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## ECLAC Online Regional Training Workshop on Measuring SDG Indicators through Population and Housing Census data

22 to 30 September 2020

Concept Note

### 1. Background

In 2015, the 193 Member States of the United Nations approved the 2030 Agenda for Sustainable Development, as a roadmap to a new development paradigm in which people, the planet, prosperity, peace and partnerships take the leading role. The 2030 Agenda has 17 Sustainable Development Goals (SDGs), replacing the Millennium Development Goals (MDGs) and guiding the work of the United Nations through 2030. The 2030 Agenda puts people at the centre, has an approach of people's rights and seeks global sustainable development within planetary boundaries. It is universal as it seeks a renewed alliance where all countries participate equally. It is indivisible as it integrates the three pillars of sustainable development—economic, social and environmental—thus presenting a holistic vision of development. Poverty eradication and inequality reduction, priorities for Latin America and the Caribbean, are also central themes in this agenda that seeks to "leave no one behind."

Through these 17 SDGs with their 169 targets and 231 indicators, the Member States of the United Nations have firmly stated that this agenda is universal and deeply transformative.<sup>1</sup> With this agenda, old paradigms are left behind where some countries donate while others receive conditional aid. This agenda also seeks to express the principle of common but differentiated responsibilities and build a true partnership for development where all countries participate.<sup>2</sup>

CELADE, the Population Division of ECLAC, conducted a process of review and analysis on the indicators of the 2030 Agenda for Sustainable Development, the Sustainable Development Goals (SDGs) and the Montevideo Consensus on Population and Development, which constitutes the roadmap for population

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<sup>1</sup> The Global Framework of SDG indicators was adopted by the United Nations General Assembly in 2015 in resolution A/RES/71/313. This framework was revised in 2016 having a definitive list of 230 indicators <https://undocs.org/en/E/CN.3/2016/2/Rev.1>. In turn, this framework has been reviewed since then and it is expected to approve several changes in the 51st Session of the Statistics Commission to be held this year. For more detail of these changes, check the following link <https://unstats.un.org/sdgs/iaeg-sdgs/2020-comprev/UNSC-proposal/>

<sup>2</sup> <https://www.cepal.org/es/temas/agenda-2030-desarrollo-sostenible/objetivos-desarrollo-sostenible-ods>

and development in Latin America and the Caribbean for the coming years. Together with the countries of the region, an assessment was carried out of the potential of the censuses to measure these indicators in the 2020 census round.<sup>3</sup>

Censuses may allow direct or complementary indicators to be computed from the list defined for the 2030 Agenda. Due to regional heterogeneity, in some countries censuses will be the only available source while the survey systems and especially continuous administrative records are strengthened. Also, censuses may allow for the disaggregation of the indicators, as defined in SDG 17.18, particularly migratory status, indigenous peoples, afro-descendant populations and people with disabilities, with the additional advantage of having this information at smaller territorial scales. Even though surveys offer in depth information for specific groups, the breakdown from an intersectional perspective (for example, to visualize gender, ethnic, generational and territorial inequalities simultaneously) is usually only feasible with censuses, due to their universal character.

In addition, censuses are used to establish baselines and update sampling frames for household surveys. Finally, census information is used as base for preparing population estimates and projections, making it possible to obtain the denominators for many of the SGD indicators. This will be the case, for example, for some indicators of mortality and fertility.

The importance of population censuses within the national statistical system and its contribution to policy making and planning is not new, however, it acquires even greater relevance in the context of the 2030 Agenda. In this way, access and accessibility to information for accountability go hand in hand with the production of data. In this sense, CELADE through its statistical software REDATAM with its online processing module, has contributed significantly to widening public access to the processing and analysis of population censuses, agricultural censuses, vital records, household surveys, education surveys, among others. National Statistical Offices of Latin America and the Caribbean and from other regions of the world have taken advantage of this tool to make their databases available to all users for online processing ([www.redatam.org](http://www.redatam.org)).

REDATAM has key characteristics for managing census microdata, among which the following stand out: i) a hierarchical data structure, allowing very fast processing; ii) a friendly interface, which allows easy programming of tabulations and indicators; iii) the confidentiality of the data, since no individual records are identified; and, iv) the feasibility of carrying out demographic processes and analysis

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<sup>3</sup> “Los Censos de la ronda 2020: desafíos ante la Agenda 2030 para el Desarrollo Sostenible, los ODS y el Consenso de Montevideo sobre Población y Desarrollo” Publicación de las Naciones Unidas, CEPAL. Serie #120, LC/TS 2017/93 Spanish edition.

(such as the construction of internal migration matrices and indicators, daily commuting analyses, and construction of mortality and fertility indicators).

Lastly, the need for strengthening of national capacities for the production and analysis of census information is evident and is in fact a frequent demand of the countries in the region. This workshop seeks to contribute to this broad goal and the following more specific objectives:

- i) Strengthening of technical capacity for the processing and mapping of disaggregated SDG indicators based on censuses, through the use of REDATAM;
- ii) Processing of selected indicators for monitoring the SDG goals, including their disaggregation (such as urban and rural areas, age groups, sex, disability, indigenous peoples, among others); and
- iii) Disaggregation of indicators by vulnerable groups, since the 2030 Agenda is emphatic in its premise of “leaving no one behind” and, also, because in the current context of the COVID-19 pandemic, the identification and characterization of these specific groups become urgent.

This activity is part of the “UNDA10 Program on Statistics and Data” project that is carried out in conjunction with the United Nations Statistics Division (UNSD). Related to this project, the draft report “Measuring SDG Indicators through Population and Housing Census and Civil Registration Data” will be presented during the workshop.

## 2. Methodology

Given the COVID-19 health crisis we are experiencing this year, we are organizing a virtual workshop using a web platform such as MS Teams, with a change in the teaching methodology as well as in the length of the classes. The classes will be presented live by modules of a maximum of three hours per day, for seven days, therefore, participants will have to activate the web platform every day at a certain hour to participate in the class. Afterwards, each participant will have to practice individually. During these periods of individual practice, you will be able to request support from the facilitators.

The workshop will be held from **Tuesday 22 to Wednesday 30 of September, from 9:30 to 12:30 hrs. Eastern Caribbean time** including a coffee break. Remote support from the facilitators will be available every afternoon from 14:30 to 17:00 hrs. Eastern Caribbean time.

The workshop will be evaluated through a final project that participants will develop through the week and will present in the final day of classes. It is anticipated that in addition to the three hours of virtual classes and the project, exercises will be set on each of the first five days of the training to which participants will need to devote an hour and a half each day.

### 3. Software

A link will be sent along with the course access key to download all the programs, manuals and databases that will be used during the workshop. Each student is responsible for installing and testing such programs prior to the course. Two days before starting day, we will test the connectivity and setup with all participants.

### 4. SDG indicators - introduction

The SDGs are a planning and monitoring tool for countries, both nationally and locally. Thanks to their long-term vision, they will provide support for each country on its path towards sustained, inclusive development, in harmony with the environment, through public policies and instruments of planning, budgeting, monitoring and evaluation. The proposed indicators contribute to monitoring progress with respect to the goals defined for each of the 17 SDGs, which, as can be seen in the following figure, cover a variety of topics.

#### 17 SUSTAINABLE DEVELOPMENT GOALS



In terms of using population and housing censuses for the calculation of indicators, it has its advantages and disadvantages. The training workshop will consider the potential of censuses to measure indicators at a national level as well as disaggregated both to lower geographic levels and for vulnerable population subgroups.

The SDG indicators impose many challenges on statistical production for the countries, making evident not only the need to strengthen traditional data sources but also to rethink them in light of new

demands. Hence, the indicators have been organized into three levels (“Tiers”) according to the availability of the calculation methodology (metadata) and availability of data. In this sense, those indicators that have both methodology and data are grouped into the “Tier 1” category; “Tier 2” indicators are those for which methodologies exist, but not all countries have the data sources; and those classified as “Tier 3” do not yet have metadata and therefore are not feasible to calculate.

Annex 1 presents a list of 29 possible indicators to estimate directly or indirectly with population and housing censuses, which have been selected to work with during this course and will be processed using REDATAM. Two studies were used as a reference which included an exhaustive review of the indicators and their respective metadata<sup>4</sup>:

1. *“Measuring SDG Indicators through Population and Housing Census and Civil Registration Data”*, draft version, United Nations Statistics Division (UNSD) (2019).
2. *“Los Censos de la ronda 2020: desafíos ante la Agenda 2030 para el Desarrollo Sostenible, los ODS y el Consenso de Montevideo sobre Población y Desarrollo”*, United Nations Economic Commission for Latin America and the Caribbean (ECLAC), Series No. 120, LC/TS 2017/93.

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<sup>4</sup> <https://unstats.un.org/sdgs/metadata/>

## Agenda

### Module 1: Introduction to REDATAM, Databases and Basic Tabulations

- 09:30 – 09:45 Opening remarks (CELADE, UN ECLAC and ECLAC POS)
- 09:45 – 10:00 Opening remarks (United Nations Statistics Division UNSD)
- 10:00 – 10:30 Technical report UNSD “Measuring SDG Indicators through Population and Housing Census and Civil Registration Data”
- 10:30 – 11:00 Introduction to REDATAM, files handled in REDATAM (project, dictionary, syntax, styles).  
Examine a census database. Simple tables FREQUENCY, AVERAGE, AREALIST
- 11:00 – 11:15 Coffee break
- 11:15 – 12:30 Basic programming in REDATAM, Tables, Using FILTERS and AREABREAK  
Exercise:  
SDG Indicator 6.1.1 Proportion of population using safely managed drinking water services.  
SDG Indicator 6.2.1 Proportion of population using safely managed sanitation services, including a hand-washing facility with soap and water
- 14:30-17:00 Individual daily exercise:  
SDG Indicator 7.1.1 Proportion of population with access to electricity  
SDG Indicator 7.1.2 Proportion of population with primary reliance on clean fuels and technology.

### Module 2: Calculation of SDG indicators disaggregated by geography

- 09:30 – 11:00 Command Editor: Basic command  
Using intermediate variables for the creation of indicators  
Function COUNT  
Create indicator at geographic levels (calculate percentages using numerator and denominator definition)  
Using Filters
- 11:00 – 11:15 Coffee break
- 11:15 – 12:30 Geographic selections  
Definition of age groups, urban-rural areas  
Geographic tables with AREALIST  
Exercise:  
SDG Indicator 17.8.1 Proportion of people using the Internet
- 14:30-17:00 Individual daily exercise:  
SDG Indicator 5.b.1 Proportion of people who use/own mobile phones, by sex

### **Module 3: Calculation of SDG indicators and possible disaggregation**

- 09:30 – 10:00 UNSD presentation on SDG indicators disaggregation
- 10:00 – 11:00 Command editor: creating indicators using intermediate variables  
Function RECODE  
Function COUNT  
Using Filers  
Output table AREALIST
- 11:00 – 11:15 Coffee break
- 11:15 – 12:30 Command editor: creating indicators  
Exercise:  
SDG indicator 1.4.1 Proportion of population living in households with access to basic services
- 15:00-18:00 Individual daily exercise:  
SDG indicator 8.6.1 Proportion of youth (aged 15-24 years) not in education, employment or training

### **Module 4: Calculation of SDG indicators and mapping**

- 09:30 – 11:00 Command editor: creating indicators using intermediate variables  
Function RECODE  
Function SWITCH  
Tables AREALIST
- 11:00 – 11:15 Coffee break
- 11:15 – 12:30 Export tables to QGIS, create maps in QGIS  
Exercise:  
COVID-19 Indicator - Percentage of elderly (over 65 years) by sex and age groups at block level or similar.
- 14:30-17:00 Individual daily exercise  
SDG indicator 3.c.1 Health worker density and distribution

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## Module 5: Create variables to define type of household

- 09:30 – 11:00 Command editor: create variable using SWITCH, SAVE, COUNT, RECODE  
Use Filters
- 11:00 – 11:15 Coffee break
- 11:15 – 12:30 Create indicators and export for mapping, Load in QGIS  
Exercise:  
COVID-19 Indicator: Determine elderly (60+) living alone in urban areas.
- 14:30-17:00 Individual daily exercise  
COVID-19 Indicator: Determine elderly (60+) living only with other elderly in urban areas.

## Module 6: Create SDG indicators

- 09:30 – 11:00 Command editor: create variable using SWITCH, SAVE, COUNT, RECODE  
Use Filters
- 11:00 – 11:15 Coffee break
- 11:15 – 12:30 Create indicators and export for mapping, Load in QGIS  
Exercise:  
SDG indicator 3.7.2 Adolescent birth rate (aged 10-14 years; aged 15-19 years) per 1,000 women in that age group
- 12:00 – 12:30 Final project review
- 14:30-17:00 Individual daily exercise  
Final project preparation

## Module 7: Final exercise presentation and closure

- 09:30 – 11:00 UNSD final recommendations in the use of census data for SDG indicators creation
- 11:00 – 12:00 Final project presentation
- 11:00 – 11:15 Coffee break
- 11:15 – 12:05 Final project presentation
- 12:05 – 12:15 Evaluation survey
- 12:15 – 12:30 Closing ceremony

## ANNEX 1. SDG indicators potentially measured using data from population and housing censuses

No.	Indicator	HOUSING/ICT - Name of Indicator
1	6.1.1	Proportion of population using safely managed drinking water services.
2	7.1.1	Proportion of population with access to electricity
3	7.1.2	Proportion of population with primary reliance on clean fuels and technology
4	6.2.1	Proportion of population using (a) safely managed sanitation services and (b) a hand-washing facility with soap and water
5	11.6.1	Proportion of municipal solid waste collected and managed in controlled facilities out of total municipal waste generated, by cities
6	9.1.1	Proportion of the rural population who live within 2 km of an all-season road
7	11.1.1	Proportion of urban population living in slums, informal settlements or inadequate housing
8	17.8.1	Proportion of individuals using the Internet
9	5.b.1	Proportion of individuals who own a mobile telephone, by sex
No.	Indicator	BASIC SERVICES/SOCIAL PROTECTION - Name of Indicator
10	1.4.1	Proportion of population living in households with access to basic services
11	3.8.1	Coverage of essential health services
12	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, new-borns, work-injury victims and the poor and the vulnerable
No.	Indicator	EDUCATION - Name of Indicator
13	4.2.2	Participation rate in organized learning (one year before the official primary entry age), by sex
14	4.3.1	Participation rate of youth and adults in formal and non-formal education and training in the previous 12 months, by sex
No.	Indicator	EMPLOYMENT - Name of Indicator

15	8.5.2	Unemployment rate, by sex, age and persons with disabilities
16	9.2.2	Manufacturing employment as a proportion of total employment
17	9.5.2	Researchers (in full-time equivalent) per million inhabitants
18	3.c.1	Health worker density and distribution
19	8.3.1	Proportion of informal employment in total employment, by sector and sex
20	8.7.1	Proportion and number of children aged 5–17 years engaged in child labour, by sex and age
21	8.6.1	Proportion of youth (aged 15–24 years) not in education, employment or training
22	4.c.1	Proportion of teachers with the minimum required qualifications, by education level
<b>No.</b>	<b>Indicator</b>	<b>FERTILITY - Name of Indicator</b>
23	3.7.2	Adolescent birth rate (aged 10–14 years; aged 15–19 years) per 1,000 women in that age group
24	16.9.1	Proportion of children under 5 years of age whose births have been registered with a civil authority, by age
<b>No.</b>	<b>Indicator</b>	<b>MORTALITY - Name of Indicator</b>
25	3.2.1	Under-5 mortality rate
26	3.1.1	Maternal mortality ratio
<b>No.</b>	<b>Indicator</b>	<b>POVERTY - Name of Indicator</b>
27	1.1.1	Proportion of the population living below the international poverty line by sex, age, employment status and geographic location (urban/rural)
28	1.2.1	Proportion of population living below the national poverty line, by sex and age
<b>No.</b>	<b>Indicator</b>	<b>INEQUALITY - Name of Indicator</b>
29	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