FS 1.3 OLAS Household Survey Data Set

The Water and Sanitation Observatory for Latin America and the Caribbean (OLAS) is a digital platform that provides reliable, comparable, timely and consistent information related to the water and sanitation sectors in Latin America and the Caribbean (LAC). To this end, the OLAS has created the OLAS Household Survey data set using data from national household surveys throughout the region. The objective of the data set is to serve as a set of water and sanitation indicators with uniform definitions for countries in LAC, allowing for more coherent comparison across countries. This fact sheet describes sectoral data issues with respect to water and sanitation access, benefits of the OLAS Household Survey data set, and its limitations.

Benefits of the OLAS Household Survey data set

Most countries throughout LAC carry out household surveys which they use to generate national level information on water and sanitation access. The questions in these surveys and the resulting national metrics vary between countries, making it difficult to directly compare information. For example, some country-level metrics focus on public water and sewer network access, while others look at access to improved water sources or sanitation facilities. Some countries do not publish the methodology behind their metrics, making it difficult to assess if indicators are comparable. These variations in definitions and methodology make metrics incomparable throughout the region.

The OLAS Household Survey data set uses harmonized household survey data from 22 countries in LAC to produce indicators, using a consistent definition across countries to generate a comparable data set. Our harmonized strategy allows for a more comparable data set, although variation in the survey questions and answer options between countries creates some exceptions, which will be discussed in this fact sheet.

Countries often generate national metrics broken down by various dimensions such as rural/urban, city size, and income, but the dimensions vary from country to country. As a result, a comparison between countries broken down by a specific dimension may require significant processing of microdata by researchers. The OLAS Household Survey data set generates indicators that are available at the national level and disaggregated by scope (rural vs. urban), per capita income quintile, and gender of the head of household, allowing users to gain valuable insights to inequities in water access throughout the region.

Additionally, the OLAS Household Survey data set is generated using microdata published by countries themselves, making countries through-out LAC active participants in its creation. As a result, the data set reflects the thoroughness of country-level data collection efforts with respect to water and sanitation access.

The data in the OLAS Household Survey data set serves as a compliment to the data generated by the WHO/UNICEF Joint Monitoring Programme, the entity charged with measuring progress towards Sustainable Development Goals 6.1 and 6.2 on water sanitation and hygiene access rates. This data delves into the elements of water access and sanitation as permitted by the national household surveys in a way that is both transparent and reproducible.

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Data Sources

The OLAS Household Survey data set is generated from national household survey microdata produced by countries throughout the region. The below table contains the countries, source survey and survey years included in the currently available data. The data set currently has one to two years' worth of data per country, with current OLAS efforts focusing on expanding and automating its production to provide a richer picture of trends in water and sanitation access over time.

Country	Years	Survey
Argentina	2018, 2020	Encuesta Permanente de Hogares
Brazil	2019	Pesquisa Nacional por Amostra de Domicílios Contínua
Bolivia	2018, 2020	Encuesta de Hogares
Chile	2017, 2020	Encuesta de Caracterización Socioeconómica Nacional
Colombia	2018, 2020	Gran Encuesta Integrada de Hogares
Costa Rica	2018, 2020	Encuesta Nacional de Hogares
Dominican Republic	2018, 2020	Encuesta Nacional Continua de Fuerza de Trabajo
Ecuador	2017, 2020	Encuesta Nacional de Empleo, Desempleo y Subempleo
El Salvador	2018, 2020	Encuesta de Hogares de Propósitos Múltiples
Guatemala	2018,2019	Encuesta Nacional de Empleo e Ingresos
Haiti	2016	Demographic and Health Survey
Honduras	2018	Encuesta Permanente de Hogares de Propósitos Múltiples
Jamaica	2015, 2018	Survey of living Conditions
Mexico	2018, 2020	Encuesta Nacional de Ingreso y Gasto de los Hogares
Nicaragua	2014	Encuesta Nacional de Hogares sobre Medición de Nivel de Vidas
Panama	2018	Encuesta de Propósitos Múltiples
Paraguay	2017, 2020	Encuesta Permanente de Hogares Continua
Peru	2018, 2020	Encuesta Nacional de Hogares sobre Condiciones de Vida y Pobreza
Suriname	2017	Survey of Living Conditions
Trinidad and Tobago	2015	Continuous Sample Survey of Population
Uruguay	2018	Encuesta Continua de Hogares
Venezuela	2019	Encuesta Nacional de Condiciones de Vida

Table 1: Microdata sources for the OLAS Household Survey data set [1].

Data Limitations

The task of harmonizing information from different surveys presents several obstacles. The representativity, questions, and response options within each survey vary significantly, requiring in-depth analysis of each survey to identify which variables can be created from a given survey, the strategy for that variables creation and identification of variables that should be assigned null values due information gaps. The Argentinian Encuesta Permanente de Hogares Survey, for example, only surveys urban populations because the Argentine population is overwhelmingly urban. As a result, the OLAS Household Survey data set lacks national level and rural information for Argentina. Some countries just neglect a given topic of interest, in which case the countries are assigned null values for those indicators.

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Other difficulties stem from variation in how the questions are asked. For example, all household surveys have a question asking about water sources for households, but some include questions on both water sources for general use and drinking water, while others only ask about general use i.e., "What is the primary water source for this household?". Understanding drinking water sources and levels of access to the public distribution network are both important aspect of water access, as household may have a tap connection but not use tap water for human consumption. To deal with this complexity, the data set has one indicator designated for general distribution network access (water_distr) and various indicators based on the primary water source used for drinking water, measuring rates of consumption from the distribution network and other improved sources*. For countries that do not ask specifically about drinking water the indicators about consumption use data from questions asking about general use. As a result, indicators in the data set that focus on sources of drinking water should not be compared between countries that ask about drinking water and those that do not; however, they are comparable within their separate groups.

*These indicators are discussed in detail in FS 1.4: OLAS Household Survey Data Set: Water Access Indicators.

Variation in response options and their specificity also presents issues. In some cases, these variations are delt with by generating consistent rules for dealing with anomalies. In cases where water sources or sanitation facilities could not be easily categorized due to lack of specificity, a minimum (conservative) and maximum (liberal) estimate is generated. These approaches are discussed further in FS 1.4 and 1.5, which delve into the details of the data set's indicators.

Caveats like those listed above are a reality of working with data sets created from various sources, and transparency about limitations is necessary for ensuring proper use of the data set and the validity of the comparisons that can be made.

Looking Ahead

Despite these limitations, the OLAS Household Survey data set offers those in the water and sanitation sector easy access to data covering several components of access at the national level and broken down by various sociodemographic dimensions. Currently the OLAS team is working to incorporate additional countries in the region, expand the temporal range of the data set, and automate data processing, all of which will allow the OLAS to create a more complete picture of water and sanitation access in LAC.

To learn more about the data set, consult the data, and learn about the methodology, please consult the OLAS Household Survey Data Set Methodology document, available on the OLAS.

References: 1. OLAS, 2022. "OLAS Household Survey Data Set", The Water and Sanitation Observatory for Latin America and the Caribbean, Washington D.C.

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