

GEOSPATIAL DATA FOR SDG INDICATORS CALCULATION

DANE COLOMBIA
March 2020



El futuro
es de todos

Gobierno
de Colombia



Agenda

9 INDUSTRIA,
INNOVACIÓN E
INFRAESTRUCTURA



11 CIUDADES Y
COMUNIDADES
SOSTENIBLES



- ◆ **Developed work**
- ◆ **Data sources and tools**
- ◆ **Main challenges**
- ◆ **Future work**

Developed work

2015-2016



11.3.1

- Methodology proposal using Geospatial information and test for Barranquilla city
- Google earth engine script development for data processing

2017



11.3.1

- Calculation for 6 metropolitan areas – 128 cities



9.1.1

- Methodology proposal using Geospatial information and test for Quindio department

2018



11.3.1

- Results socialization



9.1.1

- Methodology updating and test for national level



11.7.1

- Methodology proposal using local data

2019



11.3.1

- Index calculation for six cities



9.1.1

- Methodology updating and tool developing for recalculation



11.7.1

- Test for 3 cities: Soledad (Atlántico), Pasto (Nariño) y Villavicencio (Meta)



11.2.1

- Pilot test using geospatial information for 4 cities: La Vega, Medellín, Cali y Montería



Sources and Tools



SDG Indicator 11.3.1

Ratio of land consumption rate and population growth rate



- ☐ Landsat images
- ☐ Population data
- ☐ MGN



SDG Indicator 9.1.1

Proportion of the rural population who live within 2km of an all-season road



- ☐ DEM
- ☐ Hydrography layer
- ☐ Road network layer
- ☐ Population data
- ☐ MGN



SDG Indicator 11.7.1

Average share of the built-up area of cities that is open space for public use for all, by sex, age and persons with disabilities



- ☐ Sentinel images
- ☐ MGN place names



SDG Indicator 11.2.1

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



- ☐ MGN
- ☐ Population data
- ☐ Local transport and road infrastructure data



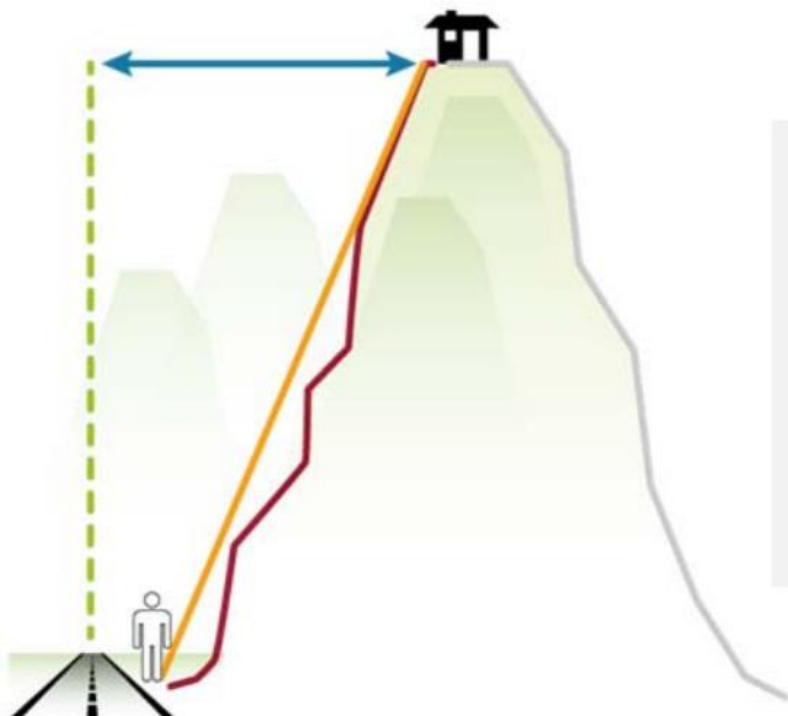


Sources and Tools – Indicator 9.1.1



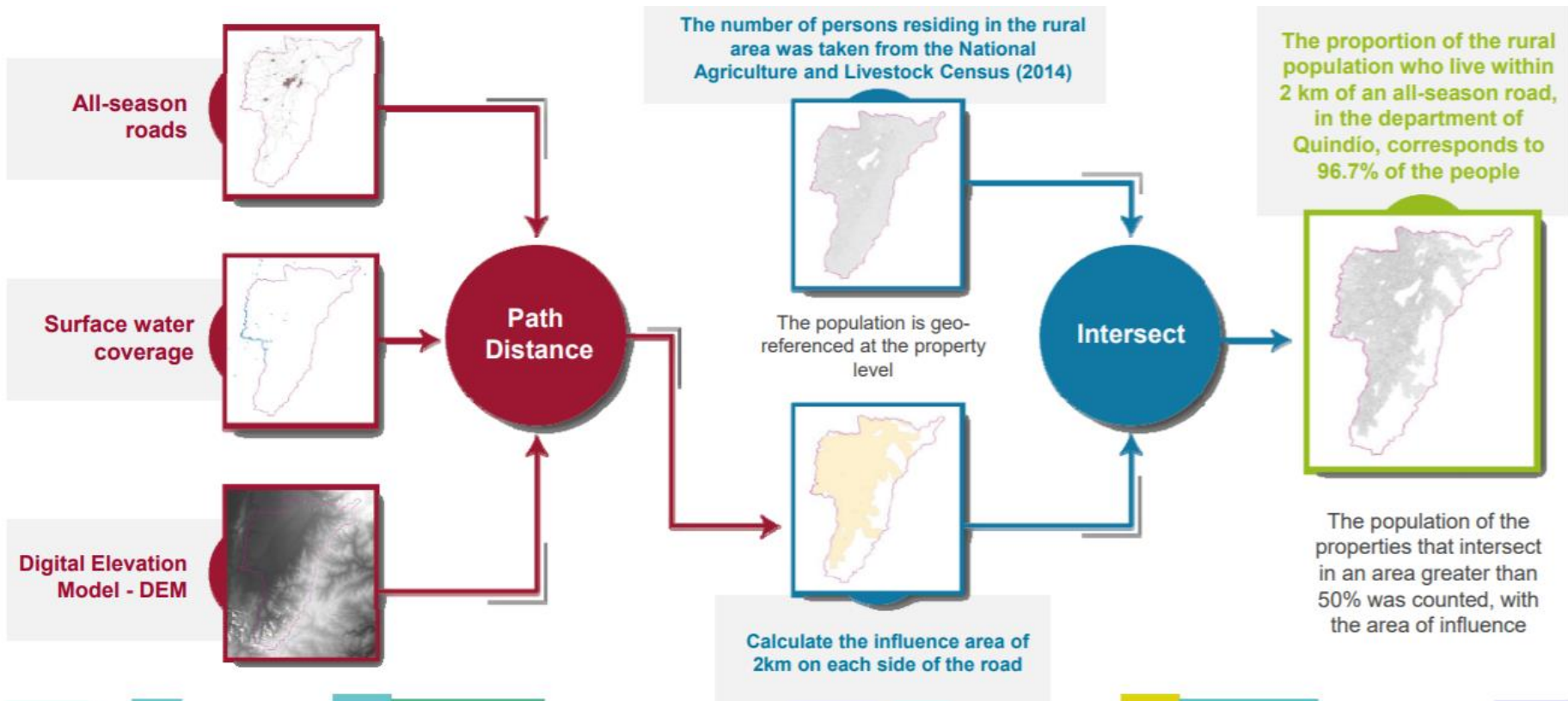


Sources and Tools – Indicator 9.1.1



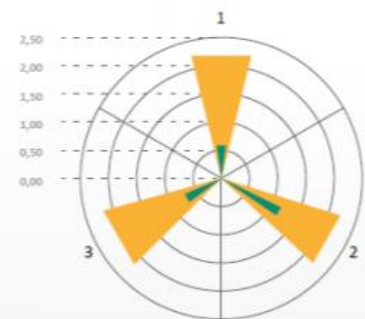
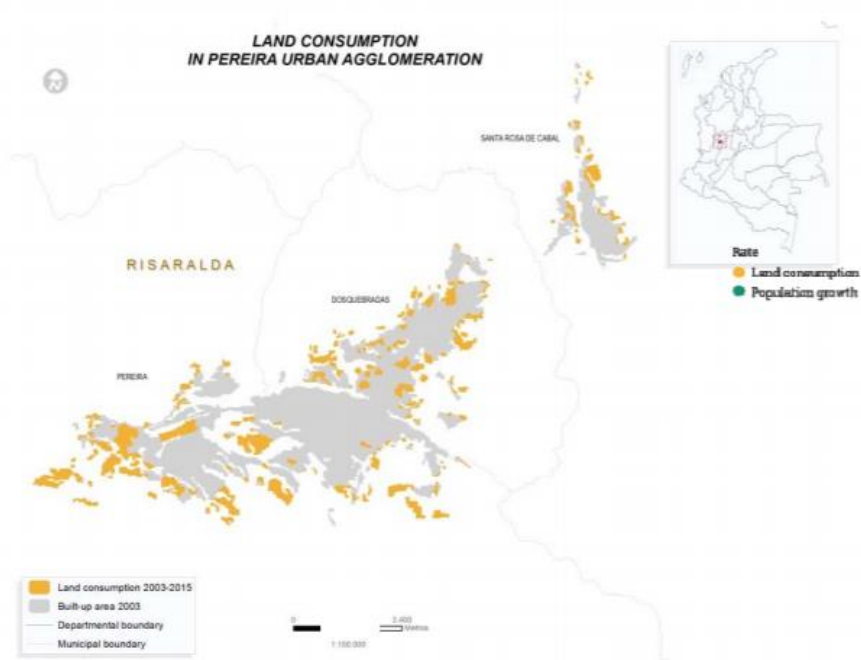
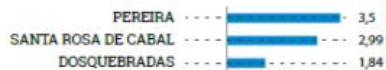
- Actual distance on the ground (natural)
- Horizontal distance
- - - Vertical distance (difference in height)
- Slope distance

Methodology – Indicator 9.1.1



Results – Indicator 11.3.1

SDG indicator



Rate

- Land consumption
- Population growth

| Municipality | Land consumption | Population growth |
|----------------------|------------------|-------------------|
| 1 Pereira | 2,17 | 0,62 |
| 2 Dosquebradas | 2,15 | 1,17 |
| 3 Sta. Rosa De Cabal | 2,09 | 0,70 |

Land consumption rates versus population growth rates



Main challenges



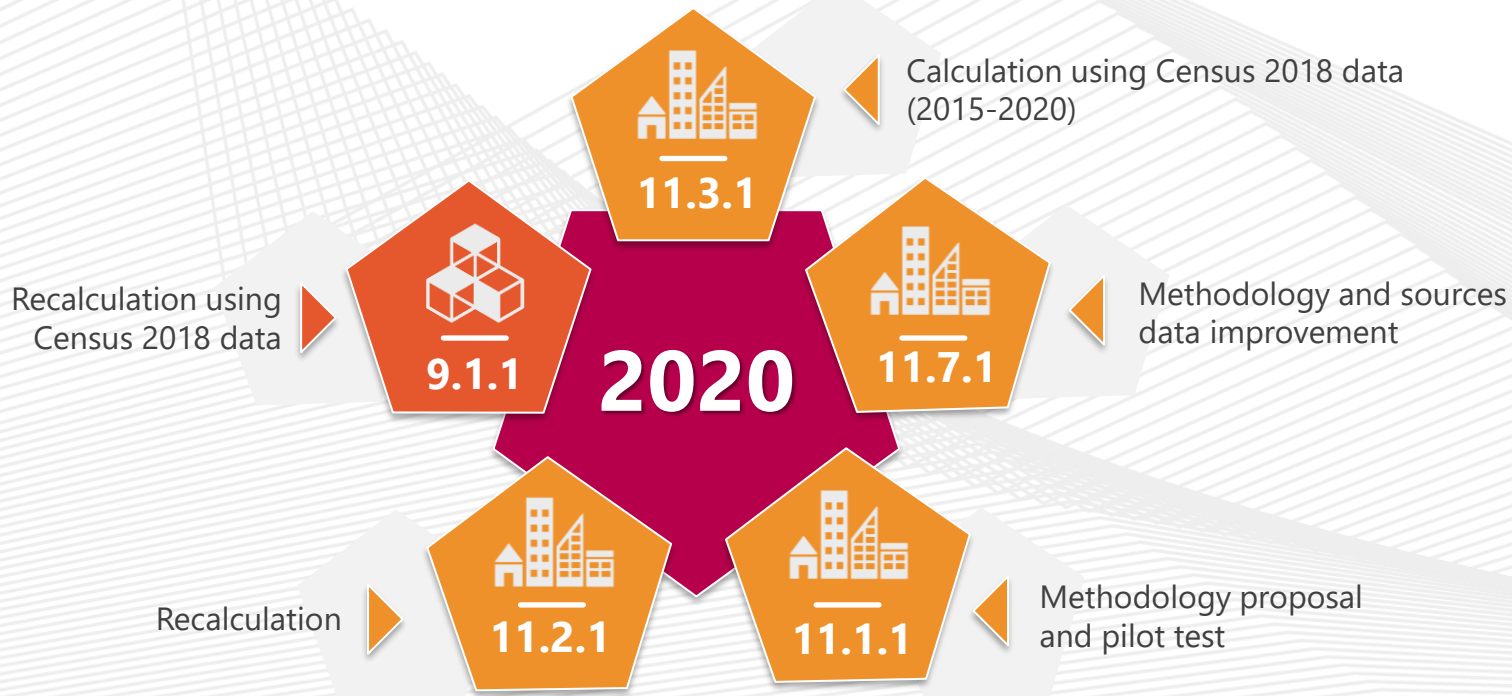
Some indicators depends on availability of census data

Georeferenced data for population (Census period close to calculation)

For most of the cases it is necessary to integrate geospatial information to other sources to obtain the level of detail required (e.g. public / private access to areas – 11.7.1)

Using geospatial data from different sources and time stamps imply error / uncertainty over final result of index calculations (Road networks, transport systems)

Future work



Socialization and data publication

Thank you

<https://dane.maps.arcgis.com/apps/MapJournal/index.html?appid=85c042d55d774e27aa1c5b948950a260>



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