

Applications of Crowdsourcing for Development and Disaster Response

Leveraging Crowdsourced mapping Approaches for Disaster Risk Reduction

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What problems are we solving?

- Where should we build safer schools?
- How should we target retrofitting projects towards most at-risk infrastructure?
- How can disaster management agencies best plan to respond to an event?
- And what are the tools to do it?





Risk Assessment Concept

Hazard Level

Impact estimate to manage risk

People, buildings, roads etc

What is at risk?

Population densities, building surveys, etc from bureau of statistics, local data or public sources such as OpenStreetMap



Community based Mapping

- Working directly with communities
- Creating multi-purpose maps: settlement planning, poverty mapping, disaster preparedness





Jakarta Contingency Planning



- Decision making for Flood preparedness requires data to inform:
 - Mitigation plan
 - Contingency plan
 - Logistic distribution
 - Human resource allocation
 - Evacuation
- Detailed data for better preparedness
- Led by Jakarta Province Disaster Management Agency (BPBD) support from BNPB, AusAID/AIFDR, HOT, OCHA, World Bank/GFDRR



Hybrid Participatory Mapping

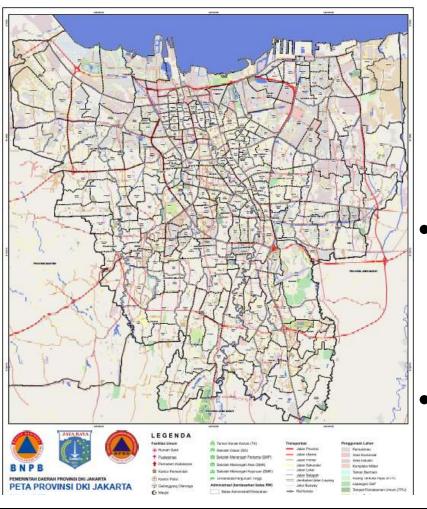
- Engagement of Local Government, trained university student mappers
- Rigorous quality control, support from national mapping agency







Jakarta Contingency Planning



500 representatives from Jakarta's 267 Villages and University of Indonesia students helped to map:

- 6,000 buildings and critical infrastructure including schools, hospitals, and places of worship
- 2,668 sub-village boundaries



OpenStreetMap INDONESIA

- ✓ open source tools for online or offline mapping
- ✓ a common platform for uploading and hosting data with free and open access
- ✓ an active global community of users
- ✓ Customized resources for growing community in Indonesia: http://en.openstreetmap.or.id/



Africa Leading the Way

Examples in World Bank projects

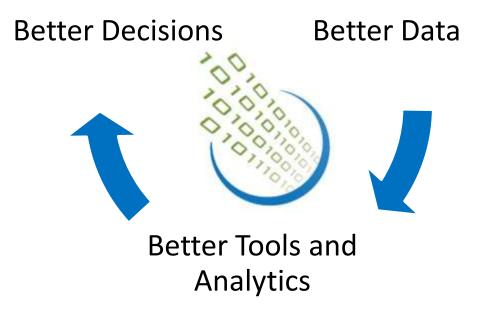
- Majority of applications for community development and other non-DRM
- Growing used for risk reduction
- Strong NGO support: Ground Truth, Humanitarian OpenStreetMap, Public Laboratory





Open Data for Resilience Initiative

OpenDRI encourages and facilitates the sharing of climate and disaster data to enable more effective decision-making by providing the rationale, technical assistance, and tools for data sharing.





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