs that prioritise marginalized groups.

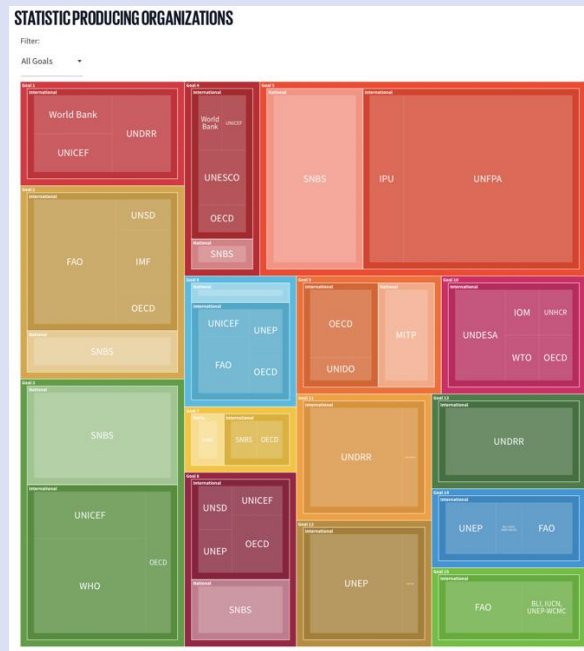
Scoreboard: Goal Tracker – Somalia



Mapping the Data Ecosystem: Aiming to become the key custodian agency for the collection and management of the SDG indicators, the SNBS mapped out the sources of data used for the VNRs. The visualization tool highlights the key stakeholders with whom the SNBS shall maintain close communications. Through strengthening the coordination across agencies, the SNBS is looking to reduce the fragmentation and improve the efficiency of data production processes.

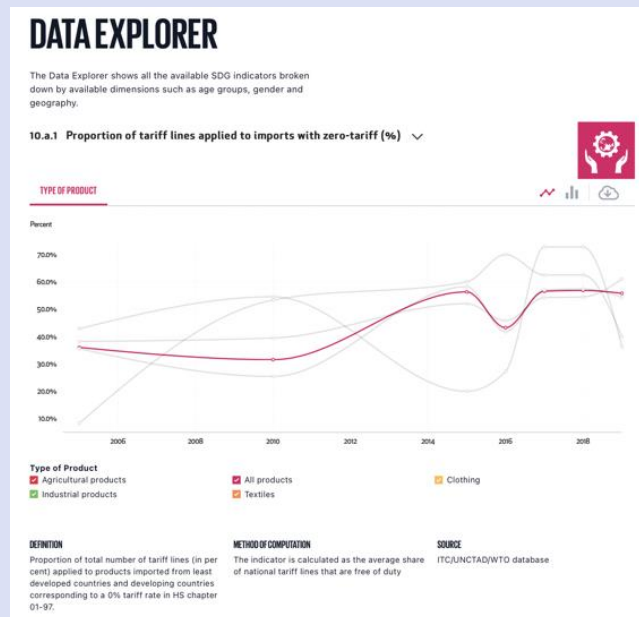
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Data Ecosystem Mapping (Goal Tracker Somalia)

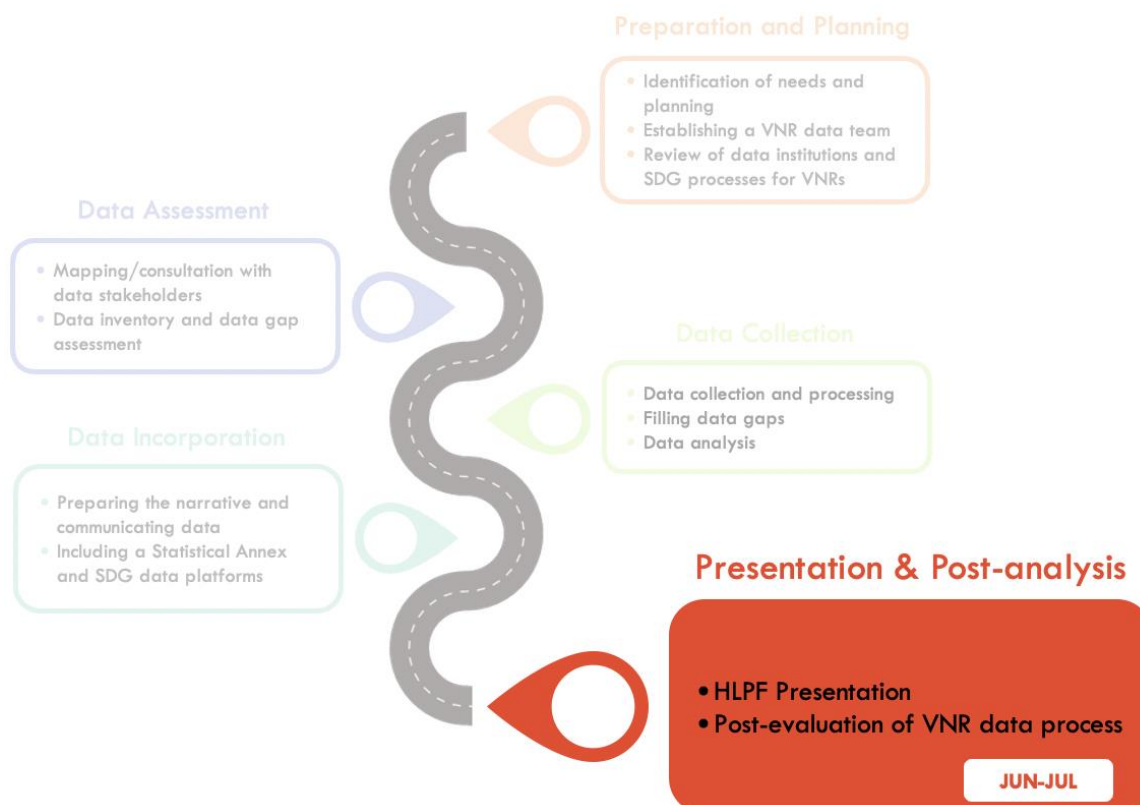


Data Explorer: The data explorer visualizes the available SDG data into line graphs and bar plots to show the time trend of the data, which can be downloaded from the page. In gatekeeping the transparency, each indicator page includes the definition, method of computation and the data source.

Data Visualization: Goal Tracker – Somalia



Presentation & Post-analysis



4.11 HLPF presentation

The HLPF presentation is an opportunity to showcase the culmination of all the efforts made by all participants in the development of the VNR, including the VNR data team. In this regard, the presentation can provide an evidence-based version of the main findings of the VNR, as well as good practices, challenges and areas for support and advice⁹². This is also an opportunity to highlight any data visualizations developed by the country for SDG monitoring, such as any data dashboards or data platforms, so that audiences can delve deeper into the data behind the VNR and other SDG reporting in the country.

4.12 Post-evaluation of VNR data process

In general, the final chapter of the VNRs prepared and presented at the HLPF by countries are on ‘next steps’ and ‘conclusions’. This chapter is one of the most important of the Review as it gives a snapshot of the main elements of an SDG action plan following the VNR, including those related to SDG data.

In addition, and in order to get the full benefit from the resources invested in the preparation and incorporation of data in the VNR, countries could consider concrete follow-up steps, such as:

⁹² Handbook for the preparation on Voluntary National Reviews, The 2021 Edition, HLPF, 2021

- Post-VNR evaluation and review of the process for developing the VNR, with an emphasis on data and the data team.
- Ensure wide dissemination of the VNR to the wider public and stakeholders.
- Consider sharing the VNR and data lessons learned at the sub-national level.
- Institutionalize the collection of the data and statistics for the VNRs.
- Use lessons from the VNR data process to refine and enhance institutional arrangements for the SDGs and VNR data collection.

5. Data Disaggregation: Counting the Vulnerable in VNRs

This chapter focuses on policy-data integration and data collection for vulnerable groups as well as useful frameworks for reporting on leaving no one behind (LNOB) in VNRs.

Implementing the SDGs and the commitment to the principle of LNOB poses a host of data challenges, starting with the imperative to account for all individuals, especially the most vulnerable. For this and to monitor progress made on various SDGs and at the country level, it is essential to produce more detailed and disaggregated data. However, current statistics in many countries reflect national averages that often mask disparities at the subnational, community or household level.

The [global SDG indicator framework](#) contains a significant proportion of indicators that include disaggregation by demographic and socio-economic characteristics⁹³. These characteristics are ones associated with marginalised or particular population groups who may be missed when statistics are reported at the aggregate level. Vulnerable groups include women and girls, children, youth, persons with disabilities, people living with HIV, older persons, indigenous peoples, refugees, internally displaced persons and migrants and other groups who tend to be excluded from economic development processes and are disproportionately represented among the poor.

According to the 2030 Agenda, vulnerable groups must be a key focus of SDG policies in order to redress their situations so that “no one will be left behind” in implementing sustainable development. The 2030 Agenda stresses that SDG targets should be met for the most vulnerable (“the furthest behind”) first. This directive has become more urgent since the COVID-19 pandemic has increased the number of vulnerable individuals and households in countries. Data disaggregated by characteristics associated with lack of access and opportunity can help identify those most at risk of exclusion. Identifying these groups allows governments to actively include them in development plans.

5.1 Mainstreaming vulnerable groups into sustainable development

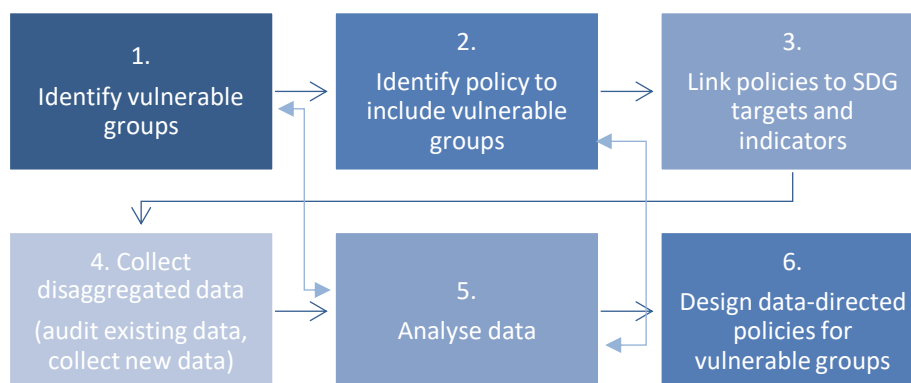
The principle of LNOB has clear implications for data arrangements for monitoring and reporting on SDG progress at the country level. Without granular data that can show vulnerability status, it is not possible to monitor SDG progress and implementation in a way that documents if the vulnerable are being included in national sustainable development plans.

The challenge is that those who are the most vulnerable (the furthest behind) are often uncounted. The fact that they do not exist in official records increases their vulnerability and may leave them further behind, even as others benefit from national SDG implementation. It is therefore crucial that NSOs and other data producing agencies adapt their data collection and data preparation methods to capture vulnerability data. Part of the process is identifying where vulnerability-relevant data exists in the NSS but has not been made available and looking for data on the vulnerable groups within other data sources, outside the NSS. There is a process governments can follow to mainstream marginalised groups into sustainable development. These steps are data-driven and what data is available and what the data reveals will influence each stage of the process as well as what is reported in VNRs:

⁹³ An examination of the [SDG indicator list](#) shows that 49 of the 231 indicators are disaggregated by age, sex, disability status, employment status, income, or other socio-economic characteristic, or location.

1. Who are the vulnerable in the country?
2. Agree on national policy priorities related to specific vulnerable groups
3. Link policy priorities to targets and indicators (policy-data integration)
4. Collect data - audit existing sources and collect new disaggregated data
5. Analyse disaggregated data to present statistics in VNRs
6. Design targeted policies for the vulnerable, based on disaggregated data and then measure the impact and effectiveness

Figure 3: Steps to include vulnerable groups in sustainable development⁹⁴



5.2 Frameworks for Reporting on the Vulnerable

VNRs must report on government plans for inclusive sustainable development. In the 2020 and 2021 VNR rounds, some governments dedicated a section of their VNRs to how they will ensure inclusive sustainable development. Others have reported on the LNOB principle as a cross-cutting theme in SDG implementation. Different frameworks have been adopted in countries to address vulnerable groups.

A Social Protection and Universal Services framework was the most common approach to address vulnerable groups in SDG planning. Another approach was a focus on poverty elimination (SDG1) as a key strategy for overcoming disadvantage, although this approach may not adequately account for the intersecting dimensions of vulnerability.

Some VNRs discussed inclusivity from a Human Rights perspective. This perspective stressed the role of formal anti-discrimination mechanisms to reduce vulnerabilities at the country level. Legislation is presented as the main mechanism to support the vulnerable. Legislation includes international legal instruments to enshrine human rights, such as the [Convention on the Rights of the Child](#). Governments reporting on vulnerabilities within the UNHCR's [human rights framework](#) stress that vulnerability-disaggregated data is sensitive and must be collected and analysed with careful consideration of ethics. Some governments, such as the Kenyan authorities, are planning for data collection based on this framework. In Kenya, the government has combined Social Security and Human Rights Rights-based approaches for inclusive planning. The Kenya National Bureau of Statistics collaborates with the Kenyan National Commission on Human Rights and other organisations representing vulnerable Kenyans.

⁹⁴ Source: Woolfrey, 2021

Together they identify the vulnerable and collect data on them using a Human Rights Based Approach to Data (HRBAD) framework to ensure no one is left behind in SDG implementation in the country⁹⁵.

5.3 Policy-Data Integration Concerning Vulnerable Groups

Policy formulation involves choosing a policy course and then identifying the data needed to implement the chosen policy. In the case of vulnerability tracking and mitigation, governments must identify vulnerable groups in their countries and align their inclusivity policies to priority targets and indicators.

For instance, the table below identifies the relation between different policy areas concerning persons with disabilities and corresponding priority SDG indicators.

Table 2: Policy-data integration for persons with disabilities⁹⁶

Policy Areas for Persons with Disabilities (PWD)	Priority Indicators
Poverty eradication for PWD	1.1.1, 1.2.1, 1.3.1, 10.2.1
Good Health for PWD	3.3.1, 3.8.1, 3.8.2, 5.6.1
Education for PWD	4.1.1, 4.2.2, 4.3.1, 4.4.1, 4.5.1, 4.6.1, 4.a.1
Employment for PWD	8.5.1, 8.5.2, 10.3.1, 16.7.1
Accessibility for PWD	11.2.1, 11.7.1, 11.7.2, 16.1.4, 16.7.2, 17.8.1

To be effective, monitoring progress on the LNOB commitment should be compatible with national monitoring tools, especially national development plans. In addition, monitoring progress towards achieving the objectives of the 2030 Agenda, in particular for vulnerable groups, could play a key role in the design or adjustment of relevant policies. VNRs are an opportunity to report on disaggregated data and measurement frameworks on vulnerable groups that can be used for these policies (see the examples of Mauritius and Uganda below).

Box 26: How data and monitoring have influenced policy direction: Uganda and Mauritius

Regular and thorough consideration of available data will influence policy direction. For example, the welfare system in Mauritius provides an array of social protection schemes, including free education and healthcare services. Monitoring, evaluation and coordination across the government system and with stakeholders is helping to identify complementary intervention areas to be included in the welfare package. These complimentary measures aim to further positively impact the lives of the most vulnerable in the country⁹⁷.

(continued on next page)

⁹⁵ Kenya, Voluntary National Review, 2020

⁹⁶ IAEG-SDGs, [Data disaggregation and SDG indicators: Policy priorities and current and future disaggregation plans](#). Inter-Agency and Expert Group, 2019.

⁹⁷ Mauritius, Voluntary National Review, 2019

To enable data-driven policy, in 2018, the Uganda Bureau of Statistics (UBOS) conducted one of the first comprehensive community surveys in districts where an influx of refugees were observed, sampling data from both local residents and refugees. Alongside a newly developed Frequent Monitoring System, updated disaggregated data by refugee status buttress the policy planning. In addition, the National Planning Authority issued a guideline to include refugees in district development planning⁹⁸.

5.4 Collecting Data on Vulnerable Groups

Many recent VNRs cite challenges in preparing data to report on certain groups. In some countries NSOs do not have vulnerability-disaggregated data to report fully on many national priority indicators. Even in countries with advanced statistical systems, data are not always available at the required level of granularity for all those at higher risk of poverty and exclusion.

Thus, data collection starts with a good data plan. A few governments have signed up to the [Inclusive Data Charter](#) of the Global Partnership for Sustainable Development data. These governments have committed to the principles of the Charter and prepared an Inclusive Data Action Plan that describes how they will produce disaggregated data to count those at risk of marginalization and social exclusion. In the UK, for example, the National Statistician created an [Inclusive Data taskforce](#) (a diverse group of senior academics and civil society leaders with wide ranging expertise across equalities topics, methodologies, geographies, and data ethics) to develop recommendations and an [implementation plan](#) on how best to make a step-change in the inclusivity of UK data and evidence.

However, without such an approach, vulnerable groups can be excluded and not counted in the data collection systems implemented by countries just based on the design of data collection. Below are some examples of how these vulnerable groups can be excluded by design in data collection:

- Geographically-isolated populations remain uncounted
- Household surveys leave out institutions
- School-based surveys miss children not attending school
- Administrative data only count those who access services
- Collection of data on religion/ethnicity and other attributes denoting vulnerability may be legally precluded in some countries

In VNRs in general, countries detail the challenges they are encountering to collect disaggregated data. For instance, Nigeria's second VNR in 2020 drew attention to the lack up-to-date gender-disaggregated data to report progress on SDG 5 (gender equality). Where data is available – for example in the database being developed by Nigeria's Federal Ministry of Women's Affairs and Social Development – this information has not yet informed gender-related policies in the country. Gender-disaggregated data held by government also does not allow for the identification of intersecting vulnerabilities of women, e.g. women and girls with disabilities are largely untraceable in official statistics.

⁹⁸ 2020 Voluntary National Review of the Republic of Uganda

Box 27: Collecting data on the vulnerable in the Philippines and Bhutan

In its 2022 VNR, the Philippines describes its Community-based Monitoring System (CBMS), a technology-based system of collecting, processing, and validating necessary disaggregated data. The system relies on a large participation of local governments with data collection done door-to-door to ensure the highest levels of inclusivity. The system is essentially the full localization of the SDGs in country and is expected to generate updated and disaggregated data necessary to target beneficiaries of programmes; conduct comprehensive poverty analysis and provide information to direct public spending on areas and populations most in need. During the pandemic, data collection continued uninterrupted through the use of Computer-Aided Web Interviews (CAWI).

In Bhutan's 2021 VNR, it describes efforts by the National Commission for Women and Children (NCWC) to reduce vulnerabilities with improved gender analysis and data. The Commission currently produces survey data on gender-based violence, violence against children and the valuation of unpaid care work. The NCWC also works with the National Statistics Bureau to mainstream gender into national statistics with a gender lens included in national survey design. Priority areas for strengthening gender statistics are agriculture and environment. To address this, in collaboration with the Ministry of Agriculture and Forest, the Commission is making the annual agriculture census questionnaire gender-sensitive to fill existing gaps in data disaggregation. It is also working with the National Environment Commission to produce gender statistics related to natural resources and biodiversity, access to food and energy as well as climate change.

The VNR process can be viewed as an opportunity to improve the collection and use of data on vulnerable populations who may not have been considered in the past. In some countries, the VNR process has been instrumental in initiating collection of data associated with vulnerability, and existing statistical processes have been adapted in some countries to collect this type of data. Many African NSOs have taken up this challenge:

- Household surveys in Niger now collect data on persons with disabilities and refugees⁹⁹.
- NSOs of The Gambia and Kenya have devised questionnaires to collect disability status data based on the [Washington Group Questionnaire](#)¹⁰⁰.

In Sri Lanka, persistent data gaps in relation to gender equality were recognized in their 2022 VNR, which also inhibited the analysis of certain government policies. As a result, a recent Cabinet-level approval will make it compulsory to collect information on sex and age in all censuses, surveys and studies conducted by ministries and departments throughout the government. This initiative is expected to directly contribute to evidence-based policy and planning processes related to children and women's development.

The [Practical Guidebook on Data Disaggregation for the Sustainable Development Goals](#), developed by the Asian Development Bank and the UN Statistics Division, is a useful resource for VNR development as it outlines the strengths, limitations and potential of sources for disaggregated data¹⁰¹. Sources reviewed include census, sample surveys, administrative reporting systems, small area estimation, big data, geospatial data and others as well as data integration.

⁹⁹ Niger, Voluntary National Review, 2020

¹⁰⁰ Partners for Review. Voluntary national reviews 2020: A snapshot of trends in SDG reporting. s.l. : United Nations, 2020.

¹⁰¹ See Chapter 3

5.5 Including Statistics on the Vulnerable in VNRs

VNRs should endeavour to include statistics according to vulnerable groups highlighted in the global SDG indicator framework as well as specific vulnerable and excluded groups identified in their countries. Policies will be aligned with the type of development framework adopted nationally to alleviate vulnerability. In this regard, vulnerability reporting in VNRs should:

- ✓ State who are the vulnerable groups in the country, and include information
- ✓ Describe measures to include vulnerable groups in sustainable development
- ✓ Highlight gaps in the official record for vulnerability-disaggregated data

Box 28: Institutional arrangements for inclusivity in Austria¹⁰²

VNRs should report on the role of national institutions in inclusive development. Reporting could include information on the representation of women and other marginalised groups in political and legislative institutions as well as other formal and ad-hoc institutional groupings. For example, the government of Austria has made strong efforts to establish multi-stakeholder forums for inclusivity and has established a consultative forum representing over 400 stakeholders to suggest actions for leaving no one behind in SDG implementation in the country.

In recent VNR rounds, many countries included statistics only on some vulnerable groups, such as women, children, and persons with disabilities, which were mentioned consistently. Age vulnerabilities were mentioned in the 2020 VNRs in the context of older persons and some VNRs reported a lack of age-disaggregated data to report on youth in their countries. Vulnerabilities around ethnicity, race, religion, and indigenous status were mentioned in very few 2020 reviews. VNRs cited gaps in suitably granular data needed to underpin reporting on the full range of vulnerable groups in their countries. Moreover, in the 2021 VNRs, the majority of countries provided some level of disaggregation by gender, region or age group, and in most cases only for a select number of indicators. Similarly, in the 2022 VNRs, more than 60 per cent of countries provided disaggregated data, which provided insights on some vulnerable population groups that could be left behind in national SDG implementation. However, the dimensions of disaggregation included in the 2022 VNRs vary across reports (see table below).

Table 3: Disaggregated Data in 2022 VNRs¹⁰³

Disaggregation Dimension	Number of Countries*
Gender	25
Age	12
Geographical Location	19
Income Level	2
Race/ethnicity	0
<i>*Aggregations are not mutually exclusive. Some countries provide indicators in more than one dimension and not all indicators are disaggregated.</i>	

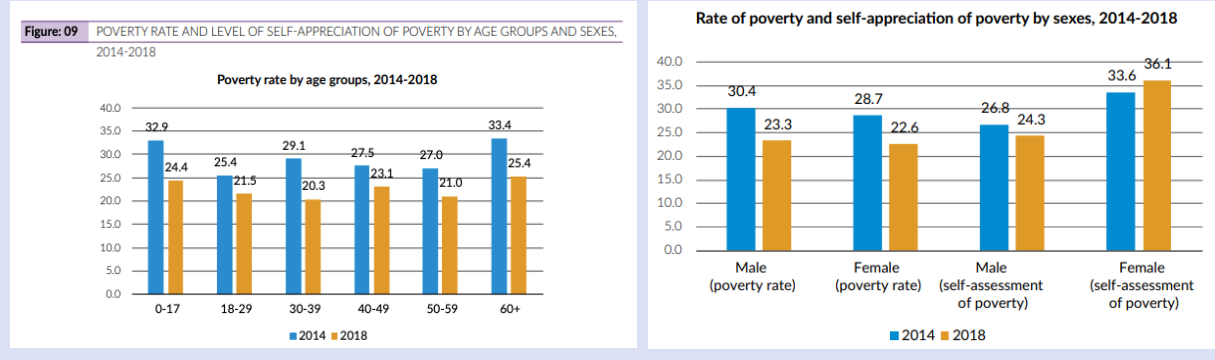
¹⁰² Austria, Voluntary National Review, 2020

¹⁰³ UNDESA [2022 Voluntary National Reviews Synthesis Report](#) (input provided by UNSD)

For instance, Costa Rica’s National Development Plan (PNDIP 2019-2022) includes 47 strategic interventions specifically focused on vulnerable groups that have been identified in the country. These groups include migrants and refugees, Afro-descendants, persons with disabilities, LGBTI persons, Indigenous peoples, women and children as well as older adults. Their 2020 VNR included statistics on the distribution of interventions by vulnerable group. The government’s interventions used local development as a way to mitigate vulnerability and implement the 2030 Agenda¹⁰⁴.

Box 29: Republic of Moldova and LNOB¹⁰⁵

During the data availability analysis of SDG indicators, Moldova paid particular attention to data disaggregation. In its 2020 VNR, Moldova highlighted that over 57.4 per cent of the SDG indicators were possible to be disaggregated in line with the requirements of global metadata. It was able to include multiple data tables with different disaggregation dimensions throughout its 2020 VNR. For instance, in its chapter on poverty, the VNR included poverty data disaggregated by age and sex. This analysis showed children and the elderly are disproportionately impacted by poverty, pointing to areas for strengthening policy measures. The VNR also noted that the gender dimension of poverty required further review.



▪ **Reporting Location-Based Vulnerabilities: Leaving No Region Behind**

VNRs should also cover vulnerabilities linked to location and include geographically disaggregated statistics. Geographically isolated and rural populations may suffer deprivations such as lack of access to basic services, including access to ICT infrastructure, and financial exclusion. Local-level data can allow authorities to address location-linked vulnerability.

In this regard, VNRs should document any processes of localisation undertaken by NSOs and monitoring teams. Obtaining indicators at a sub-national level is important in countries with significant regional differences. Collecting data at the local level is also important to ensure inclusion of uncaptured populations in remote locations. Both outcomes reinforce the SDG principle of inclusivity, to “leave no one behind,” in sustainable development.

For this reason, national governments are increasingly making space for sub-national perspectives in their VNRs. Around 70 per cent of VNRs presented in 2020 provide updates on localisation efforts. In 2020 VNRs, some countries presented their experiences on how SDG progress tracking is used at sub-national level. However, governments have also reported challenges around SDG progress monitoring and review

¹⁰⁴ Costa Rica, Voluntary National Review, 2020

¹⁰⁵ Republic of Moldova, Voluntary National Review, 2020 (charts, pgs. 39-40)

at the sub-national level, including awareness of the SDGs, useful indicators, institutional capacities for data collection, and limited involvement of stakeholders in local development.

For example, Kenya's 2020 VNR highlighted the regional disparities in wealth in the country and noted that many Kenyans suffer from multidimensional poverty, particularly in isolated indigenous communities. The government is attempting to address these regional vulnerabilities with social protection policies and enhanced public service delivery at the local level.

However, in many countries data at the level of municipality and other geographical or administrative breakdowns is not readily available for reporting. Although municipalities or local authorities regularly collect administrative data, this data has not fed into many SDG reporting mechanisms. Recently though, some VNRs have reported data-focused efforts to address the rural-urban divide and exclusion linked to location. Some have set up systematic mechanisms to collect data and track progress at a sub-national level. These efforts can inform authorities about locality-related vulnerabilities and these statistics can be reported in VNRs. For instance, the government of Burkina Faso has been building a unique municipal registry of vulnerable people since 2016. Data in the registry allows the government to target vulnerable people in municipalities around the country¹⁰⁶. In India, systematic monitoring of SDG progress at the sub-national level is undertaking the use of indexes of progress. The 'SDG India Index' ranks SDG progress in subnational territories to compare progress across territories and to ensure no territory falls behind on targets¹⁰⁷.

Box 30: Disaggregation by location in Pakistan¹⁰⁸

Pakistan has developed a national SDG Index, which tracks SDG performance across all 17 Goals and, as described in its 2022 VNR, serves as a mid-course correction tool to transform existing policies and plans to achieve SDGs. The index is further disaggregated to the province and regional level to pinpoint where to accelerate SDG implementation. This level of analysis is also useful for sharing lessons on interventions among the regions, particularly for low-performing areas. Datasets are further disaggregated to the district level (140+ districts)—where localization of the SDGs comes into effect. Moreover, sub-national profiles and district dashboards are developed from survey data. For example, the government plotted the progress and improvements of health indicators across districts from the Punjab Health Survey II (see below) to find low-performing areas-- critical for a targeted approach. The result enables policy makers to prioritise and target vulnerable areas for equitable implementation of the SDGs.

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¹⁰⁶ Partners for Review. Voluntary national reviews 2020: A snapshot of trends in SDG reporting. s.l. : United Nations, 2020.

¹⁰⁷ 2020 Voluntary National Review of India

¹⁰⁸ [VNR Lab 14: Data innovations for evidence-based VNRs](#) (chart courtesy of Government of Pakistan) and Pakistan, Voluntary National Review, 2022

Punjab Health Survey II¹⁰⁹

District	Antenatal Care Coverage	Skilled Birth Attendance	Institutional Delivery	Postnatal Care for New born	Postnatal Care for Mother	Geometric Average	Improvement from 2014
Bahawalpur	72	73	67	98	93	79	18
Kasur	67	78	74	97	93	81	18
Bhakkar	89	83	77	94	91	87	17
Rajanpur	72	44	42	96	97	66	16
Attock	94	87	82	97	95	91	15
Layyah	68	69	55	89	93	73	14
RY Khan	61	76	74	89	80	76	14
Mandi Bahauddin	86	75	72	87	95	82	13
Khanewal	92	78	76	96	91	86	13
Okara	79	73	73	93	92	82	13
Sahiwal	96	87	86	94	93	91	12
Muzaffargarh	94	50	48	96	73	69	12
Rawalpindi	96	94	93	96	95	95	10
Bahawalnagar	56	70	65	91	93	73	10
Narowal	97	85	78	75	95	86	10
Lodhran	72	67	63	96	85	76	9
Mianwali	96	80	79	97	94	89	9
DG Khan	77	43	40	84	67	60	9
Pakpattan	85	82	79	87	87	84	8
Vehari	80	75	72	97	94	83	7
Jhang	86	75	74	97	77	81	7
Lahore	96	89	88	97	90	92	6
Punjab	79	79	76	87	84	81	6
Jhelum	94	93	92	94	91	93	6
Gujranwala	76	91	87	94	93	88	5
Gujrat	97	93	91	94	93	94	4
Khushab	90	71	68	97	86	82	4
Chakwal	91	88	85	88	92	89	4
Multan	92	71	69	89	75	79	3
Nankana Sahib	76	88	82	89	92	85	2
Faisalabad	80	77	75	97	91	84	0
TT Singh	45	85	83	88	87	75	-1
Chiniot	77	81	79	96	87	84	-1
Haftabzad	70	79	75	93	95	82	-2
Sheikhpura	54	79	78	84	87	75	-2
Sialkot	45	97	94	94	91	81	-4
Sargodha	62	71	69	75	76	70	-7

▪ **Reporting on Intersecting Vulnerabilities**

To have a more in-depth analysis on the situation of vulnerable groups and the intersection of their characteristics within a country, it has been suggested that VNRs include more analytic content to make them more interesting and relevant to policymakers. Investigation of vulnerable groups is one place to do this because such analyses can expose the complexities of multiple deprivations. In-depth analysis of data on exclusion should be included in VNRs to identify the various ways groups are disadvantaged in national contexts.

Recent VNRs have taken up the challenge and addressed intersecting vulnerabilities using deprivation indexes and other analysis tools. VNRs can highlight findings from these analyses and provide information on the tools used for measuring vulnerabilities. Sharing this information could contribute to the peer-learning aspects of VNRs. These analyses have been done in high- and low-income countries. They shed some light on vulnerable groups in different countries but are also a reminder that leaving no one behind is a universal challenge.

¹⁰⁹ See: <https://p2impact.com/report-punjab-health-survey-ii-2017/>

Box 31: UK Data Picture: Disability poverty¹¹⁰

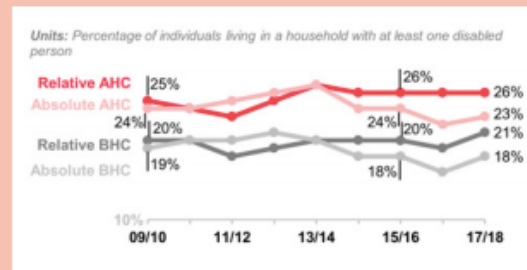
Addressing Goal 1 in its 2019 VNR, the UK noted its commitment to tackling all forms of poverty in all its dimensions and included assessments of absolute and relative poverty for various groups across the UK. The chapter also included policy responses through direct measures and noted that ending poverty is contingent on making progress across many Goals. To measure all forms of poverty, the UK included poverty data on vulnerable groups, including working age individuals, children, children of lone parents, persons with disabilities and pensioners.

The Data Picture: Disability poverty

Coverage: UK

Absolute poverty measures for families with a disabled member have fallen since 2013/14. Relative measures have remained more stable over the same time period.

Percentage of individuals in households where someone is disabled in poverty: 2009/10 to 2017/18



Source: Department for Work and Pensions, HBAI 2017/18

¹¹⁰ United Kingdom of Great Britain and Northern Ireland, Voluntary National Review, 2019 (chart, pg. 30)