Introduction
A new project has started since December 2015 (until March 2019) under the Strategic International Collaborative Research Program (SICORP) sponsored by Japan Science and Technology Agency (JST) and the Israeli Ministry of Science, Technology and Space (MOST). The objective of this research program is to increase urban resilience to large scale disasters such as earthquake and tsunamis. This is achieved by harnessing state of the art developments in spatial analysis and Geographic Information Systems (GIS).

Objectives
We aim to develop a prototype of a Dynamic Integrated Model for Disaster Management and Socio-Economic Analysis (DIM2SEA) that will give disaster officials, stakeholders, urban engineers and planners an analytic tool for mitigating catastrophic events.

Our approach
By using hazard simulation and remote sensing techniques, short-term damage assessment models are developed by the Japanese team, while damage observation and agent based modeling of land use and socioeconomic simulations are conducted by the Israeli team to analyze the effects of disasters.

Stages
1. Household Distribution and Socioeconomic Profiling
A data disaggregation algorithm is develop to build individual socio-economic profiles from census tract data. The allocation of the census data into households and discrete individuals allow for deep analysis of the urban and socio-economic dynamic.
2. Analysis and Simulation (Short-term and Long-term models)
Hazard are simulated on their generation, propagation and impact to the urban environment using physical and geospatial models to estimate the damage to buildings. Similarly, agent based models are used to estimate human losses in case of tsunami or building damage due to earthquake.
3. Synthetic Big-Data output generation
The outcome of simulation scenarios will provide a large amount of data at multidimensional levels in the urban environment. This information is considered as synthetic big data needed to be process for scenario analysis.
4. Web-based visualization platform
The geospatial information and the analysis of the synthetic big data produced during the scenario modeling is presented through a web-based environment that facilitates accessibility, managing and understandability.

Expected outcomes
a. Earthquake and Tsunami building damage assessment models
b. Household profiling and socio-economic analysis (Proposal of a Urban Vulnerability Index)
c. Human loss estimation using agent based modeling
d. Disaster support logistic model to manage post-disaster relief

Conclusions
The framework of a new project is presented to share with the scientific community the ongoing activities of collaboration between Japan and Israel universities on the science and disaster management field. The DIM2SEA model is under development for the next three years to produce an integrated platform of scenario analysis that combines short-term hazard and damage assessment modeling outputs with long-term socio-economic impact of urban areas. The outcome of the DIM2SEA projected are expected to contribute to disaster managers and planners as an analytic tool to mitigate the impact to disasters.

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