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Approach to measuring SDG indicators in Mexico

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Abstract

The National System of Statistical and Geographic Information, coordinated by the National Institute of Statistics and Geography, is working on calculating the indicators of the Sustainable Development Goals. The disaggregation for populations such as those located in rural areas and those who speak an indigenous language has represented a search for sources that allow obtaining data with a level of precision suitable for decision-making.

The measurement of phenomena such as migration motivated us to explore traditional sources of information such as Vital Statistics and Deaths for new purposes.

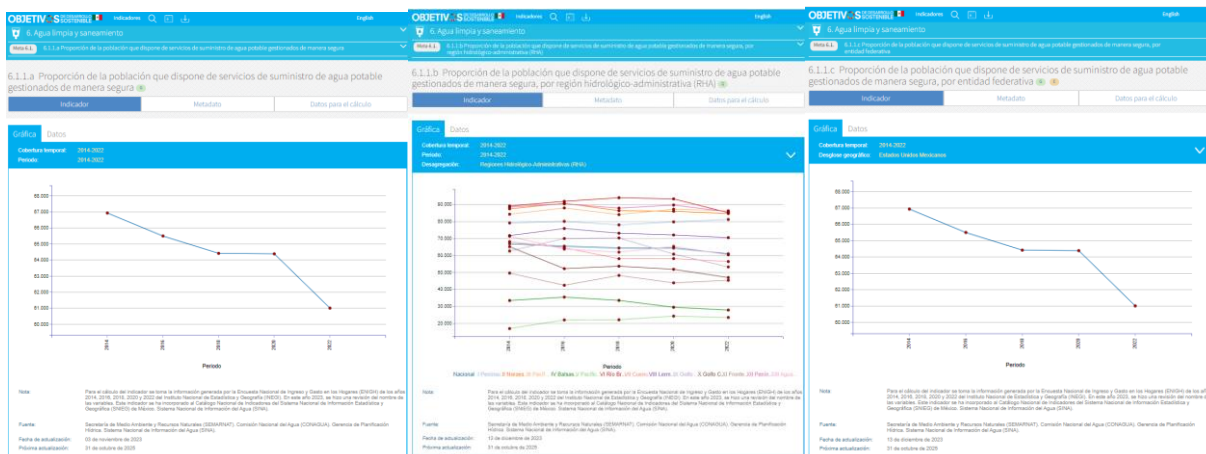
Satellite images of the territory and data science techniques open a new range of options for characterizing the national territory, allowing the identification of vegetation types or the existence of residential areas.

I. INTRODUCTION

1. The National System of Statistical and Geographic Information includes the agencies and entities of the Federal Public Administration, including the Presidency of the Republic; the Legislative and Judicial branches of the Federation; the federal entities, municipalities and territorial demarcations of Mexico City; the autonomous constitutional bodies, and the federal administrative courts.
2. The Specialized Technical Committee on Sustainable Development Goals (CTEODS) is chaired by the Ministry of Economy and its objective is to coordinate, on an inter-institutional basis, the monitoring of the progress of the State Units in relation to the calculation of the Sustainable Development Goals indicators of the 2030 Agenda. To achieve its objective, the CTEODS coordinates work on methodological and technical aspects in the calculation of the indicators, as well as in the selection of Information of National Interest and other sources of information for their calculation.
3. INEGI coordinates efforts to identify sources of information that enable the disaggregation of Sustainable Development Goal indicators for subpopulations such as people who speak an indigenous language, people with disabilities, or people who are in the country on their way to the United States of America.

II. DISAGGREGATION OF INDICATORS

4. Of the 160 indicators of the Sustainable Development Goals for the 2030 Agenda committed by Mexico, 122 have already been published, generated with 59 sources of information with data from censuses, surveys and administrative registers. The indicators on drinking water and electricity services are the responsibility of the corresponding Federal Government Agencies, which calculate them with the information captured in the administrative registers on the provision of services to the population. Due to the relevance of the topics, the information is captured in the population and housing censuses and in the National Income and Expenditure Survey, as a key element for calculating the multidimensional measurement of poverty, so there are two values, one with the data from the administrative register and another with the results of the Population and Housing Census and the National Income and Expenditure Survey. To facilitate the interpretation of the data, the figures are published separately and the differences in the Source of Information and possible differences in the concepts measured are indicated in the metadata.



5. Indicator 7.1.1 Proportion of population with access to electricity can be calculated from the administrative register of the company that provides the electricity service, only for people who have a valid contract. On the other hand, the Population and Housing Census and the National Income and Expenditure Survey ask about the characteristics of the dwelling, which includes the electricity service.

6. The Health Sector indicators have been reviewed in a coordinated manner by the Ministry of Health and INEGI to identify the best sources of information and the concepts included in the methodology, as in the case of indicator 3.8.2 Proportion of population with large household expenditures on health as a share of total household expenditure or income, where the concepts captured by the National Income and Expenditure Survey were reviewed to select those corresponding to health services.

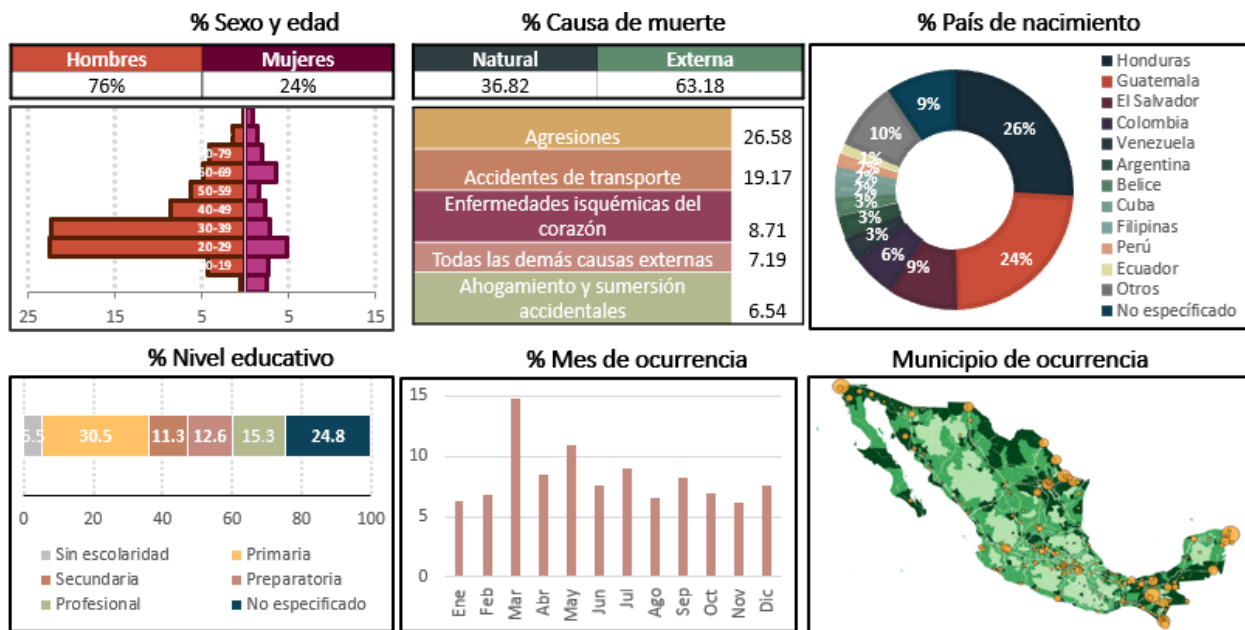
III. NEW USES OF TRADITIONAL SOURCES OF STATISTICAL INFORMATION

7. Mexico's geographical position makes it the land crossing point for people who wish to migrate in search of job opportunities, mainly from Central America and the Caribbean.

8. The Mexican government developed specialized surveys to characterize the people who make the journey throughout the country and the complications they encounter in their search to join the workforce of North American countries.

9. In an inter-institutional work carried out by the National Institute of Statistics and Geography with the areas of the Vice Presidency of Demographic and Social Information, General Directorate of Sociodemographic Statistics and Deputy General Directorate of Research, with the National Population Council, the Migration Policy Unit, both of the Ministry of the Interior, within the framework of the Inter-institutional Group on Migration and International Mobility, the Vital Statistics of Deaths were reviewed, to construct an approximation of indicator 10.7.3 Number of people who died or disappeared in the process of migration to an international destination.

10. The Vital Statistics of Deaths provides data on the nationality and country of birth of the people who died, but it is not possible to know the causes of their stay in the territory of Mexico, therefore the municipalities with the greatest passage of migrants were identified to limit the deaths to those places where there was a greater possibility that a foreign person was on the way to the northern border of Mexico. In addition, information on social assistance accommodations for migrants that was captured in the 2020 Population and Housing Census operation and the National Road Network was used to cross-reference it with the place where the death occurred.



Fuente: elaboración de la VPIDS con base en información de Estadísticas Vitales. Defunciones Registradas 2019 del INEGI.

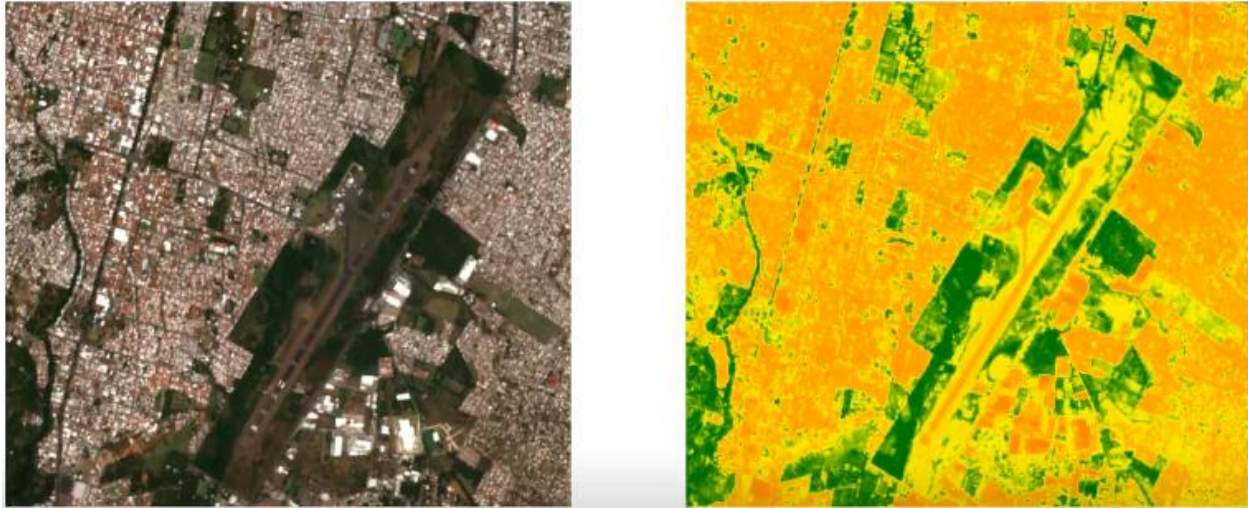
IV. NEW SOURCES OF INFORMATION

11. Social media, newspapers information sites, and satellite images emerge as sources for calculating approximations to indicators for which Mexico does not have data.

12. INEGI has a team of data scientists and researchers specializing in social and geographic issues, who work on calculating indicators 10.7.3 Number of people who died or disappeared in the process of migration to an international destination, with information from news available on the Internet, through Web scraping.

13. Research Department is working on estimating indicators for the Sustainable Development Goals: 2.4.1 Proportion of agricultural area under productive and sustainable agriculture; 15.3.1 Proportion of

land that is degraded over total land area, and 15.4.2 Mountain Green Cover Index, using satellite image data and data science methodologies.



V. CONCLUSIONS

14. The calculation of the Sustainable Development Goals indicators requires the collaboration of the National Statistical and Geographic Information System, to identify the best sources of information and use innovative sources.

15. The generation of technical capacities for the use of data science techniques and satellite image information offers a new perspective for generating indicators.

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