

Sustainable Development Goals and the 2020 Round of Censuses

Select Topics in International Censuses¹

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INTRODUCTION

This technical note in the Select Topics in International Censuses (STIC) series provides national statistical offices (NSOs) with information on how to integrate preparations for the 2020 round of censuses with the data gathering requirements established by the 17 Sustainable Development Goals (SDGs) and 169 accompanying targets. The United Nations (U.N.) General Assembly adopted the Agenda for Sustainable Development—the document promulgating the SDGs—on September 25, 2015. The SDGs present a vision for a transformed world in 2030. A world in which all of the SDG targets are met would be free of absolute poverty; more equal, peaceful, just, and inclusive; supportive of human rights, gender equality, and the empowerment of women and girls; and protective of the planet and its resources (General Assembly Resolution 70/1 2015). The SDG quantifiable targets defining this transformed world were agreed upon on March 11, 2016.

The 2020 and 2030 census rounds will take place at the beginning and the end of the SDG implementation period respectively. Progress toward meeting the targets will be tracked using 232 indicators. The U.N. member states have committed to developing national indicators in line with the global aspirations captured by the SDGs.

Figure 1 shows an example of the goal-target-indicator hierarchy that will be used to evaluate the post-2015

development agenda. The goals are an aspirational statement of how the world should look in 2030. Targets establish the terms of measurement for achieving that vision. Indicators provide the specific metrics. The data framework established and implemented by NSOs will be used to evaluate progress made toward the vision of the world put forth by the SDGs in 2030.

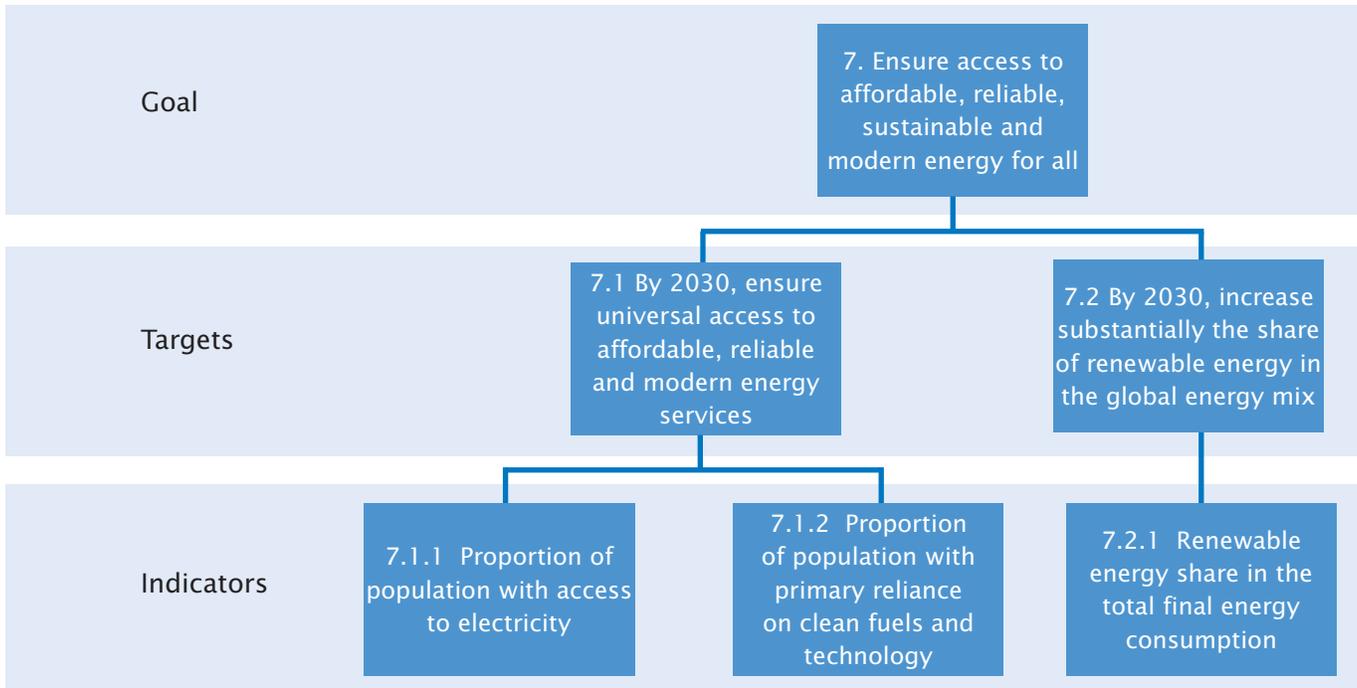
This STIC will link each census-related indicator with the relevant section in Principles and Recommendations for Population and Housing Censuses (United Nations 2015). Additional references that contain information on model questions and international coding standards are also included.

ROLE OF CENSUSES IN SDG MONITORING AND EVALUATION

The quantity and breadth of data required to monitor and evaluate the SDGs is daunting, presenting a substantial challenge to the global data community. The topics covered by the SDGs will be evaluated using data sources derived from diverse environmental and socioeconomic monitoring instruments. Demographic data are especially important for Goals 1, 3, 4, 5, and 6 and thus will be monitored in part through household-based censuses and surveys. Many additional SDG targets also use demographic data for denominators.

¹ This technical note is one in a series of “Select Topics in International Censuses” exploring matters of interest to the international statistical community. The U.S. Census Bureau helps countries improve their national statistical systems by engaging in capacity building to enhance statistical competencies in sustainable ways.

Figure 1.
An Example of the SDG Hierarchy with Goal 7



Source: United Nations Statistical Commission, Economic and Social Council, 2016.

Helleringer (2015) notes that many demographic indicators are best monitored through civil registration and vital statistics (CRVS) systems with complete or nearly complete coverage. However, many CRVS systems throughout Africa, South, and Southeastern Asia capture less than half of births and deaths (United Nations Statistics Division 2014). In these countries, censuses and household surveys will play a prominent role in providing the demographic surveillance necessary for SDG monitoring and evaluation. Evaluating the effects of the Millennium Development Goals (MDG) on differentiated demographic groups proved difficult because monitoring instruments lacked the appropriate categories and sample sizes needed to capture smaller groups. In order to meet the standards for disaggregation established in the 2030 agenda, the Sustainable Development Solutions Network (2015) recommends data collection that allows for analysis of the following:

- Sex and gender
- Age
- Income quintiles/deciles
- Location
- Disability
- Ethnicity and indigenous status
- Economic activity
- Migrant status

In some countries, the 2020 and 2030 rounds of censuses may offer one of the only data sources for small area and group cross tabulations during the SDG implementation period.

Metadata for SDG Targets

Metadata are critical when managing any data driven project. This is especially true for the SDGs, with hundreds of actors producing data at the global, regional, and local levels. Metadata ensure that data producers define and measure the targets consistently. NSOs should incorporate the standards established in the metadata as part of the planning process for statistical data collection. It is easier and more cost effective to meet the standards described in the metadata through proactive planning as opposed to retroactive post-processing.

The U.N. Statistical Commission maintains a Web site to disseminate metadata for each SDG target. The metadata include concepts and definitions, methodologies, and data sources. The site is available at <<https://unstats.un.org/sdgs/metadata/>>. At the time of writing, this list was incomplete with some census-related indicators lacking metadata. It is expected to be updated continually as target metadata are finalized.

In addition to this resource, two organizations supported by the United Nations have compiled toolkits to aid NSOs with their SDG planning.

Table 1.
Resources for SDG Planning, Measurement, and Reporting

Organization	Web site	Where to find
Global Partnership for Sustainable Data Development	www.data4sdgs.org/toolbox	Modules to aid in the creation, implementation, and reporting of SDG-related data
Sustainable Development Knowledge Platform	sustainabledevelopment.un.org/topics/indicators	Reports and framework documents

Source: U.S. Census Bureau.

Planning for SDG Baseline and Measurement and Evaluation

Evaluation of the MDGs was challenging because of the lack of baseline statistics and standardized indicators. Thus, national strategies to collect and publish data that blend a variety of existing and sometimes new data sources, should be developed. NSOs can leverage their central role within the national statistical system when seeking the resources necessary to meet SDG data needs, from either internal or donor sources.

The time to carry out this planning is now. The SDG agenda runs through 2030. Depending on census and major household survey schedules, there may only be one or two opportunities to capture key indicator data. The template provided in this STIC is an example of the type of exercise that each NSO should conduct. Creation of an SDG data portfolio should not be a retroactive exercise, in which data that have already been collected are used to monitor the SDGs.

A Guide to Measuring SDG Indicators

Table 2 provides guidance on how to structure census questions pertinent to the SDG targets.² It is limited to those goals with a substantial demographic component. The section or sections pertaining to the indicator in Principles and Recommendations (United Nations Statistical Division 2015) are highlighted, as well as additional notes, which include concept definitions from relevant international organizations.

CONCLUSION

The comprehensive nature of the SDGs makes their measurement a challenging task for any country's national statistical system. It requires careful planning and collaboration to harness data produced across many sectors,

² Note that refinement of the SDG indicator list is ongoing. The numbering of the indicators included in the table was validated against the list released after the 48th session of the United Nations Statistical Commission held in March 2017.

generate the metrics used in the indicators, and avoid duplication of effort. This technical note provides guidance to NSOs for achieving this with respect to census and household survey data.

REFERENCES

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Table 2.

A Guide to Measuring Census-Related SDG Indicators

H-Household
P-Population

A-Directly measured additional topic
DA-Derived additional topic
C-Directly measured core topic
DC-Derived core topic

Target	Indicator	P&R topic	P&R section	Universe of data source	Notes
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)	A		P	
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 1.2.2 Proportion of men, women, and children of all ages living in poverty in all its dimensions according to national definitions	A A	4.382-4.386	P P	Poverty indicators are frequently included on census but are better measured using household surveys (e.g., living standards measurement study). Assets recorded during census can be used to create a wealth index, capturing relative poverty. It is difficult to measure absolute poverty defined as income below a certain level.
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	A	Administrative records are most accurate. Year, month and day is preferred over direct question of age at respondent's last birthday. Further recommendations for accuracy can be found in 4.155 - 4.159.	P	Coverage can be modeled for safety net programs with eligibility determined based on demographic characteristics (e.g., age, disability, etc.).
1.4 By 2030, ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance	1.4.1 Proportion of population living in households with access to basic services	C	Table 4 in P&R lists housing-related census topics and whether the topic is enumerated at the level of the housing unit, collective living quarter, building or household.	H	Data collected for housing unit, proportion of population can be modeled. Individual level data may be estimated from household responses.

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A-Directly measured additional topic C-Directly measured core census topic DA-Derived additional topic DC-Derived core census topic H-Household P-Population

Target	Indicator	P&R topic	P&R section	Universe of data source	Notes
	1.4.2 Proportion of total adult population with secure tenure rights to land, with legally recognized documentation and who perceive their rights to land as secure, by sex and by type of tenure	DA	4.556-4.559	H	Some censuses capture tenure status of housing unit. Tenure status of the respondent household may or may not match tenure of housing unit.
Goal 3. Ensure healthy lives and promote well-being for all at all ages					
3.1 By 2030, reduce the global maternal mortality ratio to less than 70 per 100,000 live births	3.1.1 Maternal mortality ratio	A	4.252-4.254	P	Model filter questions for maternal mortality are given in P&R section.
3.2 By 2030, end preventable deaths of newborns and children under 5 years of age, with all countries aiming to reduce neonatal mortality to at least as low as 1.2 per 1,000 live births and under-5 mortality to at least as low as 25 per 1,000 live births	3.2.1 Under-five mortality rate	DA	Refer to 4.216-4.236 for indirect methods and model questions on children ever born alive/living.	P	Carefully designed, large sample household surveys may produce better results.
			Refer to 4.250 for direct methods based on household deaths.		
3.7 By 2030, ensure universal access to sexual and reproductive health-care services, including for family planning, information and education, and the integration of reproductive health into national strategies and programmes	3.7.2 Adolescent birth rate (aged 10-14 years; aged 15-19 years) per 1,000 women in that age group	C	4.226	P	Age/date at first union and age at first birth are recommended in countries with high adolescent birth rates and child marriage.
Goal 4. Ensure inclusive and equitable education and promote lifelong learning opportunities for all					
4.1 By 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes	4.1.1 Proportion of children and young people: (a) in grades 2/3; (b) at the end of primary; and (c) at the end of lower secondary achieving at least a minimum proficiency level in (i) reading and (ii) mathematics, by sex	C	ISCED-P program levels given in 4.271. ISCED-P attainment levels given in 4.276.	P	Minimum proficiency in reading is measurable if literacy is asked about all individuals. Model categories for attendance (in grades 2/3) and attainment (at end of primary/at end of lower secondary) are provided.

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4.2 By 2030, ensure that all girls and boys have access to quality early childhood development, care and pre-primary education so that they are ready for primary education	4.2.2 Participation rate in organized learning (one year before the official primary entry age), by sex	C	ISCED-P program levels given in 4.271. Level 0 regarding attainment ISCED-A is defined in 4.276-4.277.	P	No linkages should be assumed between attendance, attainment and literacy. Any difference between ISCED level classification and national classifications should be explained in census publications.
4.3 By 2030, ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university	4.3.1 Participation rate of youth and adults in formal and non-formal education and training in the previous 12 months, by sex	C	4.265-4.271	P	Attendance as defined in P&R measures this indicator.
4.5 By 2030, eliminate gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities, indigenous peoples and children in vulnerable situations	4.5.1 Parity indices (female/male, rural/urban, bottom/top wealth quintile and others such as disability status, indigenous peoples and conflict-affected, as data become available) for all education indicators on this list that can be disaggregated	DC	Refer to 4.265-4.271 and relevant disaggregation sections.	P	Small area cross tabulations can be produced for many of the parity indices based on census data.
4.6 By 2030, ensure that all youth and a substantial proportion of adults, both men and women, achieve literacy and numeracy	4.6.1 Percentage of population in a given age group achieving at least a fixed level of proficiency in functional (a) literacy and (b) numeracy skills, by sex	C	4.258-4.264	P	Concept of literacy is defined in 4.258. Tabulate for persons above and below 15 to allow for international comparison. Direct assessment of literacy during census enumeration is impractical. Self-assessment questions can be administered with census to provide literacy rates for small areas.
Goal 5. Achieve gender equality and empower all women and girls					
5.3 Eliminate all harmful practices, such as child, early and forced marriage and female genital mutilation	5.3.1 Proportion of women aged 20-24 years who were married or in a union before age 15 and before age 18	C	4.163-4.171	P	Suggested responses for marriage questions given in 4.164.
5.5 Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic and public life	5.5.2 Proportion of women in managerial positions	C	4.352	P	Refer to ISCO coding to ensure data are comparable.
5.b Enhance the use of enabling technology, in particular information and communications technology, to promote the empowerment of women	5.b.1 Proportion of individuals who own a mobile telephone, by sex	C	4.564	H	Mobiles are typically included in household assets, providing a measure of access at the household level but not direct ownership. Some censuses ask directly whether each household member uses telecommunications assets.

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Goal 6. Ensure availability and sustainable management of water and sanitation for all					
6.1 By 2030, achieve universal and equitable access to safe and affordable drinking water for all	6.1.1 Proportion of population using safely managed drinking water services	C	4.494-4.495	H	Data collected for housing unit, but proportion of population can be modeled. Individual level data may be estimated from household responses.
6.2 By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations	6.2.1 Proportion of population using safely managed sanitation services, including a hand-washing facility with soap and water	C	4.498-4.500	H	Toilet and waste disposal collected at housing unit level. Individual level data may be estimated from household responses.
Goal 7. Ensure access to affordable, reliable, sustainable and modern energy for all					
7.1 By 2030, ensure universal access to affordable, reliable and modern energy services	7.1.1 Proportion of population with access to electricity	C	4.511-4.512	H	Partially captured as part of responses to lighting fuel used at household level. Individual level data may be estimated from household responses.
	7.1.2 Proportion of population with primary reliance on clean fuels and technology	C	4.510	H	Partially captured as part of responses to cooking fuel used at household level. Individual level data may be estimated from household responses.
Goal 8. Promote sustained, inclusive and sustainable growth, full and productive employment and decent work for all					
8.5 By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value	8.5.2 Unemployment rate, by sex, age and persons with disabilities	C	Concept of labor force status is discussed in 4.307-4.311.	P	Census can provide for full disaggregation by disability status. Many types of on-the-job training are included in the list of persons classified as employed.
			Unemployment as component of labor force status is discussed in 4.321-4.322.		
			Disability status is discussed in 4.193-4.196.		

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8.6 By 2020, substantially reduce the proportion of youth not in employment, education or training	8.6.1 Proportion of youth (aged 15-24 years) not in education, employment or training	C	Employed person classification found in 4.316.	P	Census can provide for full disaggregation of employment status by age.
			Refer to Figure 4 in P&R to define those outside the labor force.		
			School attendance is defined in 4.265.		
8.7 Take immediate and effective measures to eradicate forced labour, end modern slavery and human trafficking and secure the prohibition and elimination of the worst forms of child labour, including recruitment and use of child soldiers, and by 2025 end child labour in all its forms	8.7.1 Proportion and number of children aged 5-17 years engaged in child labour, by sex and age	DC	Can be derived from age and employment questions.	P	Refer to ILO for age criteria and distinction between harmful and positive child labor. http://ilo.org/ipec/facts/lang-en/index.htm
8.9 By 2030, devise and implement policies to promote sustainable tourism that creates jobs and promotes local culture and products	8.9.2 Number of jobs in tourism industries as a proportion of total jobs and growth rate of jobs, by sex	DC	4.356-4.359	P	Compile information on industry according to ISIC. Correspondence should be established when coded using national standards.
Goal 9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation					
9.2 Promote inclusive and sustainable industrialization and, by 2030, significantly raise industry's share of employment and gross domestic product, in line with national circumstances, and double its share in least developed countries	9.2.2 Manufacturing employment as a proportion of total employment	C	4.356-4.359	P	See note for 8.9 above.
9.5 Enhance scientific research, upgrade the technological capabilities of industrial sectors in all countries, in particular developing countries, including, by 2030, encouraging innovation and substantially increasing the number of research and development workers per 1 million people and public and private research and development spending	9.5.2 Researchers (in full-time equivalent) per million inhabitants	C	4.352-4.355	P	Research related occupations can be captured as part of responses to occupation.

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Goal 10. Reduce inequality within and among countries					
10.2 By 2030, empower and promote the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status	10.2.1 Proportion of people living below 50 per cent of median income, by age, sex and persons with disabilities	A	4.382-4.386	P	While some countries directly measure income on the census, it is not recommended especially in countries where salaried wage work is uncommon.
Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable					
11.1 By 2030, ensure access for all to adequate, safe and affordable housing and basic services and upgrade slums	11.1.1 Proportion of urban population living in slums, informal settlements or inadequate housing	Outer walls: C Floor and roof: A Number of rooms: C Water supply: C Drinking water: C Toilet: C Sewage: C Tenure: C	Outer walls: 4.545-4.547 Floor and roof: 4.548 Number of rooms: 4.482-4.484 Water supply: 4.490-4.493 Drinking water: 4.494-4.495 Toilet: 4.496-4.499 Sewage: 4.500 Tenure: 4.556-4.559	H	UN Habitat defines a slum as a household that lacks one or more of the following: 1. Durable housing of a permanent nature that protects against extreme climate conditions. 2. Sufficient living space which means not more than three people sharing the same room. 3. Easy access to safe water in sufficient amounts at an affordable price. 4. Access to adequate sanitation in the form of a private or public toilet shared by a reasonable number of people. 5. Security of tenure that prevents forced evictions.
					http://mirror.unhabitat.org/documents/media_centre/sowcr2006/SOWCR%205.pdf
Goal 16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels					
16.7 Ensure responsive, inclusive, participatory and representative decision-making at all levels	16.7.1 Proportions of positions (by sex, age, persons with disabilities and population groups) in public institutions (national and local legislatures, public service, and judiciary) compared to national distributions	C	4.356-4.359	P	Can be calculated using industry code for government/public institutions.
16.9 By 2030, provide legal identity for all, including birth registration	16.9.1 Proportion of children under 5 years of age whose births have been registered with a civil authority, by age	A	Not in P&R	P	Possession of national identification is included on some censuses.

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Goal 17. Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development					
17.6 Enhance North-South, South-South and triangular regional and international cooperation on and access to science, technology and innovation and enhance knowledge-sharing on mutually agreed terms, including through improved coordination among existing mechanisms, in particular at the United Nations level, and through a global technology facilitation mechanism	17.6.2 Fixed Internet broadband subscriptions per 100 inhabitants, by speed	C	4.571	H	Information communication and technology assets are recorded at the household level, possibly including broadband access.

Source: U.S. Census Bureau, Target and Indicator Columns from U.N. Statistical Commission, Economic and Social Council.

ABBREVIATIONS

CRVS	Civil registration and vital statistics
ISCED-P	International Standard Classification of Education (Programs)
ISCED-A	International Standard Classification of Education (Attainment)
ISCO	International Standard Classification of Occupations
ILO	International Labor Organization
ISIC	International Standard Industrial Classification of All Economic Activities
MDG	Millennium Development Goal
M&E	Measurement and evaluation
NSO	National statistical organization
SDG	Sustainable Development Goal