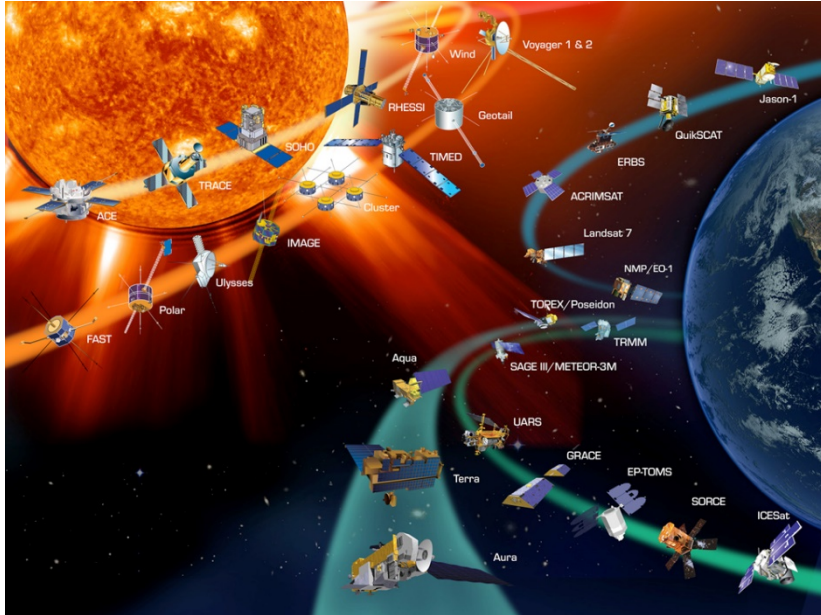# Proposal to advance Step 3 activities

Giriraj Amarnath
International Water Management Institute (IWMI), Sri Lanka
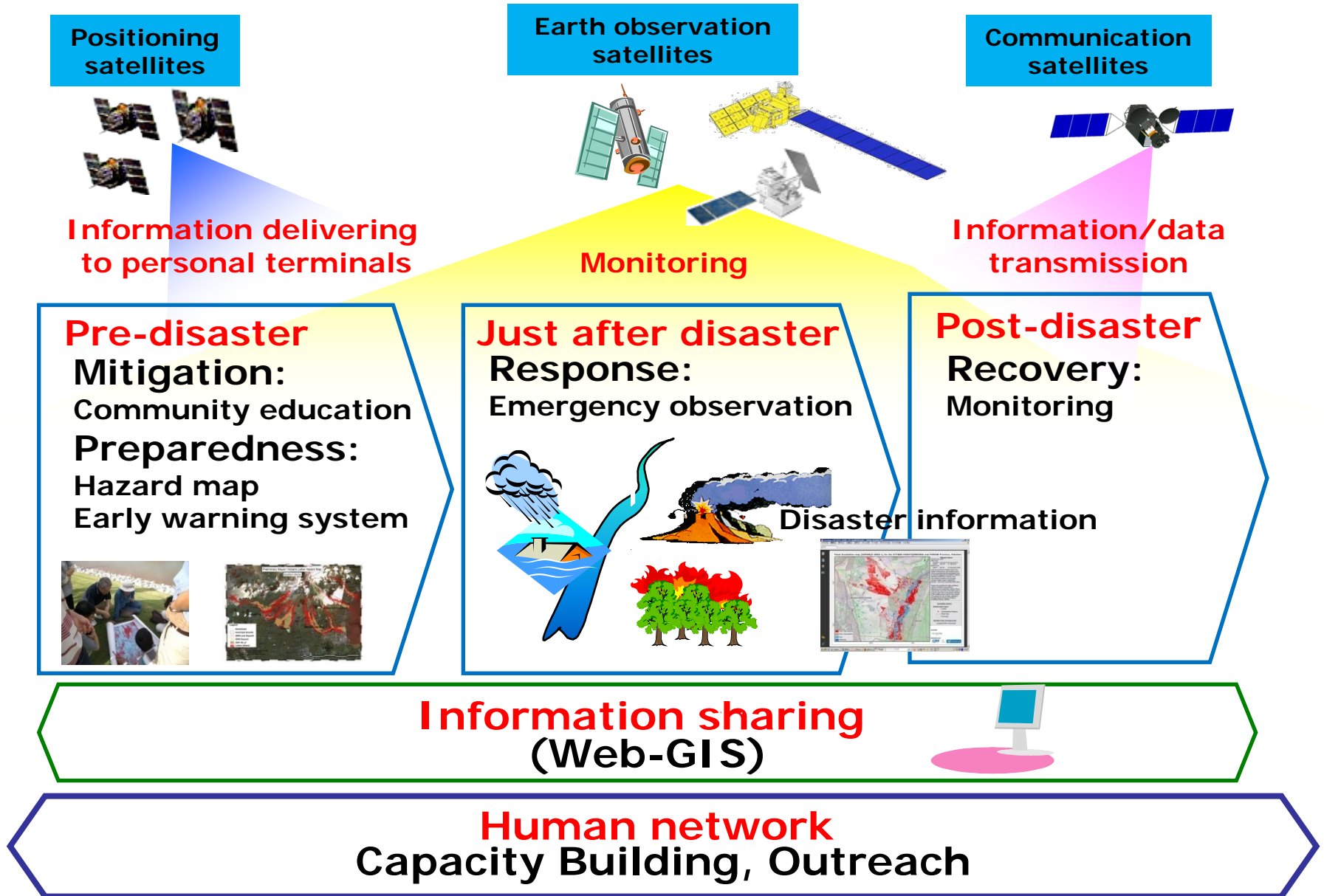**Manzul Hazarika**
Asian Institute of Tecnology (AIT), Thailand

5th Joint Project Team Meeting (JTPM 2018) for Sentinel Asia STEP3
Howard Civil Service International House, Taipei, Taiwan

Concept of Sentinel Asia Step 3

Positioning satellites

Earth observation satellites

Communication satellites

Information delivering to personal terminals

Monitoring

Information/data transmission

Pre-disaster
Mitigation:
Community education
Preparedness:
Hazard map
Early warning system

Just after disaster
Response:
Emergency observation

Disaster information

Post-disaster
Recovery:
Monitoring

Information sharing
(Web-GIS)

Human network
Capacity Building, Outreach

Sendai Framework for Disaster Risk Reduction

4 PRIORITIES FOR ACTION

Priority 1 — Understanding disaster risk
Policies and practices for DRR should be based on an understanding of disaster risk in all its dimensions of vulnerability, capacity, exposure of persons and assets, hazard characteristics and the environment.

Priority 2 — Strengthening disaster risk governance to manage disaster risk
Disaster risk governance at the national, regional and global levels is of great importance for an effective and efficient management of disaster risk.

Priority 3 — Investing in disaster risk reduction for resilience
Public and private investment in DRR are essential to enhance the economic, social, health & cultural resilience of persons, communities, countries, their assets, as well as environment

Priority 4 — Enhancing disaster preparedness for effective response, and to "Build Back Better" in recovery, rehabilitation and reconstruction
Strengthened disaster preparedness for response, recovery, rehabilitation and reconstruction are critical to build back better

National and local dimensions

Regional and global dimensions

Reference: ISDR

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Vision:

To review previous activities, identify problems, propose solutions and lead to implement Step3 to enhance the contribution of space based technology to DRR (Disaster Risk Reduction)

Activities and actions:
- Concept note - linking Step3 to Sendai framework for disaster risk reduction
- DRR priority of actions with JPTM members
- Develop fund raising strategy with donors and JPTM members to implement Step3

Action plan
- Review existing support by Sentinel Asia to identify gaps and challenges
- Develop theory of changes to demonstrate the positive impact in the field

Time-frame
- 9 to 12 months
- Depending on the support from JPTM members, SAS and funding support to complete the activities
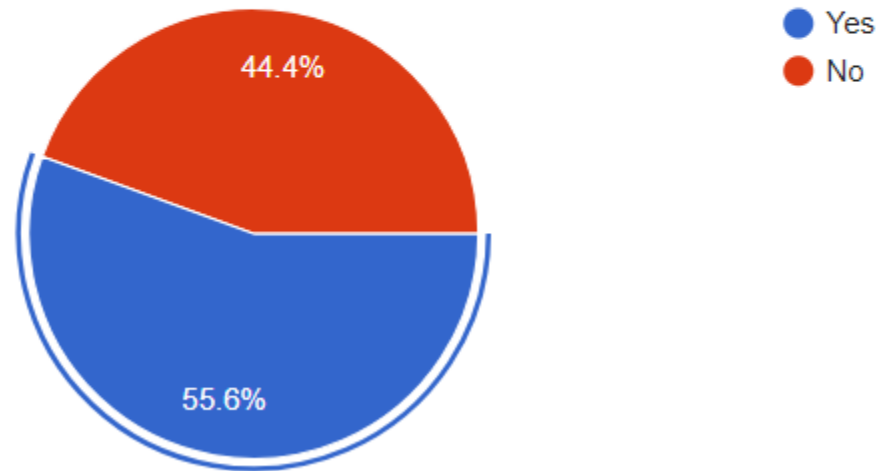
Outcome
- Framework and investment plan to promote substantial reduction of new and existing disaster risk through integrated approach to increase preparedness for response, recovery and thus strengthen resilience

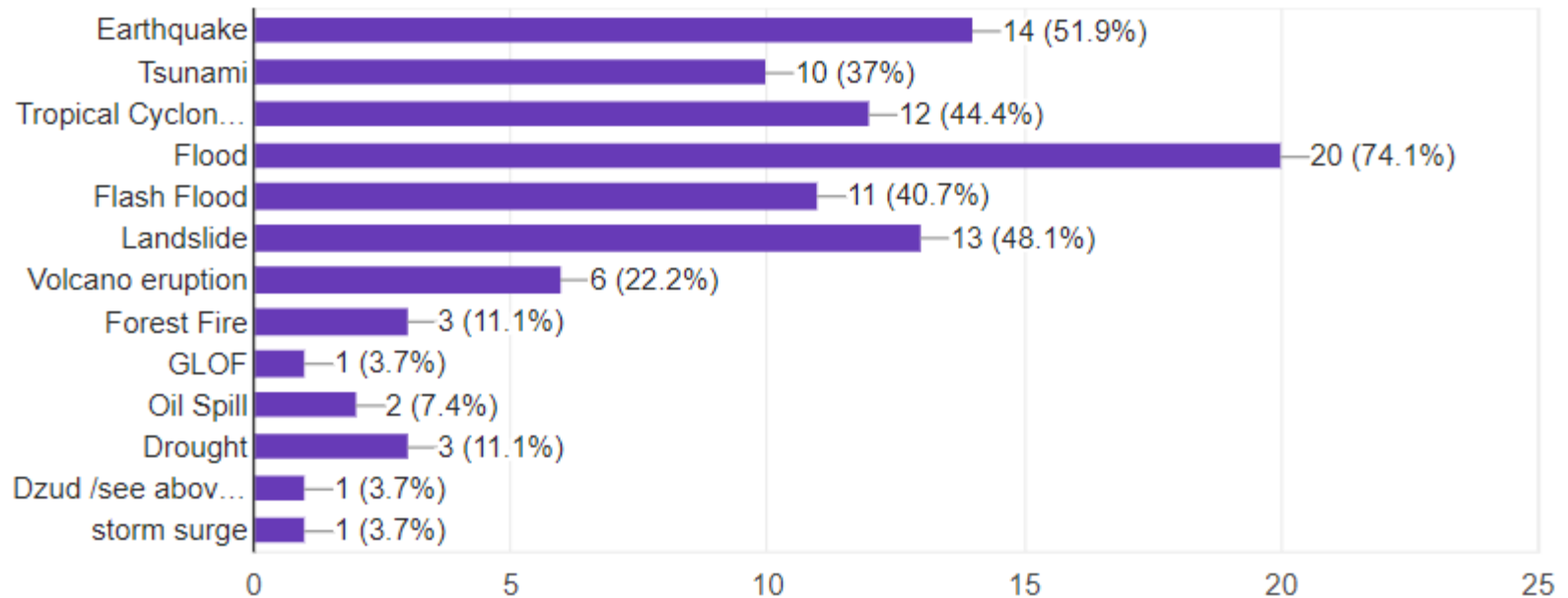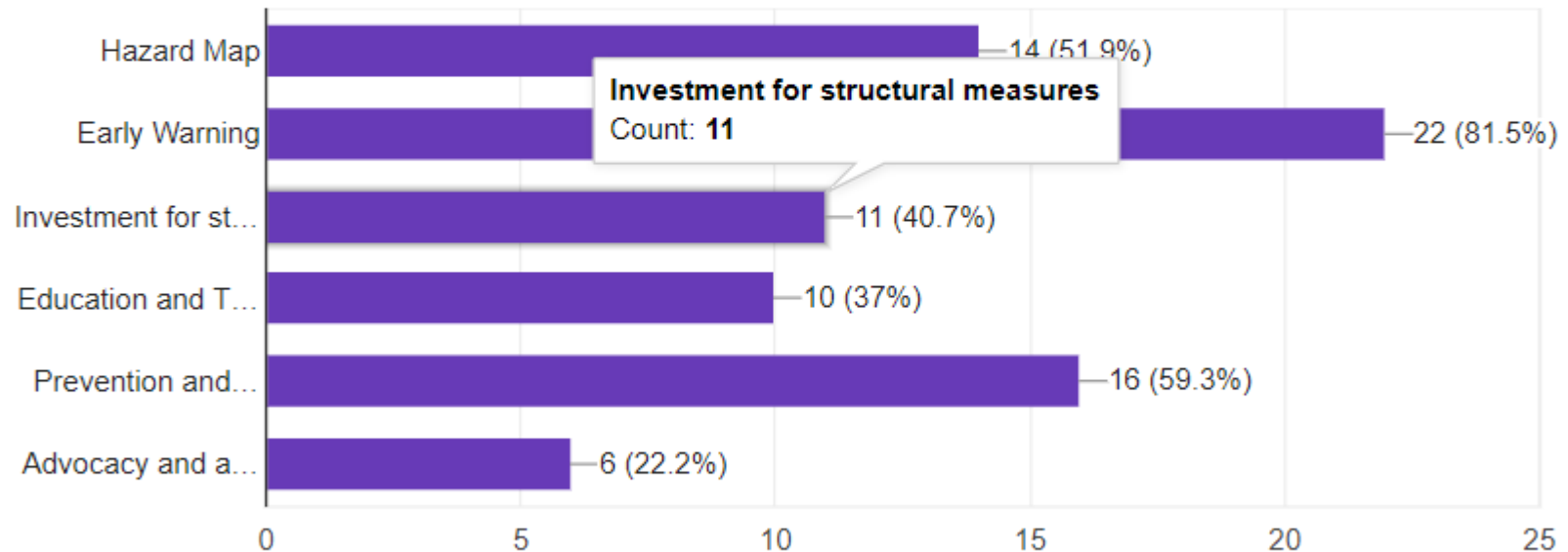Questionnaire on Sentinel Asia Step3 and Sendai Framework

Which of the following natural hazard caused the most severe loss and damage in your country of residence? (Multiple choice)
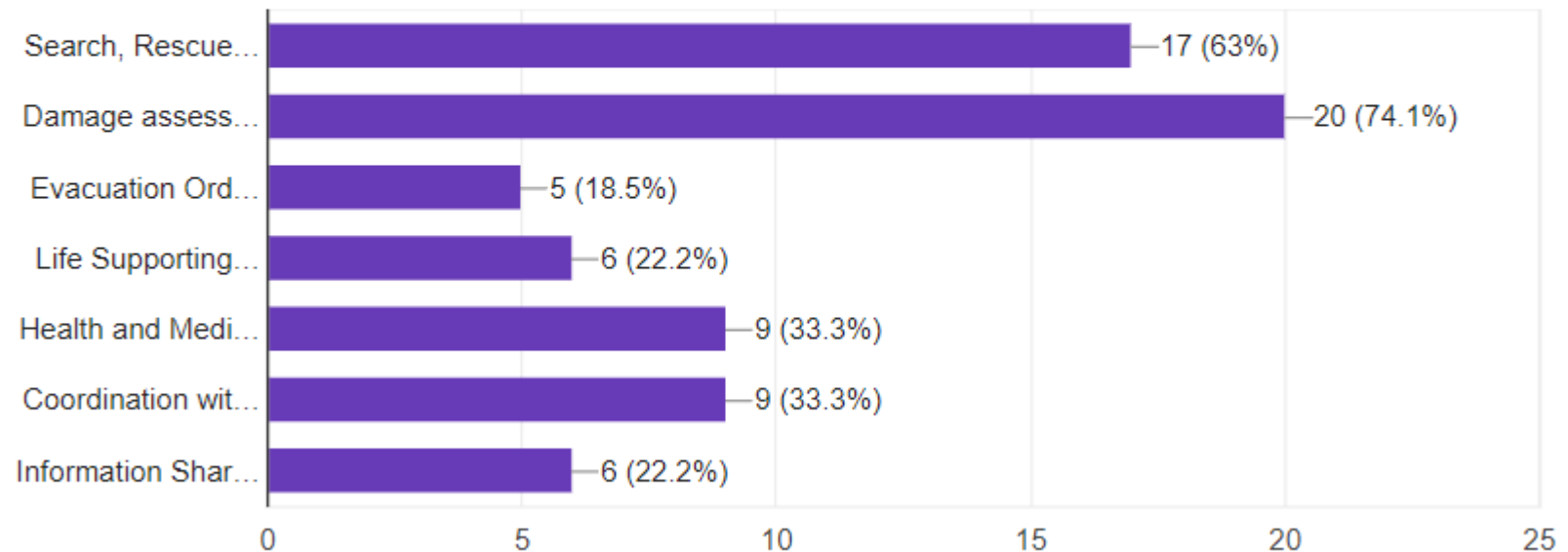
27 responses

Which of the following activities were most challenging during the pre-disaster phase ? (Multiple choice)
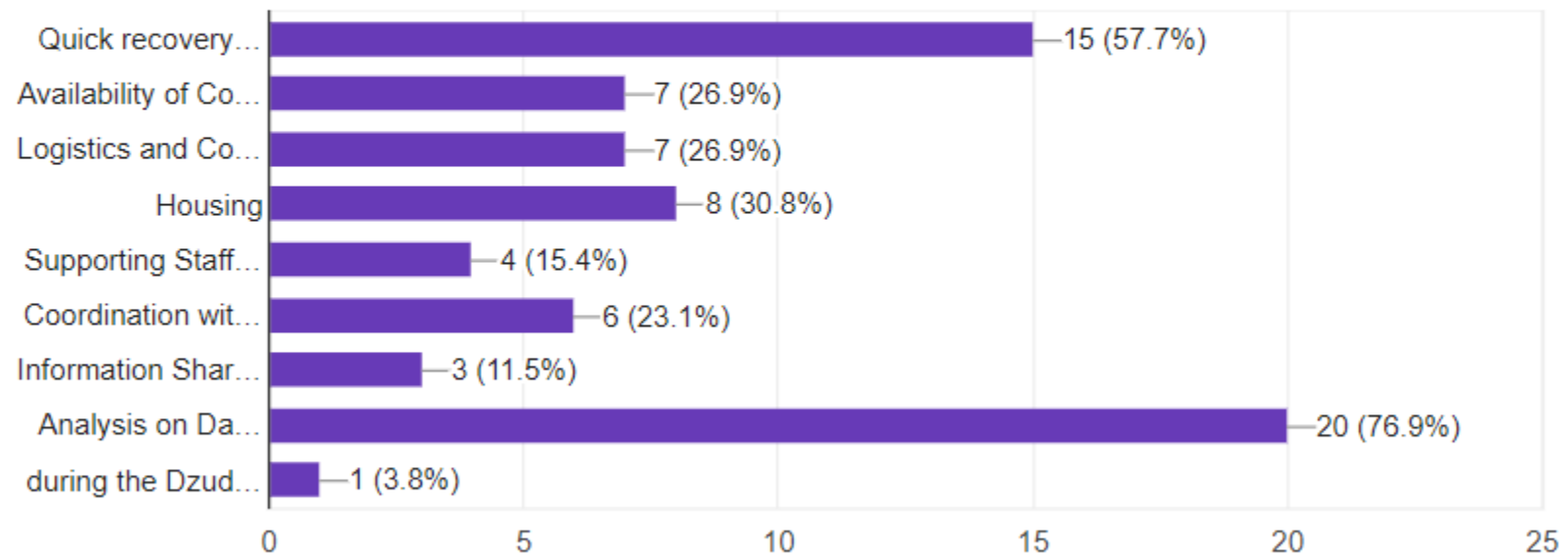
27 responses

Which of the following emergency response activities were most challenging? (Multiple choice)
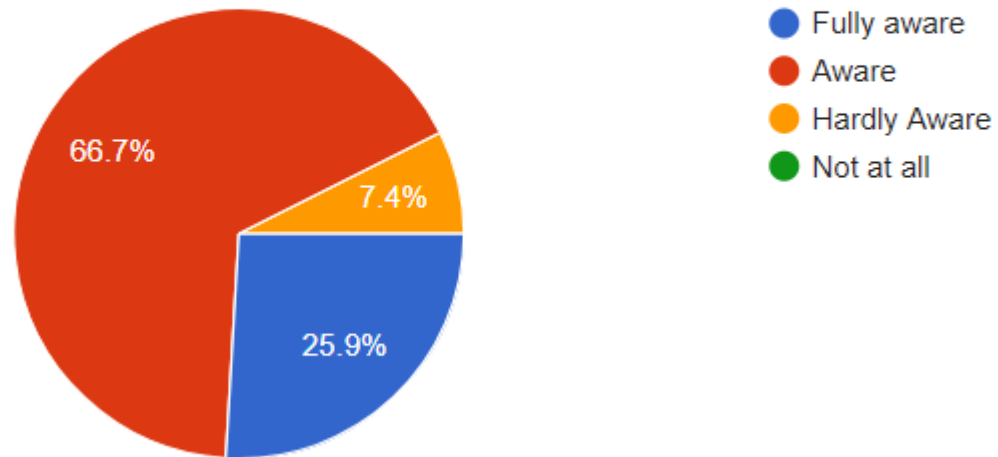
27 responses

Which of the following activities were most challenging in recovery and reconstruction phase? (Multiple choice)

26 responses
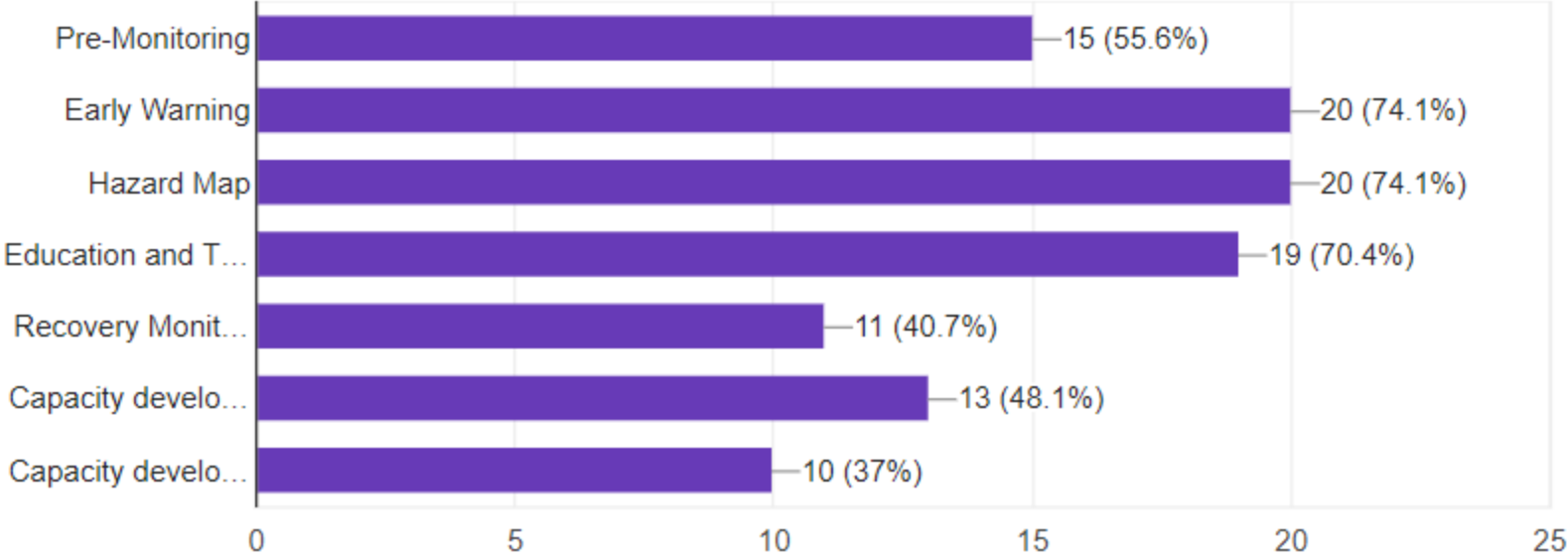
Are you aware of Sentinel Asia Step3 for Disaster Risk Reduction?

27 responses

- Fully aware
- Aware
- Hardly Aware
- Not at all

66.7%

7.4%

25.9%

What do you expect Sentinel Asia Step3 for your work? (Multiple Choice)
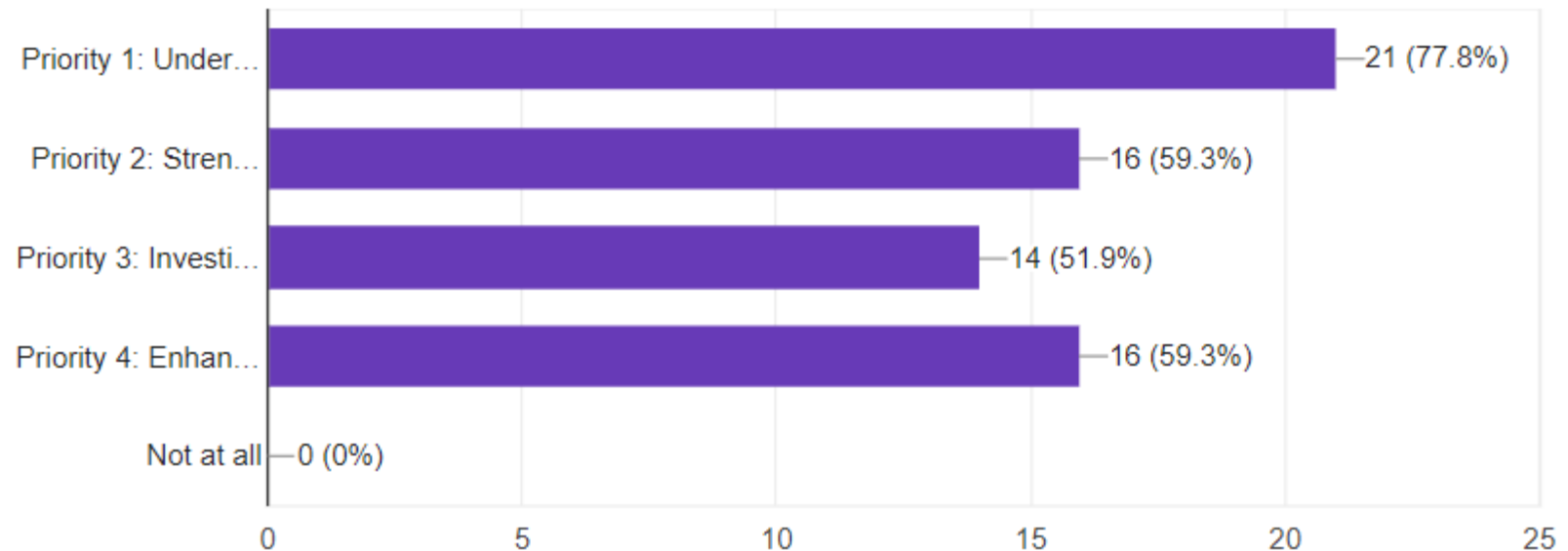
27 responses

What type of priorities for action do you work ? (Multiple choice)

27 responses

- Priority 1: Under... — 21 (77.8%)
- Priority 2: Stren... — 16 (59.3%)
- Priority 3: Investi... — 14 (51.9%)
- Priority 4: Enhan... — 16 (59.3%)
- Not at all — 0 (0%)

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How SAS Step3 and Sendai Framework addresses the learnings?

Strategic focus

SAS proposes a framework with three major phases is align to Step3 strategy where programs activities need to put their attention. Research, innovation and knowledge management are the instruments to improve the strategic environment for this framework.

The phases are:

1. build stability through preparedness, response and resource mobilisation;
2. improve adaptive strengths by building resilient livelihoods and access to basic services along with social safety nets;
3. develop transformative capacity by encouraging good governance and transformation of leadership.

Proposal to strengthen SA Step3 implementation

In particular, this support will focus on:

1. Sharing Space-based Information: **Procedural Guidelines for Disaster Emergency Response** in Asia Pacific countries; (during disaster)

2. Promote **standard approach and tools** in multi-hazard risk assessment using space-based information; (before disaster)

3. **Monitoring and assessment** of major natural disasters using space technology for disaster risk investment; (during/after disaster)

4. Up-scaling and accelerating **implementation of multi-hazard early warning systems** and services; (before disaster)

5. Facilitating the consolidation of **case studies and lessons learned** from SA and JPTM members the exchange of experiences among regions, countries, cities and local communities and the analysis of emerging related issues (capacity development);
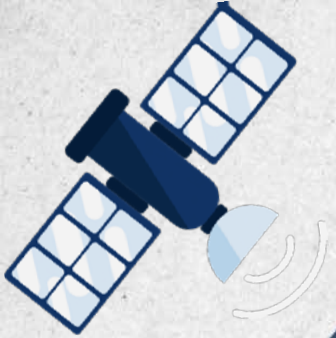
Understanding disaster risk - National level
(relevant to Earth observation)

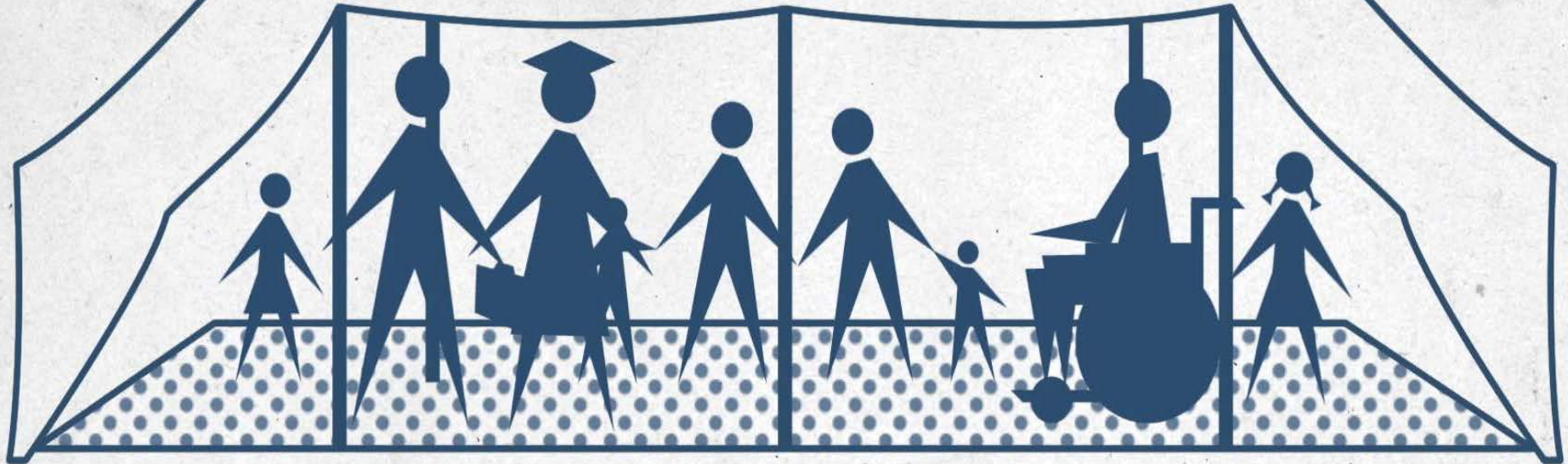| Activities	SAS	JPTM Members	Outcome
Promote the collection, analysis, management and use of relevant data and practical information.	Limited efforts from SAFE project	Coordinate with end-users to implement the best practices in understanding disaster risks with guidelines and promote project case study across various sectors for risks informed decision making process.	A holistic risk assessment that considers all relevant hazards and vulnerabilities, both direct and indirect impacts, and a diagnosis of the sources of risk will support the design of policies and investments that are efficient and effective in reducing risk
Encourage the use of and strengthening of baseline and periodically assess disaster risks	No		
Develop, update periodically and disseminate, as appropriate, location-based disaster risk information, including risk maps to decision makers,	Limited efforts from SAFE project		
Promote real-time access to reliable data, make use of space and in situ information, including GIS, and use information and communications technology innovations	Only during disasters		
Build the knowledge of government officials at all levels, civil society, communities and volunteers, as well as the private sector, through sharing experiences, lessons learned, good practices and training and education on disaster risk reduction,	Limited efforts	Note: Implement either with ongoing projects being implemented by member states or require new funding sources	

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SAS Step 3 Theory of Change

Outcome	Output	Explanation of relevant activities	Assumptions need to be considered	Risk Factor
1. **Community and Institutions are mobilized with information, skill and resources to respond and mitigate shocks and stresses.** *Here it is expected that both vulnerable communities and local institutions will become efficient enough with received information, knowledge and skills in the face of a disaster and climate change and proactively respond to their demands.* *In order to gain certain self sufficiency at the community and institution level, 3 major outputs need to be achieved.*	1. **Contingency plans are effective and practiced by community and LGIs**	Through **capacity building** and improved **coordination and organization**, contingency plan at local level needs to be operational and responsive for the vulnerable targets	Institutions are actively offering the emergency services and communities are practicing it actively.	Low risk
	2. **Early warning messages are effectively relying for on time response**	Through **innovation** and further **awareness** or **promotion**, early warning messages are projected to reach the community for on time response. Such early warning messages include – TV/ Radio announcement or SMS.		
	3. **Risk informed feedback loop is present and local community leaders inclusive of women, older people and socially excluded are participating**	To create a risk informed feedback loop for local authorities, improved **coordination and organization** needs to be achieved at the local community level. Therefore, certain **capacity building activities** needs to take place so that local community leaders inclusive of women, older people and socially excluded can voice out their concerns. Parallel to this practice, **budget allocation and funds** need to be organized for implementing the risk informed planning and activities. Such as – canal excavation, dam repair etc.	The practice behaviour of feedback culture is exercised.	Medium risk in case of proper budget allocation and fund raising capacity
2. **Communities are practicing resilient livelihood and benefitted from social safety nets and offered basic services**	1. **Communities are practicing alternative livelihood (on farm**	Through capacity building, innovation, awareness and promotion, research and knowledge management.	Communities are aware of possibilities for alternative livelihood options.	

https://www.preventionweb.net/publications/view/50801

ENSURING THAT **KNOWLEDGE**, **SCIENCE** AND **DATA** ARE AVAILABLE TO ALL

Thank You