REPORT ON THE HAZINFO DISSEMINATION WORKSHOP BANGLADESH

Sharing Knowledge on Last-Mile Warning: Community-based Last-Mile Warning Systems

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OVERVIEW

This report presents a summary of the comments and observations with respect to the Workshop on Sharing Knowledge on Last-Mile Warning: Community-based Last-Mile Warning Systems, which took place in Dhaka on October 25, 2007. LIRNE*asia* and Bangladesh Network Office for Urban Safety (BNUS) – Bangladesh University of Engineering and Technology jointly organized the Workshop. The Workshop provided an outstanding opportunity for researchers, students, practitioners, and policy makers in Sri Lanka and Bangladesh as well as invited international private sector participants to address and discuss early warning activities from the South Asia Region.

The focus was on

- Obtaining feedback on the findings of "Evaluating Last-Mile Hazard Warning Dissemination: A Research Project",
- Exchanging lessons learned from end-to-end hazard detection and alerting systems that serve grassroots communities in Bangladesh,
- Merging knowledge from Bangladesh to develop practical solutions for communicating risk information to rural communities
- Analyze and determine methodologies for measuring the performance of Community-based Early Warning Systems
- Commencing dialogue on the development of a regional last mile warning system.

OBSERVATIONS AND COMMENTS

The excitement started with heated debates between the academics and the bureaucrats. Dr. AMM Safiullah, Vice Chancellor of BUET acted as a moderator to point out the mistakes made during past events and the need to upgrade existing systems based on the lessons learned and not immerse in the glory of "half baked" systems. The Bangladeshi participants agreed on the proof that the existing systems for Cyclone preparedness do not apply to all-hazards; especially tsunami and earthquake; modification is eminent.

The audience had to be reminded constantly that the LIRNE*asia* tested Last-Mile Hazard Warning System was not a traditional warning system that is usually used by governments but it was a community-based model used for alert and notification. The HazInfo project and other similar community-based hazard information systems can only be responsible for providing clear and accurate hazard information alerts. Another issue that arose from discussions, was whether individual nations within the South Asian region should replicate hazard analysis, leave that responsibility to international hazard analysis organizations (such as the Pacific Tsunami Warning Center), or have a regional hazard analysis entity. Currently, Bangladesh is in the process of replicating similar tsunami models and earthquake risk maps already available at international hazard analysis organizations. The much studied Common Alerting Protocol (CAP) used in the HazInfo project was new to the Bangladesh audience. They are yet to understand the value and strengths of using this content standard.

Table 1 –Presentations and notes from each of the sessions

Presentation Title and Speaker	*Presentation Main Points*	*Rapporteur Notes/Comments*
Inauguration Mr. K. M. Massud Siddiqui, Director General, Disaster Management Bureau (DMB) dmb@bttb.net.bd	It is a tricky subject for government to make early warning Need to identify technical deficiencies Lessons are not only for government policy makers but also must activate CBO, NGO, Private Sector, Civil Society, Medics, etc DG invited LIRNEasia to contact his bureau for future collaborative work	
Elements of Community-based warning Prof. Rohan Samarajiva, Executive Director, LIRNE*asia* samarajiva@lirne.net	ICTs play a key role in distancing the physical world where hazards occur from the symbolic world where media and first responders live giving time to alert the public Elements comprise national early warning center, government first-responders, media, community CAP Broker a 1-to-many software application is an essential non-existent component essential for last-mile warnings Planners must take in to consideration	

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	Complementary Redundancy when deploying ICTs in communities for alert and notification	
Discussion Director, Bangladesh Meteorological Department directorbmd2005@yahoo.com	Cyclone warnings are initiated by the Meteorological department Tsunami warnings are initiated by the Geological department, which was practiced during Nias earthquake in March 2006 as well as Bengkulu earthquake in September 2007 Bulletin received from Japan had mentioned that it would take 9 hours before tsunami would hit Bangladesh coast but did not mention wave height; hence ran simulation model to estimate wave parameters Warning was issued and withdrawn at 0120 September 12th Bangladesh Govt. instructed to "play fail safe"	Heated debate between director and audience based on the fact that experts were not consulted prior to issuing warning General public was forced to understand expert knowledge in early warning
Session I: Local Transmission of Warning An Overview of the Bangladesh Cyclone Preparedness Program Mr. Md. Nasir Ullah, Director, Cyclone Preparedness Program, Bangladesh Red Crescent Society cpp@bdmail.net	Overview of CPP CPP and ways in which local communities receive information about cyclones through BRCS' extensive network of trained volunteers. Use of HF and VHF transmitters; HF for short range and VHF for long range Street dramas best way of community awareness	How are volunteers trained to receive and disseminate cyclone information? 1965 Cyclone shelters collapsed after 5 years because they were not utilized during normal times Current cyclone shelters are better utilized as they are integrated in to schools
Nuwan Waidyanatha Project Manager, LIRNE*asia* Waidyanatha@lirne.net	Presented data on transmission of warning to communities through the experience of the HazInfo project.	

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Discussion Dr. AMM Safiullah, Vice Chancellor, BUET safi@ce.buet.ac.bd	Need to perfect warning and avoid false warnings Warnings are ineffective if too many simulation models have to be run to predict situation Need schemes for better prediction Communicated message has to be precise adequate proof that warning is an inexact art Too much satisfaction with existing systems will not help drive for improvement of current systems Purpose is saving lives Tell people (be true) if warning system is imperfect	Is cyclone warning system applicable to all-hazards? Need to address vulnerable area, clarify meaning of warning
Session II: Determination of Hazard from National Level Determination of Hazard from National Level Prof. Aftab Alam Khan, Department of Geology, Dhaka University aftab@univdhaka.edu	Tsunami and Earthquake must be given high priority in Bangladesh Low land, 1 – 2 ft above sea level land area in Bangladesh vulnerable to sea surge and high tidal waves Bangladesh Meteorological Dept. must be authority for cyclone, flood, and tidal warnings but this formal method is not yet decided DART system is inaccurate as the bottom pressure sensor and surface buoy can be activated by other phenomenon; hence, cannot accurately predict tsunami Limitation on DART system must be understood Tsunamis cannot be modeled simply with the use of Laplace and Gaussian equations need to consider other factors Earthquake hazard warning cannot yet be done "almost entire Bangladesh coastal region is free from any potential tsunami threat."	
Determination of Hazard from National Level: Sri Lanka Experience Natasha Udu-gama, Project Dissemination Manager, LIRNE*asia*	Drew comparisons between government action in Sri Lanka during the Indian Ocean tsunami of 26 December 2004 and the tsunami warning of 12 September 2007 National level maybe able to use and integrate elements of the HazInfo project alerting structure in its monitoring and warning relay systems.	

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Mr. Sujit Kumar Debsarma, Pr. Meteorologist and System Manager, Bangladesh Meteorological Department swcbmd@yahoo.com	Tsunami modeled using propagation of gravity waves; better to be modeled using vertical azimuth of pulses Low bandwidth and slow speeds in Bangladesh prevents acquisition of high resolution data for accurate simulations	
Session III: First Responder Action First Responder Action (Bangladesh Experience) Dr. Ashutosh Sutra Dhar, Dept. of Civil Engineering, BUET	Discussed the CDMP-BUET project on the Development Tsunami and Earthquake Preparedness for Cox's Bazaar within the context of the session Clear methods of warning dissemination had not yet been identified and gave results of surveys that demonstrated that while most people knew or heard warnings, not all responded positively or rapidly enough.	
First Responder Action Nuwan Waidyanatha Project Manager, LIRNE*asia* Waidyanatha@lirne.net	Discussed the full process of first responder action from the Hazard Information Hub through to the Emergency Response Plan Coordinators	
Session IV: Methodology, Preparedness, Community Organization and Training WorldSpace Early Warning Systems	Overview of the various satellite radio systems available from WorldSpace Corporation for use in warning systems. During his interactive presentation, Dr. Rangarajan showed the various systems and their configurations.	

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Dr. S. Rangarajan, Senior Vice President, WorldSpace Corp. SRangarajan@worldspace.com		
Methodology, Preparedness, Community Organization and Training: HazInfo Experience Natasha Udu-gama, Project Dissemination Manager, LIRNE*asia* udu-gama@lirneasia.net	Screening of "The Long Last Mile" (HazInfo video)The video gave a comprehensive overview of the background of the project, its inception and implementation in Sri Lanka. Summary of best practices in training, community organization, methodology and preparedness demonstrated within HazInfo project.	
Session V: Next Steps Roles of policymakers, regulators, private sector and civil society Prof. Rohan Samarajiva, Executive Director, LIRNE*asia* (samarajiva@lirne.net)	Working with incomplete probabilistic information Cannot do disaster management work on usual turf based politics Early warning should give priority to "rapid onset' hazards, which will be a catalyst to solving other hazard warning events	Sri Lanka has recorded history of 8 – 9 tsunamis in the past

Recommendations to the Organizers

- Screen HazInfo video at the beginning when government and distinguished guests are present who tend to stay only for the 1st session of the program
- Appoint chairs for each of the sessions to ensure timekeeping
- Have a designated note taker (for workshop minutes)

- Insist presentations are submitted in advance for screening to ensure material is in par with the program, else warn speaker that slot will be reallocated
- Reorganize the program to discuss the methodologies prior to discussing the results
- Ensure that speakers stay through the duration of the workshop to avoid last-minute session changes.
- Provide nametags for participants