DANE
INFORMACIÓN PARA TODOS

THE SDGs
GEOSPATIAL
ROADMAP

Measuring and reporting geospatially SDG indicators

Sandra Moreno - Karen Chavez

El futuro es de todos
Gobierno de Colombia

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EXPERIMENTAL STATISTICS

Current Approach in DANE

Definition

Are the ones derived from projects in development that have at least one of the following innovative aspects:

- The use of non-traditional sources of information
- the statistical methodology used
- New topic

They are considered experimental because they still show room for improvement (harmonization, coverage and methodology) and they have not yet reached sufficient maturity. **In Colombia the experimental statistics are official statistics by decree 2404 of 2019.**

Quality Attributes

1. **Relevance**
2. **Opportunity**
3. **Accesibility**
4. **Interpretability**
5. **Coherence**
6. **Transparency**
7. Accuracy
8. Comparability
9. Continuity
10. Credibility

- Attributes required for experimental statistics

https://www.dane.gov.co/index.php/estadisticas-por-tema/estadisticas-experimentales

INTEGRATION OF STATISTICAL AND GEOSPATIAL INFORMATION

Inputs

Geoespatial

- Fundamental data.
- Supplementary data.
- New data sources.

Statistical

- Censuses. Surveys.
- Administrative registers.
- Big data and other sources.

Principles

- Accessible & usable.
- Statistical and geospatial interoperability.
- Common geographies for dissemination of statistics.
- Geocoded unit record data in a data management environment.
- Used of fundamental geospatial infrastructure and geocoding.

Key elements

- Standards and good practices.
- National laws and policy.
- Technical infrastructure.
- Institutional collaboration.

Outputs

- Integration.
- Harmonized and standardise information.
- Interoperability and comparability.

These serve as inputs for:

- Analysis.
- Diffusion.
- Decision making.

Source: Adapted from "THE GLOBAL STATISTICAL GEOSPATIAL FRAMEWORK. WORKING PAPER - FOR EG-ISGI CONSULTATION. UNITED NATIONS EXPERT GROUP ON THE INTEGRATION OF STATISTICAL AND GEOSPATIAL INFORMATION"

SDG 1.2.2 Multidimensional Poverty Index

Integration of Alternative Sources of information in the Statistical Process

DATA FOR THE GOALS

DATA FOR NOW

MPI Estimation at per block level

(Before) Measures with traditional sources

- MPI statistics at the department-level using household surveys (annually)
- MPI statistics at the municipality-level using census data (every 10 years)

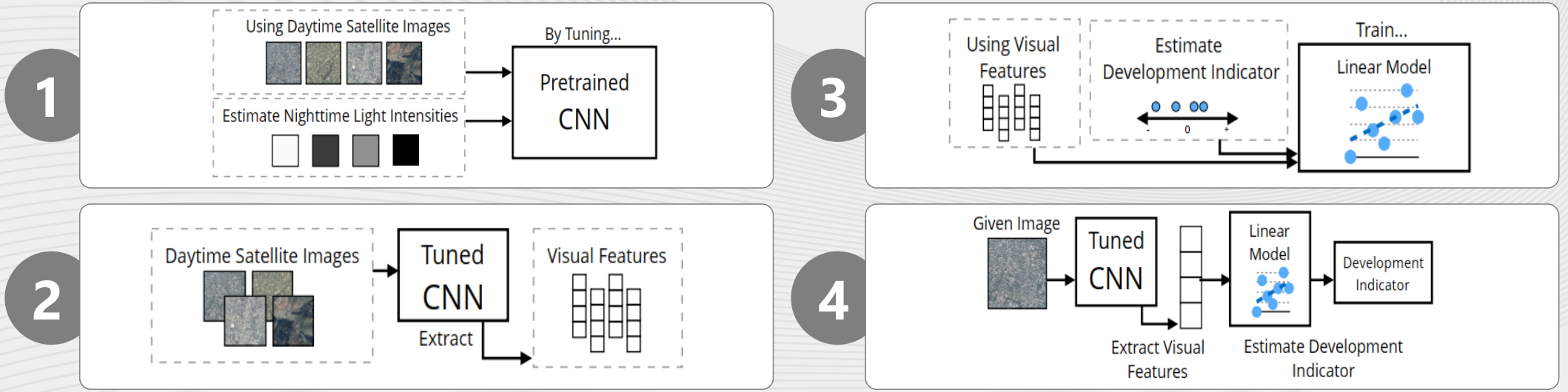
(Now)With Geo-covariates

- Measure MPI statistics at the municipality-level every year

Sources of Information used

- Spatially detailed Census data
- Geospatial covariate datasets
- Household surveys (Next Steps)
- Adminsitrative Records (Next Steps)

Methodology:



Source: Jean et al, 2016.

BACKGROUND

2015

SDG 11.3.1

Methodological exploration began to calculate the indicator from Earth Observations and population projections from the 2005 General Census.
A use case was carried out with the preliminary calculation for a city in the country.

2017

SDG 9.1.1

Beginning of the exploration and methodological adaptation for the calculation of the indicator, based on georeferenced information from the 2014 National Agricultural Census and official basic cartography.

Use case application in a department of the country.

2020

SDG 11.3.1

Calculation of the national indicator based on the calculation performed for 63 cities.

SDG 9.1.1

Calculation of the national indicator based on the calculation made for 32 departments.

CALCULATED SDG INDICATORS

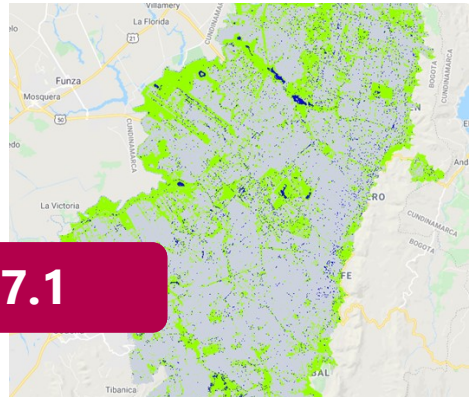
SDG 11.3.1: *Ratio of land consumption rate to population growth rate.*

- Definition of city by the methodology of degree of urbanization of UN-Habitat.
- Use of population projections adjusted by the 2018 National Population and Housing Census.
- Supervised classification of Sentinel-2 images was carried out, through Google Earth Engine.

SDG 9.1.1: *Proportion of the rural population who live within 2 km of an all-season road.*

- Use of georeferenced information (dwellings) from the 2018 National Population and Housing Census.
- The information on roads and their status is provided by the basic cartography of the National Geographic Institute.
- A methodological adaptation was made that takes into account the geographical characteristics of the Colombian territory.
- The calculation was developed from GIS processing in ArcGIS

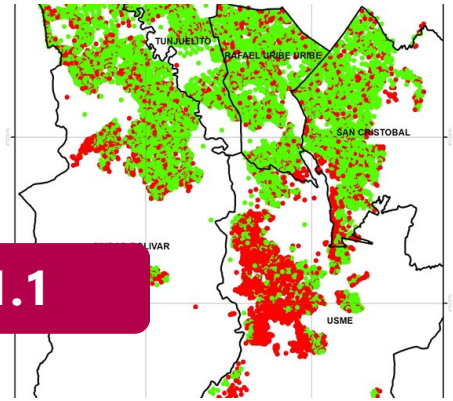
OTHER SDG INDICATORS EXPLORED



11.7.1

Average proportion of the built-up area of cities corresponding to open spaces for the public use of all, disaggregated by sex, age and people with disabilities

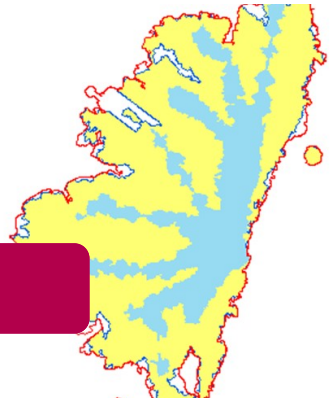
Using Sentinel-2 images; property and census information. Determination of a representative sample of eight cities to calculate the indicator.



11.1.1

Proportion of urban population living in slums, informal settlements or inadequate housing

Collection of internal and external sources of information. Preliminary use case in five locations within the city of Bogotá.



11.2.1

Proportion of population that has convenient Access to public transport, by sex, age, and persons with disabilities

Determination of urban areas with integrated mass transportation systems. Preliminary calculation for two cities in the country.

GEO-VISUALIZATION OF INDICATORS

https://indexods-ec702-dane-ods.opendata.arcgis.com/

As part of the follow-up to the 2030 Global Agenda, the Directorate of Geostatistics and the Group of Sustainable Development Goals of DANE, together with ESRI Colombia as the platform's technological provider, present this portal where the main SDG indicators can be consulted and geo-visualized from the integration of statistical and geospatial information produced from DANE.

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slmoreno@dane.gov.co
klchavezq@dane.gov.co
ods@dane.gov.co

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