SDG Indicator 9.1.1
Proportion of rural population who live within 2 km of an all-season road

ONS team (Data Science Campus, UN Global Platform, ONS Geography, SDG team)

9.1.1. Tier III indicator - Rural Access Index
- Inputs: population, roads, road conditions
- Recognises value of global datasets
- National implementations e.g. UK and Colombia

Purpose
- What are issues in scaling from national to global scales
- Consistency and availability of data
- Ease of production
- Comparability of statistical outputs

Methodology
- Identify global datasets (e.g. OSM, GRIP, GPW, WorldPop GHS)
- Design and implement a process chain
- Visualise and assess results
- Refine methodology for deployment in Cloud via UNGP
Outputs

Towards the United Nations Sustainable Development Goals - Indicator SDG 9.1.1
Reclassified GHS Settlement Grid

Re-classified GHS Settlement Grid

- Rural
- Urban
- Mixed

Data sources:
- Global Road Inventory Project (GRIP)
- PlanetScope (high resolution imagery)
- Digital Chart of the World
- WorldPop

Map: 2020, data: 2010

Graphic created by GIS and Mapping Unit, ONS Geography

GHS reclassified to Urban and Rural

Towards the United Nations Sustainable Development Goals - Indicator SDG 9.1.1
Rural Population per Global Human Settlement (GHS) 1 km Grid Square

Rural Population Per 1km grid cell

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</table>

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Rural population

Towards the United Nations Sustainable Development Goals - Indicator SDG 9.1.1
Rural Population beyond the 2 km GRIP road buffer

Rural Population Per 1km grid cell

<table>
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Rural population >2km from a road
Outputs

Countries ranked by indicator and rank of GDP per head.
Optimisation via UN Global Platform

Gridded data stored in AWS S3 Bucket
Tiled for parallel processing

OSM open data on AWS

Chaining service
Methods library
Extract_OSM (Python)
Compute_911
Buffer_and_burn (R)
Stack_grids (R)
Non-traditional sources - Mapping the urban forest

- Analysing images to improve data on local environment
- £1Bn value trees in urban areas (air pollution, health, wellbeing)
- But poor data at local level on tree & urban greenery
Non-traditional sources - Mapping the urban forest

Makes use of:
1. Google streetview imagery
2. OpenStreetMap road network data
Non-traditional sources - Mapping the urban forest

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0% green

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