Towards More Resilient Cities

Tom Veldkamp
ITC Faculty, University of Twente
Netherlands

Bjarke Ingels Group / Rebuild by Design / NYC DDCEast Side Coastal Resiliency project, Manhattan, New York
www.architectmagazine.com/
The definition implies temporal change/dynamics and capability to respond after shock in system.

The used data is static and relative and lacks spatio-temporal dimensions and behavior and different perspectives. It gives technocratic info.
IDENTIFY CURRENT CHALLENGES OF URBAN COMMUNITIES AND SETTLEMENTS AND OPPORTUNITIES FOR INTEGRATING GEOSPATIAL AND STATISTICAL INFORMATION;

- From robust to resilient concepts.

Shift from static to dynamic concepts changes geospatial data needs. So apart from needing accurate (fit for purpose) x,y,z data we also need temporal data and forecasts.
EXAMINE HOW GEOSPATIAL INFORMATION WILL SUPPORT AND INFORM INCLUSIVE AND EVEN URBANISATION, RESILIENT DEVELOPMENT, AND THE SDG’S

- Spatial information will allow to identify where and when and if resilient engineering is required.
- This information should ideally be available for everyone from a reliable and acceptable source to prevent contested knowledge (fake facts) discussions.
- Allow all stakeholders to participate and share views
PRESENT AND DEVELOP ROADMAPS FOR A MORE SUSTAINABLE AND RESILIENT FUTURE FOR ALL, PARTICULARLY IN LIGHT OF GROWING DISASTER RISKS.

- Our urban planning and infrastructure need to change to allow more resilient solutions.
- These development should be fact based (reproducible reasoning and decision making)
- Not only the city has to become resilient also its citizens, including informal habitants (it is also social challenge not only a planning and engineering problem)
- Sustainable development of cities in the context of global change is a wicked problem

- ITC’s mission is to develop global capacity, particularly in less developed countries, and to utilize geospatial solutions to deal with national and global problems
- The road map from ITC perspective is capacity development for sustainable resilient cities.
- New MSc programme: Spatial Engineering
MASTER SPATIAL ENGINEERING

- 2-year Master’s programme
- Research-based educational programme
- Entry level: BSc
- Combining technical and socio-economic knowledge with a strong basis of spatial data analysis and modelling

Taming wicked problems
Disaster risks are increasing because of urban encroachment into risk areas.

Informal settlements are almost always in disaster prone locations. Typically in area of flooding, land sliding.
Commitment to sustainable solutions are closely linked to ownership of location and related problems.

Capacity Building in Land Administration

- **Scientific**
  - concepts
  - models
  - methodology

- **Operational**
  - operations
  - management
  - governance

School for Land Administration Studies
Thank you
Let us move towards engineering more Resilient Cities