Participatory 3-Dimensional Mapping (P3DM) for Disaster Risk Reduction

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Community-Based Disaster Risk Reduction

- It is widely acknowledged that disaster risk reduction (DRR) should be community-based.

- CBDRR should integrate both bottom-up and top-down actions as well as indigenous and outsiders' knowledge.

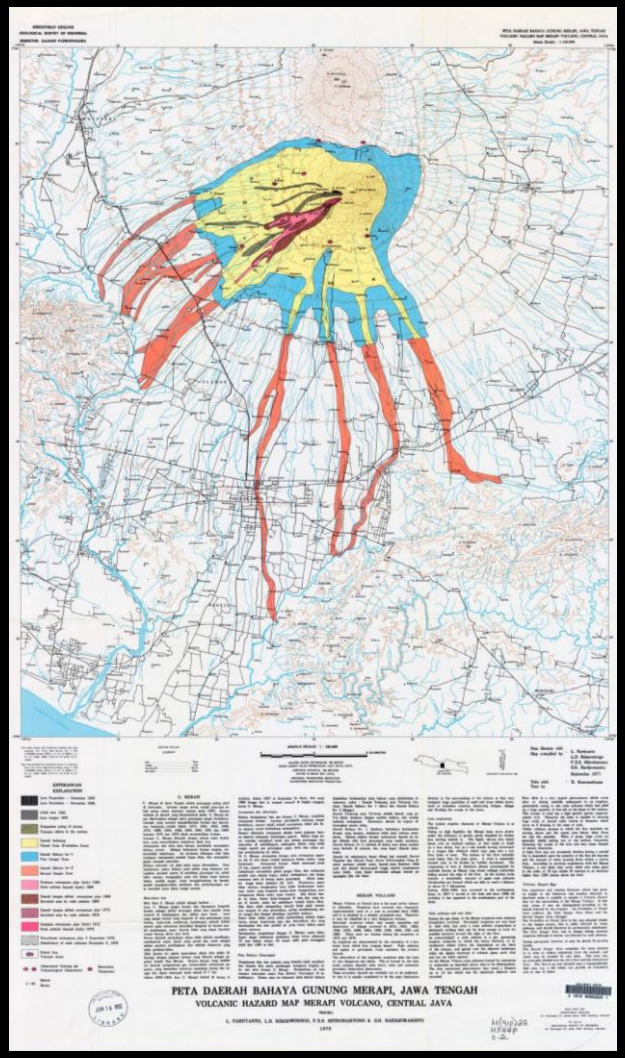
- Therefore DRR should involve a large array of stakeholders, including local communities, NGOs, local and national governments, scientists, school communities, faith groups, private sector institutions, etc.

How do we foster dialogue among those stakeholders?

- CBDRR often limits to local communities and NGOs partners.

- Scientists often dismiss indigenous knowledge.

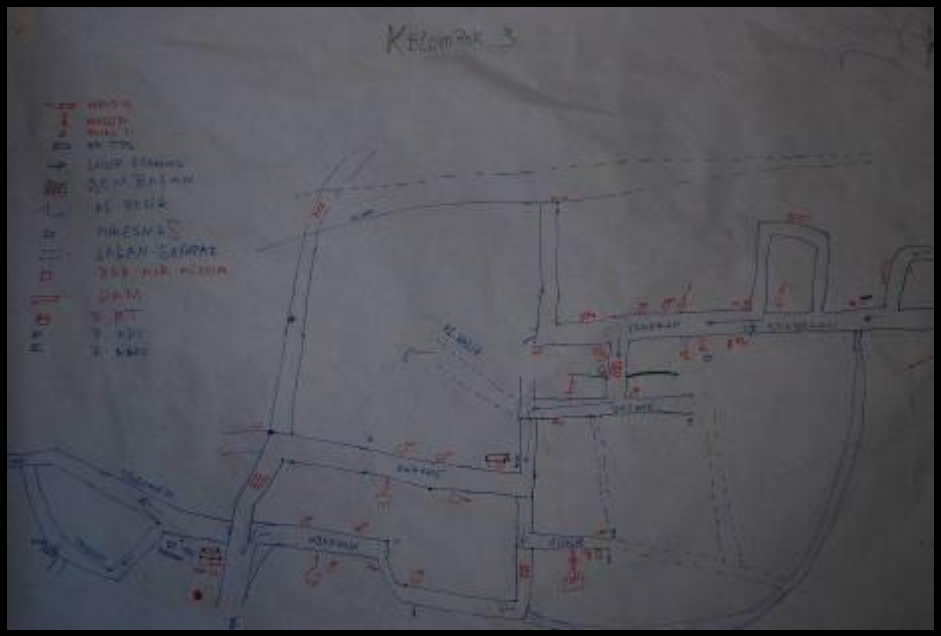
- Local governments are often enclosed within top-down and command-and-control national disaster management frameworks which give them little freedom for alternative initiatives.



Top down actions - Scientific knowledge

GAP ?

Bottom up actions - Indigenous knowledge



Participatory 2D sketch map of a village on the slope of Merapi volcano, Indonesia, July 2009

We need tools which provide space for dialogue

Participatory 3D Mapping consists in the building of stand-alone scaled relief maps over which are overlapped thematic layers of geographical information.

Participatory 3D mapping in Borongan, Eastern Samar, August 2007

1. P3DM enables a large array of stakeholders to collaborate

Participatory 3D mapping in Masantol, Pampanga, August 2008

2. P3DM is cheap and fosters the use of local materials

Participatory 3D mapping in Borongan, Eastern Samar, August 2007

Participatory 3D mapping in Masantol, Pampanga, August 2008

Participatory 3D mapping in Masantol, Pampanga, August 2008

3. P3DM spurs the participation of all sectors of communities

Participatory 3D mapping in Borongan, Eastern Samar, August 2007

4. P3DM emphasizes indigenous knowledge

Participatory 3D mapping in Borongan, Eastern Samar, August 2007

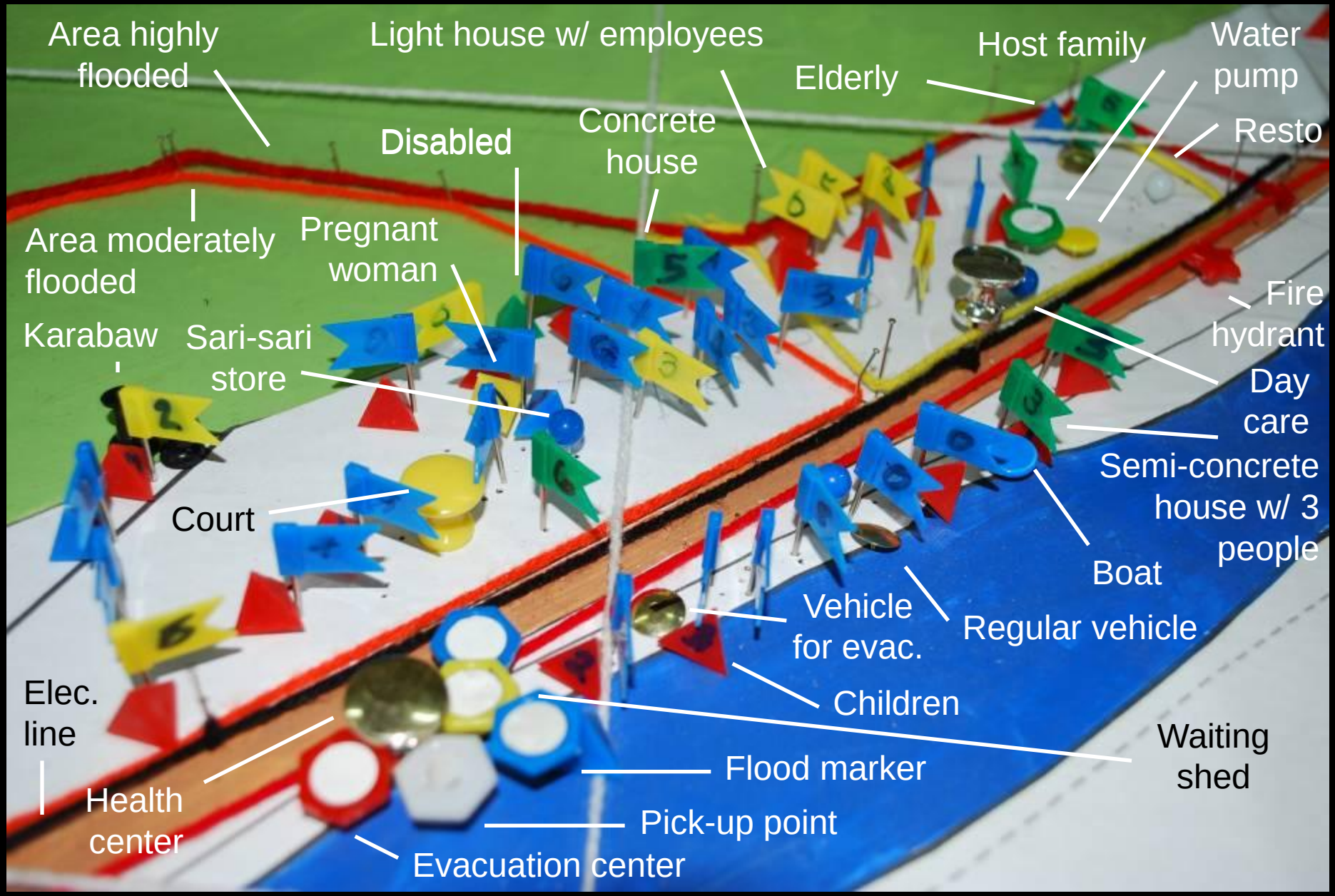
5. P3DM enables to plot community features and vulnerability

Participatory 3D mapping in Borongan, Eastern Samar, August 2007

6. Hazard mapping from people's and scientists' perspectives

Participatory 3D mapping in Masantol, Pampanga, August 2008

7. P3DM increases people's perception of their vulnerability



Participatory 3D mapping in Dagupan, Pangasinan, July 2009

8. P3DM facilitates community-based DRR

Participatory 3D mapping in Borongan, Eastern Samar, August 2007

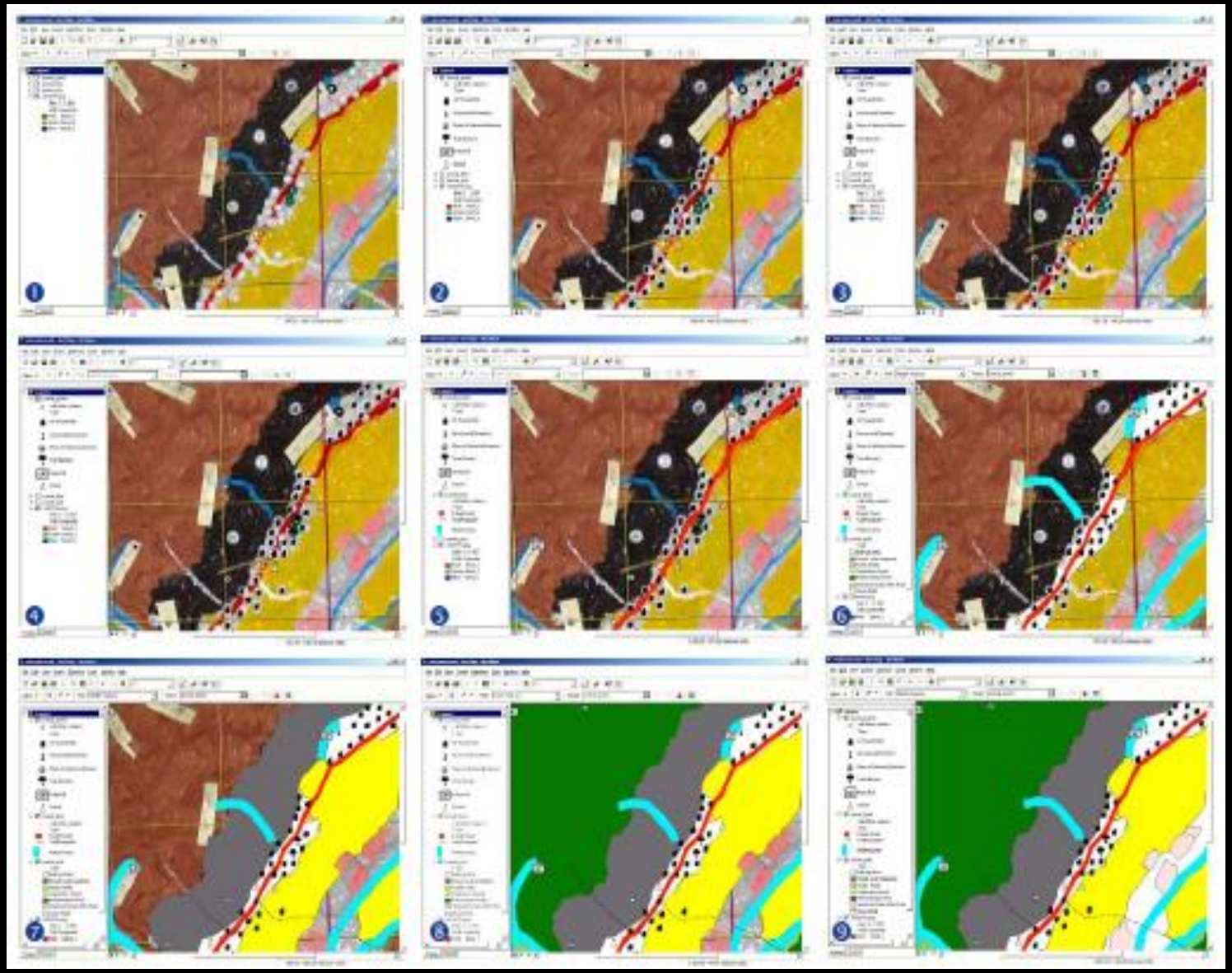
9. P3DM integrates CBDRR into development planning

Participatory 3D mapping in Masantol, Pampanga, August 2008

10. P3DM may be used beyond the stakeholder community

Participatory 3D mapping in Dagupan, Pangasinan, July 2009

11. P3DM data may be integrated into GIS



Integration of P3DM data into Geographic Information Systems
(*Rambaldi and Callosa-Tarr, 2002*)

Conclusions

• P3DM is a tool which cannot stand alone. It should be combined with other tools common to vulnerability and capacities analysis (VCA) and participatory and learning actions (PLA).

• P3DM only partially covers social vulnerability / capacities and better applies to physical vulnerability / capacities.

• Variation of vulnerability and capacities in time (especially on the short term) according to population mobility, is another issue still to be addressed on the maps.

• P3DM is also highly dependent on the scale chosen for the map and thus on the space for storing it.

• Better sustainability is achieved when monitoring and upgrading of the map rely on the long-term implication of mapping facilitators from local NGOs or governments.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The end!
Thank you very much!