WEBINAR

Earth Observations & Statistics
Unlocking sociodemographic knowledge through the power of satellite images
June 18, 2020 -- 9:00 to 11:30 am (CDT)
University of Twente / INEGI

Introduction

The continuous urbanization in many cities is coupled with rapid socio-economic and demographic changes in urban, peri-urban, and rural areas. Many cities are rapidly growing, which is accompanied by urban transformation processes, such as gentrification, but also by an increase in poor urban neighborhoods. The socio-economic and demographic changes are rapid, their linkages are not well understood, and the data are often not available or are outdated.

Traditional survey-based methods are slow and costly for covering large regions, and the data are mostly outdated when they are finally published (e.g., national census). Furthermore, data might be aggregated at geographically arbitrary units that might average and hide poor areas. Therefore, remote sensing has a vast potential to provide such information so as to support monitoring transformations and provide relevant information for planning and decision making. We aim to showcase how EO-based proxies of socio-economic and demographic data could contribute to rapidly providing relevant information when large areal coverage and/or multi-temporal information is required, in support of sustainable development.

Agenda

9:00 - 9:10 Welcome word / Paloma Merodio (paloma.merodio@inegi.org.mx) & Monika Kuffer (m.kuffer@utwente.nl)

9:10 - 9:40 AGENDA ITEM 1: Blocks and grids (fixing the 'area' variable)

9:10 - 9:20 José Luis Olarte Quiroz (joseluis.olarte@inegi.org.mx) / The design of a national level grid: solving Urban-Rural Dichotomy

9:20 - 9:30 Dana Thomson (dana.r.thomson@gmail.com) / The gridded mapping approach for IdeaMaps Network (https://ideamapsnetwork.org/about-2/)

9:30 - 9:40 Q&A

9:40 - 10:30 AGENDA ITEM 2: Data Science (the evolution of methodologies and the adoption of new techniques for more timely information)

9:40 - 9:50 Monika Kuffer (m.kuffer@utwente.nl) / The Role of Earth Observation in an Integrated Deprived Area Mapping "System" for Low-to-Middle Income Countries

9:50 - 10:00 Jimena Juárez (jimena.juarez@inegi.org.mx), Abel Coronado (abel.coronado@inegi.org.mx) / Integrating the Mexican Geospatial Data Cube with Official Statistics

10:00 - 10:10 Elio Villaseñor (elio.villasenor@inegi.org.mx) / Machine Learning and EO for marginality mapping

10:10 - 10:20 Jon Wang (j.wang-4@utwente.nl) / Deep learning for urban poverty mapping

10:20 - 10:30 Q&A

10:30 - 11:10 AGENDA ITEM 3: Other key aspects of poverty mapping

10:30 - 10:40 Claudio Persello (c.persello@utwente.nl) / Uncovering socio-economic inequalities using VHR satellite images and deep learning

10:40 - 10:50 Isaac Oluoch (i.o.oluoch@utwente.nl) and Michael Nagenborg (m.h.nagenborg@utwente.nl) / Mapping ethics for urban poverty mappin

10:50 - 11:00 Patricia Brito (britopatricia@hotmail.com) / EO data for Covid-19 responses in slums

11:00 - 11:10 Q&A

11:10 - 11:30 Closing remarks / Paloma Merodio (paloma.merodio@inegi.org.mx) & Monika Kuffer (m.kuffer@utwente.nl)

Key conversation topics

- How close can we get with EO data to understand poverty and deprived areas? Spatial patterns across cities…
- The meaning of gridded mapping from the perspective of data scientists, decision-makers...
- What is the cost of error in a model for poverty in Official Statistics matters? How can decision-makers use this models?
- Concerns and advantages of Machine Learning for Official Statistics
- Ethical guidelines to map slums: how data needs to be mapped
- What challenges have NSOs faced in household surveys due to COVID19?