Consolidation, Revision and Pilot Application of the RAI

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Definition of RAI

**Rural Access Index (RAI)** = ‘the proportion of the rural population living within two kilometres of an all-season road’.
Two kilometres was selected as ‘typically equivalent to a walk of 20-25 minutes’ (Roberts et al, 2006)
**Definition of ‘all-season’**

- All-season = “a road that is motorable all year round by the prevailing means of rural transport (often a pick-up or a truck which does not have four-wheel-drive), with some predictable interruptions of short duration during inclement weather (e.g., heavy rainfall) allowed.”
Aim and Objective

- Aim is to develop, propose and obtain agreement on a harmonised approach to data collection and measurement of the Rural Access Index that is relevant, consistent and sustainable.

- Objective is to scale up implementation of the RAI across UN member countries in order to advance the status of SDG Indicator 9.1.1 to Tier II and eventually Tier I in the tier classification of the SDGs.
SDG 9.1.1 (=RAI)

- Total of 17 SDGs
- 9 = Build resilient infrastructure....
- 9.1 = Develop quality, reliable, sustainable and resilient infrastructure......
- 9.1.1 = RAI is sole rural access indicator
- 9.1.2 = Passenger and freight volumes, by mode of transport

The three factors of RAI

- Population distribution
  - Where do people live?

- Road network
  - Where do roads exist?

- Road condition
  - All-season roads?
The RAI is defined as ‘the proportion of the rural population living within two kilometres of an all-season road’.

- Identify the rural population
- Identify where it lives
- Produce a GIS rural population layer
The RAI is defined as ‘the proportion of the rural population living within two kilometres of an all-season road’.

- Identify where the roads are
- Identify best source of mapping
- Produce a GIS map layer
The RAI is defined as ‘the proportion of the rural population living within two kilometres of an all-season road’.

- Identify road condition data
- Interpret data to identify ‘all-season’ roads
- Produce a GIS ‘all-season’ layer
Condition data can be obtained from:

- Visual surveys
- Roughness
- Speed
- Travel time
- Satellite assessment
- Sat-Nav/GPS tracking
- Mobile data
- Secondary sources
How can we measure RAI....?

In a repeatable, consistent, accurate and sustainable way.......
Involve Stakeholders

- World Bank (custodian)
- UNECE (co-partner)
- UNEP (co-partner)
- Others interested: ADB, AfDB, ISDB, IADB
- Local Roads Organisations
- Statistical Offices: UK ONS, local NSOs

Use Data Providers and Processors

- WorldPop
- OpenStreetMap
- GRIP Database
- CitiLogic
- Azavea
Carry out Trials

- Engage with NSO and roads organisations
- Review data for completeness and quality
- Produce data in GIS format
- Support local partners to measure RAI
General Challenges

- Getting full commitment from all stakeholders
- Develop a methodology for a wide range of data, whilst maintaining quality and consistency
- Making RAI data collection sustainable
- Taking account of motorcycles and other modes of transport, secondary indicator?
- Securing funding for Phase 3
Future Actions......

- Inclusion in IDA 19
- Funding coordination to support global uptake of RAI (inclusion in projects)
- Host and publish on an appropriate website
- Work towards Tier I in the long term
- Consider alternatives, i.e. HH surveys
Thank you for your attention

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