

StatsTalk-Africa: Monitoring Roads at a Large Scale in low income and developing countries using Big Data and Remote Sensing
13th May 2024; 11:00-12:30 EAT; Virtual Event

Concept Note

Background

The demand for data and evidence is enormous in all walks of our lives. International agendas like the sustainable development goals and Agenda 2063 have put data and indicators at the core of their frameworks. As sources of official data, national and international statistical systems are under pressure to furnish data for planning, decision making and policy formulation. Besides government agencies and development partners at national and international levels, the public, researchers, and academia require all quality and timely data.

The demand for both data and monitoring tools is particularly high in the infrastructure domain. Governments around the world spend around 1-2% of their GDP each year to maintain roads and ensure adequate road safety and connectivity. It is the largest component of public investment programs and international development aid. Despite these efforts, global road networks still suffer from poor maintenance, chronic underfunding and are generally not well adapted to climate change. This road infrastructure gap is bound to grow as climate pressures increase and budgets shrink. The situation is expected to be particularly dire in low income and developing countries (LIDC), where technical and financial resources are scarce and climate shocks are both more frequent and more severe.

Part of the problem comes from a general lack of data about road infrastructure: in most countries, governments simply do not have comprehensive, granular, and updated data about the size and quality of their road network. And while international organizations are ramping up efforts to compile and publish global, consistent, and timely data, results are limited. With no ways to collect new data about their network seamlessly and at a low cost, nor access to modern Road Asset Management Systems (RAMS), governments cannot organize and optimize maintenance work, prioritize tasks, or plan future adjustments to make sure their network is resilient to climate change. As a result, even when they have substantial budgets at their disposal, money is spent inefficiently.

Research at the frontier has shown that remote sensing and big data can help on all those fronts: map networks, assess pavement condition, reduce monitoring costs, or run climate simulations. However, recent experience has also shown that these techniques have very rarely been deployed at scale, thereby limiting the benefits that satellite and big data-based solutions promised initially. Practical examples of their operational use in public-sector decision-making and policy in the developing world are especially limited.

In the first session, Mr. Roberto Carroccia of the University of Roma, will provide insights on the African Regional Transport Corridor Management System – ARTCOMS. The presentation will highlight the use of satellite imagery and artificial intelligence to assess the condition of roads identified as critical to optimizing the benefits of the African Continental Free Trade Area. Various datasets (satellite imagery, raw and processed and analyzed geospatial data) and also other ancillary and statistics data are integrated, stored, and managed in a standard spatially enabled database management system for online geo visualization and querying. Meanwhile, session 2 by Damien Puy will delve on the recent work done by the International Monetary fund and Alteia in collaboration with the World Bank. Session 2 will delve into a new platform designed to: (i) help countries monitor the size and quality of their road network in real time and at a low cost; and (ii) use those inputs to measure investment gaps, sequence road maintenance work or simulate the resilience of road networks to climate shocks to better pilot investments. It will also explain how the tool can be leveraged for other tasks, such as generating road statistics at the macro level, computing SDGs (e.g. Rural Access Index) or assessing returns on future road renovations or construction using country case studies in African and Latin American countries.

Objective

The ACS is convening the monthly webinar series – *StatsTalk-Africa* – to provide a space for a dialogue about data, statistics, and innovative tools with data experts and users. Specifically, StatTalk-Africa aims to:

1. Serve as a knowledge-sharing and exchange platform.
2. Demystify and promote greater understanding of key statistical concepts and alternative data sources that could be harnessed in the African context.

Date and Time

The Webinar is scheduled for 13 May 2024, Monday, 11:00 – 12:30 hrs EAT

Language

English will be the official language for this webinar series.

Registration link

Register in advance for this meeting here .
Microsoft Teams meeting Join on your computer, mobile app or room device.
Meeting ID: 385 095 164 506 Passcode: FKAvNf
Join on a video conferencing device Tenant key: unitevc@m.webex.com Video ID: 123 489 434 3 More info

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