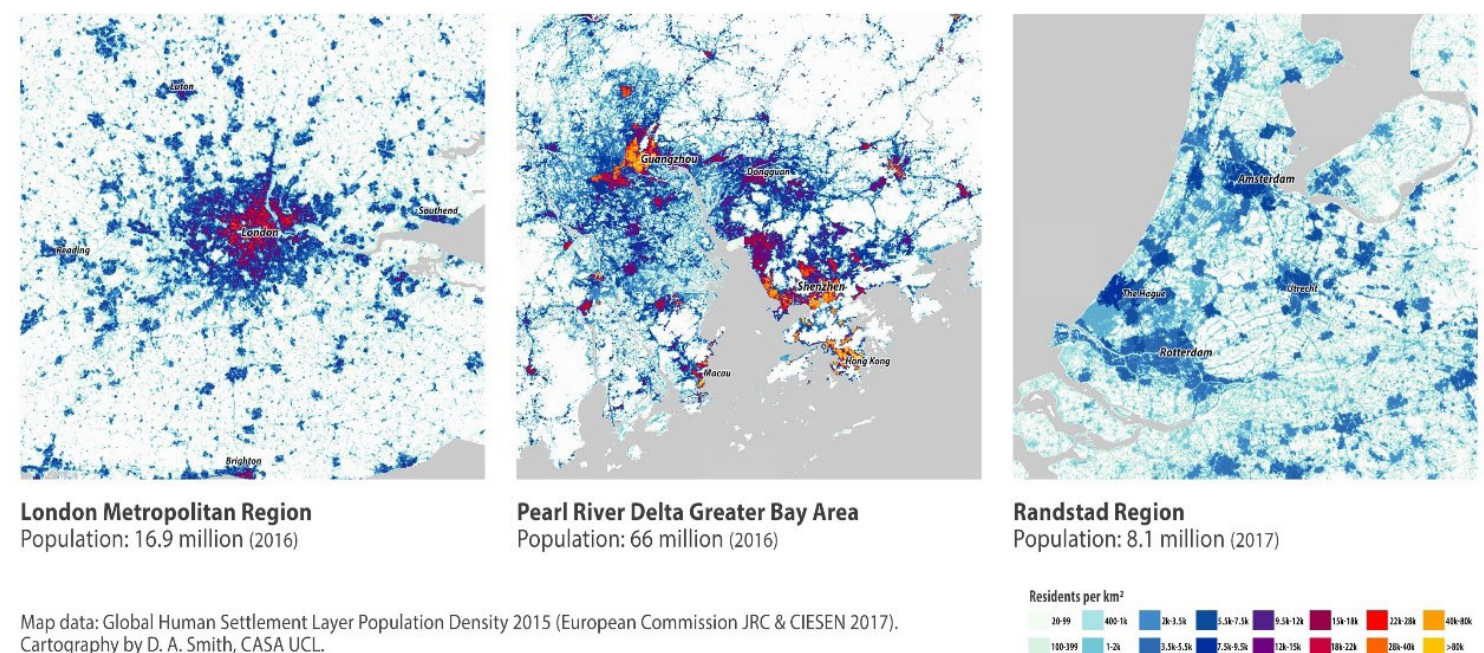


SIMETRI

The 21st century will be dominated by very large urban agglomerations, qualitatively different from those big cities that our contemporary analytical understanding and models of governance are able to handle. The growth of these mega-city regions is heavily influenced by the fusion of existing cities, and rapid continental scale migration. This growth is generating severe problems of social segregation, connectivity, mobility, and income inequalities that require new and powerful methods of analytical understanding such as those being developed using real-time 'big' data sources and new information technologies. We propose to develop a platform for prediction and urban governance using the Pearl River Delta 'Greater Bay Area' mega-city region as a demonstrator, bringing sustainability indicators and simulation models from the Greater London and Holland (the Randstad) to inform the development of an urban data and simulation platform relevant to designing and testing scenarios for new modes of transport and the alleviation of socio-economic inequalities in the Bay Area.



Aim/objective

The aim of the project is to develop a platform for both understanding and predicting future development in mega-city regions, which, we argue, are intrinsically different from the biggest cities that have developed so far. The project will: (1) integrate already developed Land Use Transportation Interaction (LUTI) models for London and the Randstad with ongoing cellular development and transport models for the Greater Bay Area, (2) develop new indicators for measuring spatial efficiency and equity, (3) develop analytics to inform innovative policy analysis and governance, and (4) demonstrate these tools in association with planning agencies and government across the region.

Approaches/methods

Research activities will be carried out in the four WPs. The urban analytical platform (WP2) serves as a technical foundation for the entire project. Based on this platform, innovative data processing methods will be developed for cross-border, cross-sector and multi-source mega-city region data. WP3 will develop indices for evaluating different aspects of social inclusion and inequality. WP4 will develop advanced urban (LUTI) simulation models. A methodological innovation is to advance the state-of-the-art urban models by adding socioeconomic indicators and to include new data sets. In WP5, three planning and policy scenarios will be defined and implemented addressing the most critical issues in mega-city region management.

Expected results and impacts

We consider the various web sites and online tools as well as access to online data that the urban platform will develop to be strong outlets for integrating this research with local stakeholders and for communicating the results of the project to a range of stakeholders as well as to an informed public. We have indicated that the applicability of our platform goes well beyond the Greater Bay Area because we envisage it having relevance to many world mega-city regions. We are conscious that although the tools we proposed have relevance to mega-city regions in the Global South, the platform would require adaptations if it were to be applied to mega-city regions in less developing countries.

SIMETRI - Sustainable Mobility and Equality in mega-ciTy Regions

Duration: Starting in 2019, ending in 2022 at the latest

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Budget: €889,227

Partners: University College London – Centre for Advanced Spatial Analysis (CASA), King's College London – Geography, Vrije Universiteit Amsterdam – School of Business and Economics, Birkbeck, University of London – Geography Department, Shenzhen University – School of Architecture and Urban Planning, The University of Hong Kong – Shenzhen Institute of Research and Innovation, Sun Yat-sen University – School of Geography and Planning.

Involved countries

- China
- Netherlands
- The United Kingdom

The Sustainable and Liveable Cities and Urban Areas call

The pilot call Sustainable and Liveable Cities and Urban Areas organized by JPI Urban Europe and the National Natural Science Foundation of China (NSFC), inviting interdisciplinary Sino-European consortia opened on January 31st, 2018.

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