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ASSESSING THE FEASIBILITY OF USING LOCAL SPATIAL KNOWLEDGE IN DISASTER RISK MANAGEMENT IN GEORGIA

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BACKGROUND AND PROBLEM STATEMENT

Background

- DRM;
- Risk (Hazard, vulnerability and capacity);
- LSK is an oldest, accumulated practices/knowledge that is unique to certain local people in particular geographic area.



Problem statement

- Georgia is highly prone to natural hazards;
- There is also a lack of relevant detailed information needed for effective DRM, and a lack of interaction between local communities and government organisations.





RESEARCH OBJECTIVES

Assess the feasibility of using local spatial knowledge about hazard, vulnerability, and coping capacity in DRM in Georgia.

- 1. Evaluate the existing situation in Georgia regarding DRM;
- 2. Critically review the methods of acquiring LSK from communities on hazards, vulnerability and coping capacity in a selected study area;
- 3. Test the potential for mapping LSK integrated with scientific knowledge;
- 4. Review the opportunity of acquiring and utilising LSK for DRM activities at different government levels.



RESEARCH METHODOLOGY



STUDY AREA (FIELDWORK IN KHELVACHAURI MUNICIPALITY, VILLAGE GONIO) AND WORKSHOP IN DUSHETI MUNICIPALITY

- Photo-mapping;
- Semi-structured interviews;



- Personal observations, open-ended interviews;
- 2 day fieldwork in Mleta using Cyber tracker;







MAIN FINDINGS FROM THE COUNTRY ANALYSIS REGARDING DRM

- Legal framework;
- Institutional framework
 - Key institutions (NEA, EMD, MRDI);
- DRM is not a priority;
- Emergency respond oriented;
- Lack of detailed data.

Some progress

 International organizations, NGOs Matra project;









FIELDWORK EXPERIENCE

About Tools

- Photo mapping;
- Semi structured interviews with GPS;
- Mobile mapping (Cybertracker).

About local people and government officials

- Local people indifferent;
- Officials are willing to use LSK but have to be cross checked;







INTEGRATION OF LSK AND EXPERT KNOWLEDGE ON HAZARDS

- Lack of detailed hazard maps at institutions;
- Lack of experience in flood hazard modeling;
- Landslide susceptibility map did not match with LSK;
- No credibility to LSK by the experts for LSK incorporation;









MAPPING VULNERABILITY AND CAPACITY

Vulnerability was not cross checked by the local people;





PURPOSES FOR ACQUIRING LSK

- a) Local hazard, vulnerability and capacity assessment needed by NEA (pg45)
 Challenges:
- Lack of staff;
- Vulnerability and capacity is not a priority for NEA
- Community participation.

b) Hazard/Incident reporting to central office
 of EMD or NEA

Challenges:

- Awareness campaign will be needed;
- Communication access;

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Incentives for people are necessary.





SOME GENERAL CONSTRAINTS AND OPPORTUNITIES FOR LSK USAGE BY INSTITUTIONS

Constraints

- Poor resources;
- No legal framework for LSK acquisition;
- The local communities indifference without incentives;

Opportunities

- Pressure from outside (international on-going projects);
- NGO's are involved;
- ICT development is on-going;
- Institutions are willing to accept the LSK, but cross check is needed.





CONCLUSIONS

- Low priority of DRM by policy makers;
- Wider range of tools would be more appropriate;
- LSK is not perceived as fully reliable by institutions;
- Local hazard/incident reporting is more feasible than local vulnerability and capacity assessment;
- Local community not only as information providers but as well as actors;





RECOMMENDATIONS FOR FUTURE RESEARCH

Need for in-depth interviews with government officials for required information identification before fieldwork;

Organise community discussions for cross checking the individual responses about hazards, priorities, vulnerability, capacity and needs for risk reduction;





THANK YOU

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RESEARCH QUESTIONS

- What is the legislative and institutional framework for DRM in Georgia?
- What is the existing (geo) information related to DRM used by the key institutions?
- What is the information gaps related to DRM of key institutions?
- What is the attitude of institutions regarding LSK?
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 - What methods are suitable for acquiring LSK about DRM in study area?
 - What LSK about DRM can be collected in the study area?
- What are the advantages and disadvantages of methods used for LSK collection?





RESEARCH QUESTIONS

- What are the hazard/risk maps from different sources (LSK maps; scientific maps; Local official maps; Government Institution maps) potentially available in the study area?
- What are the differences between the maps?
- What LSK about vulnerability and coping capacity can be presented on the maps?
- How can LSK be used in the national and local level DRM activities?
- What are the main institutional opportunities and constraints to use LSK in DRM in Georgia?





PHOTO MAPPING







RESPONDENTS PERCEPTION ON HIGH HAZARD FREQUENCY AND INTENSITY OVERPLAYED ON MAYORS PHOTO MAPS



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EXISTING HAZARD/RISK MAPS AVAILABLE AT GOVERNMENT







mitory of Georgia Damaged by Landslide and

DATA AND METHODS USED FOR LANDSLIDE SUSCEPTIBILITY MAPPING USING STATISTICAL APPROACH



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GENERAL PROCEDURE FOR HAZARD, VULNERABILITY AND CAPACITY ASSESSMENT

