

Lessons learnt from tsunami warning issued on 12th September 2007

EW Dissemination in Sri Lanka



People centred EW

- Guiding principles in UNDP Disaster Management acknowledge the objective of people-centered early warning systems is:
- *....to empower individuals and communities threatened by hazards to act in sufficient time and in an appropriate manner so as to reduce the possibility of personal injury, loss of life and damage to property and the environment and loss of livelihoods.*

Participating journalists

- Kumudu Jayasekara (Kalutara provincial correspondent, Lakehouse)
- M. Karandana (Kalutara provincial correspondent, Lankadeepa)
- Thilak Pushpakumara, (Ratnapura provincial correspondent, Divaina)
- Ravindra Medagedara (Ampara provincial correspondent, Lakbima)
- T. Rohana Siriwardena (Secretary, Mass Media Forum)
- S. L. M. Fickeer (Ampara provincial correspondent – Weerakesari)
- Upali Palihakkara (Gampaha provincial correspondent, Lake House)
- M. P. Chandrapala (Hambantota provincial correspondent, Lake House)
- Jagath Gunetti (Galle provincial correspondent, Lake House)
- D. V. Kamal Priyantha (Gamapaha provincial correspondent, Radio Neth FM).
- Abdul Catheef, Rafaideen (Kuchaweli correspondent, Thinakaran)
- Azur Mohamed Cassim (Trincomalee district correspondent, Nawmany weekly newspaper)
- R.G Dharamadasa (Trincomalee BBC correspondent)
- S. Thowfeek (Kinya correspondent, Thinakaran)
- Wilson Wijeratne (Kalutara provincial correspondent, Divaina)
- Somaratne Poddeniya (Kalutara provincial correspondent, Lakbima)

Why journalists over experts?

- The decision to work with provincial based journalists in the evaluation instead of experienced sociologists or DM experts was intentional. We recognize the vital role of media in EW and disaster risk reduction. Disaster experts, state and development experts fully acknowledge the crucial space for the media when it comes to reaching and protecting vulnerable communities.
- Indeed, despite sirens and megaphones that were used by the police to warn people, our surveys showed people switched on the radio and television immediately to get more information on the Sept 12, 2007 alert. This is after all the ultimate goal of EW dissemination.

Cont..

Why journalists over experts?

- The methodology of employing journalists in the evaluation flags their contribution towards creating an expanded role for the media in DM and risk reduction. The wide and deep experience of PANOS of working with media in many countries suggests they are particularly effective in raising and sustaining awareness of hazards and disaster response over the long-term. Working with and engaging journalists in EW evaluations encourages them to realize the importance of their own roles in protecting the lives of the people in the community.
- The inclusion of journalists who were not experts in DM and looked at issues from a layman's perspective provided for an impartial evaluation of the effectiveness of EW mechanisms.
- The journalists developed a sense of ownership of the evaluation project contributing to a sustainable media response in disaster reporting based on a heightened sensitivity.
- The Media's role is not restrictive to mainstream mechanisms such as print and broadcast. The importance of developing tele-dramas and street dramas must not be underestimated.

Contents of report

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Dissemination (Tsunami)
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Terms of reference

- Review practices adapted by DMC to disseminate the Early Warning message particularly that of 12th September 2007
- Review practices adapted by different mass media organizations to disseminate the Early Warning message in general and on 12th September 2007 particular
- Find out the efficacy and efficiency of different media in disseminating the message and educating the public on the incident
- Find out the perception of the public on different communication methods in Early Warning dissemination
- Find out whether there was a geographical or any other difference in message dissemination
- Identify the short falls of the existing system(s) and suggestion for the improvements

Questionnaire

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05. ஏதாவது நடைமுறை அறிவிப்பை முன்பு அல்லது அதற்குப் பின்னர் ஏதாவது காரணத்தினால் கைவிட்டிருக்கிறீர்களா? அல்லது அறிவிப்பு செயல்படாமல் போனதால் அதற்கான பரிகாரத்தைக் கண்டறிந்துள்ளீர்களா?
06. தரவேண்டிய ஏதாவது தகவலைக் கொடுக்க முடியாத காரணத்தினால் அல்லது ஏதாவது காரணத்தினால் அறிவிப்பைக் கைவிட்டிருக்கிறீர்களா?
07. முடிவடைந்த அறிவிப்பை மீண்டும் ஏதாவது காரணத்தினால் கைவிட்டிருக்கிறீர்களா?
08. அறிவிப்பைக் கைவிட்டிருக்கிறீர்களா?
09. அறிவிப்பைக் கைவிட்டிருக்கிறீர்களா?
10. அறிவிப்பைக் கைவிட்டிருக்கிறீர்களா?
11. அறிவிப்பைக் கைவிட்டிருக்கிறீர்களா?
12. அறிவிப்பைக் கைவிட்டிருக்கிறீர்களா?
13. அறிவிப்பைக் கைவிட்டிருக்கிறீர்களா?
01. அறிவிப்பைக் கைவிட்டிருக்கிறீர்களா?
02. அறிவிப்பைக் கைவிட்டிருக்கிறீர்களா?
03. அறிவிப்பைக் கைவிட்டிருக்கிறீர்களா?
04. அறிவிப்பைக் கைவிட்டிருக்கிறீர்களா?
05. அறிவிப்பைக் கைவிட்டிருக்கிறீர்களா?

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14. சமீபத்தில் ஏதாவது வகைகளான தாழ்வாரம், பிழிவிட்டு, கிணர், ஈழகாசு, சாறு, சேஷம், கணத்தாசைகள் ஏற்படுத்தும் காலங்களில் உயிர்கள் தப்பியிருப்பது உறுதி?
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17. ஏதாவது ஏதாவது கிராம மக்கள் இம் பிரதேசங்களில் வாழும் மக்கள் காலத்திற்கு காலத்திற்கு குறைபாடுகளுக்காக உயிர்கள் பிரதேசத்தில் செலுத்தப்பட்டுள்ளனவா? ஆம் / இல்லை
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19. ஏதாவது ஏதாவது கிராம மக்கள் இம் பிரதேசங்களில் வாழும் மக்கள் காலத்திற்கு காலத்திற்கு குறைபாடுகளுக்காக உயிர்கள் பிரதேசத்தில் செலுத்தப்பட்டுள்ளனவா? ஆம் / இல்லை

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20. பின்வரும் வினாக்கள் குறிப்பிட்டவை குறித்து உங்கள் கருத்துகளை கீழ்க்கண்ட வினாக்கள் /
வினாக்களைக் குறிப்பிட்டுக் கொள்ளுமா? உங்கள் திட்டமிடல்கள் குறிப்பிட்டவை / நினைவுகளை

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2004 ஆகஸ்டில் 26 ஆவது சட்டமன்றத்தில் இருந்து தொடங்கிய 2007 ஆகஸ்டில் 12
ஆவது சட்டமன்றத்தில் இருந்து தொடங்கிய 2007 ஆகஸ்டில் 12

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வினா / கேள்வி

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கருத்து / கருத்து

கருத்து / கருத்து

Ampara Survey

- **Locations** – **Kalmunai, Maradanunai, Pandirappu**
- **Total persons surveyed** - **Focus on specific groups ; 10 Hindu priests, 25 Traders & 15 Female fisher folk**

Observations

- Surveys conducted to define Early Warning dissemination in the Ampara district concentrated on four themes— the role of religious organizations in EW, local traditions in EW for disasters, the role of the private sector and how to create ethnic harmony through EW and disaster mitigation programs in the district which has the presence of Tamil, Muslim and Sinhalese communities.
- In Ampara Kovils, Mosques and Temples play a predominant role in EW dissemination as well as disaster mitigation, as these religious sites are well patronized by the local public. The Kovil bell announces a wedding, the birth of a child or a funeral. Thus, the Kovil bell can act as an effective EW system for local populations. Likewise the sound system of the Mosques which are usually used for the prayers calls can be used in the case of EW. In the Buddhist temples in the Sinhala villages, the temple bell could be tolled to indicate warning. Programs geared to facilitate co-operation by religion leaders with regard to will be effective in Ampara.

Ampara Survey Cont....

Observations

- A multi religious disaster team can be a unique development towards effective EW in Ampara.
- The current EW system in the district is as follows: Government Agent sends message to the Grama Sewaka who in turn informs village disaster team heads. This system needs an overhaul as there are delays due to the lack of coordination between the different sectors.
- The role that the Ampara business/trade and fishing community can play in early warning can be greatly enhanced. These communities include traders as well as boat owners who are responsible for the safety of fishermen out at sea. Specifically, it should be mentioned that fishermen can play a key role in early warning as they are constantly aware of changing weather patterns at sea. Therefore the possibility of using fishermen to support the establishment of special EW technology and mitigation programs must be explored.
- A closer working relationship between NGOs and business communities on disaster preparedness is also recommended.
- Because Ampara is a volatile area prone to conflict between ethnic communities, EW programs and disaster preparedness mechanisms should take into account this ground situation and have a multi-ethnic approach that will ultimately promote ethnic harmony through cooperation.

Ampara Survey Cont....

- Given the long ethnic conflict in the region which has led to poor economic development, EW programs and disaster mitigation must also target poverty reduction for better impact. For example community development programs that involve mangrove growing or the building of evacuation sites in schools can serve this dual purpose.
- Several individual interviews in Ampara revealed that the observation of animal behaviour had contributed somewhat to EW during Sept 12, 2007. Therefore, there was a suggestion for the establishment of an environment observation centre where various insects and animal behaviour can be monitored for EW in the case of a tsunami as well as other disasters such as cyclones and floods.
- An example of how one individual monitored the behaviour of animals during the tsunami warning on September 12 is Brother Mathew, a Catholic priest living near the coast in Kalmunai. He said he observed the reaction of his dogs on Sept 12, 2007. When the dogs did not express any signs of fear he said he realized there was no danger of a tsunami. Another example cited by Brother Mathew is the increase of poisonous snakes on his roof before the 2004, December 26th tsunami. He said it was a clear indication of the snakes trying to get away from the ground due to the tsunami risk.
- The harnessing of talents and skills of locally based experts in the field of environment and disaster management is important for effective development of EW. If priority is given to the local sector in these fields it can have a widespread and long-term impact given their identity with the communities, understanding of grass-root culture and traditions and well as their own vested interest in protecting areas where they are based.

Gampaha Survey

- Locations – Negombo & Wattala
- Total persons surveyed - Focus on Gender role in EW ; 50 women

Observations

Enhance the role of the Church in EW. The Church bell is important in the lives community—the bell rings to announce call for prayer, weddings and births. Mary Rose, volunteer DM leader for the area, said, “it is best to include the local Reverend in EW dissemination and DM management. There is high respect among the public for the priest in comparison to the lack of trust between people and the local police.” The disaster team talked of ringing the Church bells as an effective EW method. The Church bell is run at 5.30 am, 12 pm and 6pm. People view the bell as a clock so it will be an effective EW for disasters,” said Swanthi Peris, volunteer in the team. Request for siren in the area as best EW when the threat occurs at night. Need better facilities such as separate rooms for women and children in evacuation sites. Need gender awareness programs focusing on the role of women in DM. Mary Rose said, “despite women working the hardest for disaster preparedness, we carry little authority when we try to negotiate with the police or other officials for better DM programs.” Need more meetings with DMC and local municipal officers. There is no attempt by the officials to listen to our needs, they said. “We are willing to contribute to better disaster preparedness by working as volunteers to build drains, bridges and roads. But we need funds and support from officials and so we need to meet with them” said Charmini Kalyani Agnes who is also a volunteer in the local DM team. We need bicycles for evacuation. We need three sirens for the area.

Trincomalee Survey

- Locations – Kinya, Muttur, Town & Grate, Shalli, Kucchaveli
- Total persons surveyed - 240 from Muslim & Tamil community.

Observations

- There are no warning towers in the District at the time of the survey. The UNDP has provided sirens and loudspeakers to be used by the Policy and Navy for EW. There are five community level disaster volunteer teams working hard on the ground. Relationship between DMC officers and local community disaster teams are working well. The media, however, does not seem to be closely involved with DMC. There is a need to develop better communication between journalists and DMC.
- Women took a leading role in disaster preparedness and management. This was apparent in small knit communities we surveyed in Kinya.
- There is lingering fear and isolation among vulnerable groups. Indication of continued fear from December 2004 tsunami

Kalutara Survey

- Locations – Kalutara North, Kalamulla, Beruwala
- Total persons surveyed - 150 people living in the coastal area.

Observations

- Our surveys indicated that communities feel abandoned after the December 26, 2004 tsunami. There is discontent over the emphasis given to other areas such as Hambantota and Trincomalee. Communities need more training and involvement in DM offices.

Hambantota Survey

Locations – Hambantota, Tangalle, Kudawella, Tissamaharama & Kirinda

Total persons surveyed - 75 including
Students

Observations

The present district capacity with regard to tsunami warning includes six loudspeakers that have been given to police stations in six tsunami affected areas. The areas are Hambantota, Tissamaharama, Kirinde, Hungama, Ambalantota and Tangalle. A total of eleven electrically operated tsunami warning sirens are located in police stations and fisheries harbours in Kirinde, Tissamaharama, Hambantota police station / Hambantota DMC office (District Sec office) / Godawaya fisheries harbour/ Ambalantota, Hungama, Tangalle and Kudawella. **However, according to the DMC officials most of the sirens in the Hambantota district were fixed after the September 12 tsunami warning.**

General range in which the sirens could be heard: 2 kilometers

Hambantota Survey Cont...

- Loudspeakers were considered important components of early warning. The government officials interviewed during the survey felt that there was a dearth of loudspeakers to facilitate effective early warning in all areas in the Hambantota district.
- The EW seems to have reached Hambantota half an hour in advance of the average time taken to reach the East coast. The tsunami warning had reached the DMC office in Hambantota at 5.25 pm.
- There was disparity between the town areas and rural areas with regard to the level of early warning efficiency. Those interviewed in the towns of almost all the areas in which the survey was conducted said the warning did not come through official channels and cited the radio and the television as the main sources of alert. Comparatively, the success of early warning in village areas was due to village committees and good communication between these committees and the Hambantota Disaster Management Unit.
- All of the 18 surveys indicated that the communities living close to the coast needed the warning to arrive at least two hours prior to the estimated time of the threat. Since a tsunami did not occur on September 12, 2007 those interviewed said they could not be certain if the warning in fact did come on time.
- The time the tsunami warning was officially removed in Hambantota was 7.30 pm after receiving message to the effect by the DMC Colombo.

Key findings – The Good

- High awareness of the dangers of tsunami and other disasters among the local people.
- Almost ninety percent of our surveys showed that in comparison to the ignorance before the December 2004 tsunami most people have now acquired basic knowledge of what a tsunami is, how they must be prepared for evacuation, experienced some kind of training in disaster preparedness such as drills, first aid, reading of site maps and had direct contact with local disaster officials.
- In some areas we met with volunteer teams comprised of people from the village or town who were extremely active in EW dissemination and response.
- Eighty percent of polled villagers owned tsunami bags as per the recommendations of the DMC that contained their most important documents such as National identity cards, bank-books and property deeds.
- Some also had made arrangements to contact their loved ones – a meeting point after the EW threat or disaster has subsided--to avoid their harrowing experience of being separated and lost in the past.

Key findings – The Challenges

- It was sobering yet unsurprising to find out that our surveyed communities continue to remain deeply scarred from the Boxing Day tsunami in December 2004. They repeatedly expressed their fear at even the mention of the word tsunami.
- Ninety percent reported panic when they got the message and felt the only option they had to escape was to immediately run for safety, contrary to what they had been told in the EW message that day—to await further information and instructions.

How the EW message went

- After receiving these warnings of the quake on September 12 the Department of Meteorology in Sri Lanka formally informed the Disaster Management Centre (DMC) in Colombo of the quake and the possibility of a tsunami.
- Telephone and SMS were the main mode of communication. The alerts were issued by the DMC Colombo to the DDMCU coordinators in the districts who in turn informed the disaster management officers to carry out the mobilizing of the people for evacuation.
- The warnings issued by the DMC head office in Colombo to the DDMCU were carried out in three stages following the continuing assessment by the DMC on the level of the crisis.
- The first warning was sent at 5.25 pm. The second warning at 5.45pm and the third at 5.58 pm.
- The time the tsunami warning was officially removed by the Colombo DMC office was 7.30 pm.
- Following the warnings issued by the DMC to the DDMCU, the role of the coordinators of the DDMCU is to inform the District and Divisional Secretaries of the respective districts. The District Secretary (Government Agent) as well as the Divisional Secretaries (Assistant Government Agents) plays a key role in the mitigation and prevention of disasters in the areas of the country they represent and are in charge of alerting the District Disaster Management Committees which includes representatives of relevant government departments, leading Non Governmental Organisations (NGOs) and political authorities.

Conclusion

- **New media and technologies used for EW are not a panacea** to address deep rooted fear and anxiety in communities affected by disasters. EW to the extent possible needs to take into account the responses generated by panic and fear as opposed to that which is recommended as a course of action.
- An **emphasis on continuous training** is key to avoid scenarios where timely EWD only leads to mass panic that in turn severely vitiates disaster preparedness of communities and increases their risk of exposure to the hazard.

Conclusion

- EW training conducted to date has not addressed a **deep fear of another tsunami** within the communities most at risk of such an event. The **incorporation of trauma counseling** and other psycho-social aspects to EW training workshops is key to augment community resilience.
- The EW message must **not only hold a warning but also succinctly include more information** such as instructions on what to do, how to re-check the alert and other instructions to allay knee-jerk responses generated by fear.
- Yet another area which we feel forms a crucial part of more effective and sustainable EWD is **close cooperation between disaster management officials, local non-governmental organizations and town and village level institutions** such as religious entities and businessmen. Our findings and recommendations on this front are included in the report.

Role of media in EW

- The methodology of employing journalists in the evaluation flags their contribution towards creating an expanded role for the media in DM and risk reduction. The wide and deep experience of PANOS of working with media in many countries suggests they are particularly effective in raising and sustaining awareness of hazards and disaster response over the long-term. Working with and engaging journalists in EW evaluations encourages them to realize the importance of their own roles in protecting the lives of the people in the community.
- The inclusion of journalists who were not experts in DM and looked at issues from a layman's perspective provided for an impartial evaluation of the effectiveness of EW mechanisms.

Role of Media in EW

- The journalists developed a sense of ownership of the evaluation project contributing to a sustainable media response in disaster reporting based on a heightened sensitivity.
- The Media's role is not restrictive to mainstream mechanisms such as print and broadcast. The importance of developing tele- dramas and street dramas must not be underestimated.

Types of media for dissemination

- TV: After siren or police megaphone most people immediately switched on their television for more information and updates. TV is vital to counteract rumours and stem public panic during emergency. Given its wide appeal this medium can provide informative programs towards disaster risk reduction.
- Radio: equally important especially for households who do not own a TV. Most reliable media source for EW given its wide availability. Radio must be used for regular updates during emergency alert

Types of media for dissemination

- Internet: EWD through Internet almost negligible given the lack of access to computers in villages.
- Mobile SMS message: EW message from this source was on par with traditional media.
- Police: Megaphones and sirens were effectively the most important source of information for local media.
- Fax: useful for sending EW local media offices or key district disaster management communities.

Key challenges

- TV: very effective source for providing information and update but falls behind siren and police message particularly when EW is issued at odd hours or when not viewed.
- Mobile phones: clogging can occur. Tendency to cause panic when message does not contain a coordinated EW message with DMC. Importance of using three main languages.

Key challenges

- Cell broadcasting: important. But community level is more familiar with mobile phones.
- Police: In the surveys we discovered that police megaphone EW was restricted to main streets rather than covering smaller roads in the area. Also EW reach was restricted to areas within a mile of police vehicle. Siren sound also resembled ambulance sirens resulting in confusion among the public—noted during drills conducted in Hambantota.

Recommendations

- The role of the media in EWD and DM is specific. While this sector cannot take the lead during an emergency there is no doubt that journalists, both broadcast and print, can play responsible roles in risk reduction and preparedness in communities.
- Various forms of media can be developed for this regular features in newspapers and magazines, television and radio programs as well teledramas. This aspect is essential for better EWD.

Recommendations

- Participation and integration of women in EW response key to their effectiveness and adoption
- Use of grassroots organisations, building up their capacities, are essential in EW
- EW and disaster planning must be integrated into local development programmes and initiatives.

Recommendations

- The significant variance between communities living in the Southern and Eastern coastal belt on EW and disaster preparedness need to be taken into account by Government and NGOs
- This variance need to be urgently equalised and capacities built in vulnerable communities, including access to EW technologies, response training and mechanisms, financial assistance and other means of long-term multi-hazard support.

The way forward

- **Short-term**
- Sharing of information in this survey between DDM organizations that participated in the surveys
- Sharing of information in this survey between communities participating in the surveys
- Workshop with DDM and community leaders and civil society to discuss and share ideas for better EWD and coordination.
- Preparation of reports on lessons learned.
- DM and EW programs for youth and in schools.
- Support for women leadership programs in DM.

The way forward

- **Long-term**
- Exchange between community level groups based in Sri Lanka and other disaster-prone countries—empowerment at grass-root level.
- Developing media programs aimed at risk reduction and disaster preparedness.
- Involvement of provincial based journalists in DDM offices.

Survey visuals



Hambantota Community

Survey visuals



Mock drill

Survey visuals



Survey with school children

Survey visuals



Hambantota Community

Survey visuals



DMC Briefing

Survey visuals



Survey Ampara

Survey visuals



Religious leaders Ampara

Survey visuals



Negombo Bridge

Survey visuals



Negombo Lagoon

Thank you !