

Country Use Case of EO for SDG Indicator	
SDG Indicator/Sub- indicator	ODS 9.1.1 Proportion of the rural population who live within 2 km of an all-season road
Country or region	Country and region
Status (please check)	<ul> <li>being used in official SDG Indicator reporting</li> <li>X- being verified or tested by country</li> <li>studying feasibility</li> </ul>
Earth Observation Data Used and its links	<ul> <li>Official cartography of Colombia (roads, hydrography, DEM)- <u>https://geoportal.igac.gov.co/contenido/datos-abiertos-cartografia-y-geografia</u></li> <li>Rural population - National census of population 2018 DANE</li> <li>MGN (Layer of country and region) <u>https://geoportal.dane.gov.co/servicios/descarga-y-metadatos/descarga-mgn-marco-geoestadistico-nacional/</u></li> </ul>
Additional/ Other Data Used and its links	NA
Description of data access, processing, and analysis, including methodology that was developed, associated tools or applications, and how these are applied to compute SDG Indicator	The development of the project requires the geographic coverage of the lines that represent the all-season roads, the geographical coverage of the points or polygons that represent the location of the rural population, and the coverage of polygons that define the urban-rural boundary. Furthermore, the elevation values of the land and the extent of the surface water are necessary for the calculation of the area of influence. The date of study of the project was defined considering the collection date with respect to the population data of the CNPV conducted by DANE, which corresponded to year 2018.1 <b>Calculation of the area of influence</b> : Among the spatial analysis tools of the ArcGis software, in the distance matter, there is the <b>Path Distance tool</b> , which allows calculating, for each cell, the distance of lowest accumulative cost from or to the source of least cost, considering the distance of the surface along with the horizontal and vertical cost factors (Environmental Systems Research Institute, s. fb).
Work flow	Please show the work flow using a process flow diagram.

<sup>&</sup>lt;sup>1</sup> National Census of Population



	All season Rogital cartography Surface water Coverage from official cartography Digital Budget DEM
Lessons learned, any gaps, key issues and recommendations	The methodology proposed by DANE complements the World Bank proposal by including the extent of the surface water and the geometric distance in the calculation of the area of influence. When the geometric distance is included, from the DEM, the calculated area of influence is smaller, mainly in regions with steep slopes. The greater the area of influence, the greater the amount of rural population selected will probably be and the value of the indicator will be greater, which would affect the accuracy of the result.
Supporting material about this use case. Include links, publications, etc.	The indicator is in the calculation stage
Collaboration with other agencies - agency names and activities	NA
Name(s) and email address of individual(s) involved in this effort. Please note the principal point(s) of contact (POCs).	National Administrative Department of Statistics – DANE Sandra Moreno <u>slmorenom@dane.gov.co</u> , DANE Technical Director of Geostatistics Carlos Durán <u>cadurang@dane.gov.co</u> , Coordinator of the Research and Development Group of the Geostatistics Department.