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CABARET BRIEFING PAPER

Improving the capacity of multi-hazard early warning to ensure the coastal resilience in Sri Lanka

1. Summary

Briefly describe the need for MHEW and/or coastal resilience in your country
Explain the potential role or contribution of HEIs in supporting capacity building efforts for MHEW and coastal resilience
Present suggestions to overcome barriers that limit HEIs contribution to the development of capacity in MHEW and/or coastal resilience
(suggested 100 words – one paragraph)

Economic loss, displacement of the coastal communities, effect on the water quality, loss of habitats in estuaries, drought and salt-water intrusion, loss of coastal properties, damage to the population, and rapid loss of land are some of the critical impacts to the coastal belt of Sri Lanka. Over the years Sri Lanka has strengthen its Multi hazard Early Warning Dissemination mechanisms that needs further improvements. In this context, contribution of Sri Lankan Higher Education Institutes interms of advocacy, research and innovations are vital. Furthemorem it is imporatnt to collaborate with academics outside Sri Lanka to improve the capacity of the local academics to exchange the knowledge and transfer the technology. Differences in the expectations of the stakeholders lack of openness and lack of participation in the awareness programs are some of the barriers HEIs face in their role of MHEWS. Training and public awareness campaigns, efficient funds, properly maintained hierarchy and concern to the coastal eco systems are some of the enablers associated with MHEW in coastal resilience.

2. Policy messages

This can be presented as bullet points to highlight the key suggestions to address the issue presented in the briefing paper.
(suggested maximum of 5 bullet points in a box)

- A community based Multi Hazard Early Warning System (MHEWs) is necessary to increase the coastal resilience of the country. For proper operation and efficiency Identifying the impacts of coastal hazards at all levels, enhanced inter-agency cooperation and the use of advanced technology is important.

- Improving the data availability for investigating, forecasting/predicting and managing risks on different time scales and introducing mechanisms for sustaining the early warning dialogue and supporting the development is also necessary
- Enhancing the current MHEW mechanisms through evidence based research
- Current National policies and frameworks related to coastal hazards must be aligned to the post 2015 global frameworks as quickly as possible to reach the global targets in time
- Higher Education Institutes must involve more in cross-disciplinary and transdisciplinary research and awareness campaigns to build the coastal resilience while sharing their expertise in addressing the complexities of coastal resilience

3. Introduction

The introduction should include four key elements and be limited to one page. Each section can be presented as a separate paragraph without labelling as the problem, background etc.

The problem

Explain: the present threat of coastal hazards in your country; the need to develop MHEW in order to increase coastal resilience.

Storm surges, tropical cyclones, floods, Tsunamis and oil spills are some of the frequent coastal hazards occur in Sri Lanka. Poor land use practices, illegeal coral mining and climate change induced sea level rise has been agrreviated the frequency and intensity of these hazards. The Indian Ocean Tsunami, which hit Sri Lanka on 26 December 2004, was by far the major coastal disaster, which caused 39,143 deaths while it affected 800,000 people in the coastal zone. The distribution frequency of the events, number of people affected, and loss of life due to disasters throughout the islands clearly shows that coastal communities are the mostly affected. It was identified that there is an early warning system for Tsunamis but for other coastal hazards there aren't any specific early warning systems. In order to avoid or reduce the impact of coastal hazards, to build the capacity of communities to benefit from early warning systems, and to integrate this knowledge into their livelihoods and wellbeing to reduce risk are few of the important facts on the need of developing MHEWs.

Background

Explain: the current status of early warning systems in your country; the key actors involved in MHEW and coastal resilience.

According to the Early Warning framework, when there is an impending disaster, the technical agency responsible for the given hazard determines the scale of the disaster and the decision is conveyed to the Ministry of Disaster Management (MDM) and the Emergency Operation Centre (EOC) of DMC. In Sri Lanka Multi Hazard Early Warning System is available as a whole without being specifically focused on coastal hazards. Dissemination of warning from national level to the grassroots level is divided into four layers, namely, National, District, Divisional and Grama Niladari (GN) Level. The EOC of the DMC receives the EW message from International and Regional Technical Agencies. Then a national level EW message is disseminated to the emergency response committees. District Disaster Management Centre Units (DDMCU) disseminate the district level EW messages to the District Secretariat and

stakeholder agencies. Finally, GN level EW message is disseminated to the vulnerable community by last mile communication tools.

Causes and effects of the problem

Using the results of your study, present: weaknesses / issues / challenges identified within the current MHEW systems; the level of participation of HEIs in supporting the development of MHEW and coastal resilience.

The mismatch of expectations by diverse stakeholders such as the academic experts, funding organizations, policy makers, affected communities and general public etc, hinders a successful coordination of projects, and hinders the social impact. HEIs often face the challenges of their research findings are overlooked in the policy formulation process. In addition lack of participation for the programmes and duplicate innovations are some of the problems, which exist in HEIs. In adequate resources; lack of capacity to think beyond the main subject area or expertise and developing integrated solutions by partnering with other entities/agencies; In country issues in obtaining patents for new technology developments and poor recognition are some of the main obstacles faced by HEIS.

Ways to deal with the present problem

Present the ways in which the MHEW can be introduced, further developed and maintained in the country. Highlight the role of HEIs in this exercise.

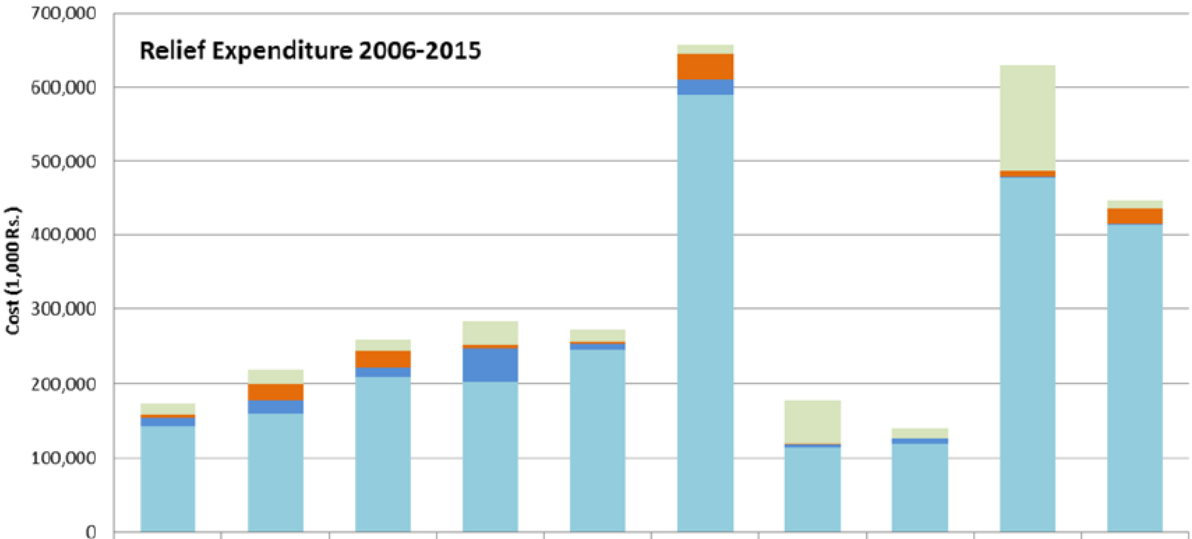
HEIs must be aware of the responsibilities to create the social impact. They should have a clear strategy to address the identified barriers. Adopting long-term approaches and Integrating with national budgets, Continuous dialogue among agencies with better coordination are some of the key points highlighted by SIP10. Encouraging and supporting researchers to work with other stakeholders such as the policy makers, affected communities, encouraging relevant research with long term societal impact, fostering reflexive research attitude in young researchers, encouraging and providing institutional environment that support transdisciplinary contextual research are some of the ways to overcome the barriers. In addition HEIs must actively engage with DMC and conduct more research and encourage to include courses and modules within the National Education Systems in all levels.

4. The body of the briefing paper

- Present the problem of coastal hazards in your country with data and graphs if available. Present the nature and impact of future coastal hazards with increasing coastal population in your country (give data on coastal population and their trends).
- Discuss the adequacy of existing coastal resilience including MHEW.
- Explain the need for improvement of existing MHEW or introducing MHEW (in the event if there is no such system in your country).
- Discuss the need for HEIs in this process, highlighting their role in your country (with numbers or any pieces of evidence to show their level of participation) and what is missing or present challenges they face.

- Present why do you suggest to cooperate with HEIs in developing MHEW and how to achieve this objective.

(Limit to one page with graphs and tables, and write up)



	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Drought	15,194	19,922	15,287	31,139	16,308	12,864	58,563	12,049	140,826	11,072
Landslide	4,636	22,587	20,503	4,929	3,253	34,398	672	181	9,788	21,959
Cyclone	10,237	17,662	11,676	43,880	8,678	20,997	3,845	8,293	1,506	541
Flood	143,309	159,111	210,339	202,680	244,091	589,836	113,942	118,425	476,284	413,129

Figure 1: Trends of disaster relief costs in each disaster from 2006 to 2015 in Sri Lanka (Japan International Cooperation Agency, 2017)

The distribution frequency of the events, number of people affected, and loss of life due to disasters throughout the islands clearly shows that coastal communities are the most affected (Disaster Information Management System, 2012). Relief expenditure of the country also has an increasing trend (Ministry of Disaster Management, 2014). Furthermore, during any year the relief cost for flood disasters account for approximately 80% to 90% of the annual expenditure. Relief expenditure (Figure 1) for the past decade clearly shows the impact of the disasters to the communities. In addition, compared to the population growth rate, people affected by floods has a higher increased rate (Japan International Cooperation Agency, 2017).

It was observed that even though there is an early warning system for Tsunamis and for other coastal hazards there are no any specific early warning systems commonly known to the general public. Also currently there are no any specific multi hazard assessments being done for the coastal hazards in Sri Lanka. In order to minimize the relief costs incurred as mentioned above it is well required to establish and sustain the MHEWs in Sri Lanka.

After analyzing the observations, importance to have national efforts towards MHEW for increased disaster resilience among coastal communities was identified as two key actions.

To improve the community resilience and capacity towards coastal hazards as a whole country and to to gather data and produce information as a whole without specifically focusing on a selected community. In this scenario the providence of knowledge and expertise for effective MHEW and coastal resilience from the government and private universities are vital.

Hence by enhacing education, expertise, advocacy, research and incorporation of DMC while integrating academic and professional development to the social impact process, MHEW and coastal resilence is where HEIs can contribute while overcoming the challenges they face specially on the stakeholder coordination, and inadequacy of resources.

5. Policy implications

- Explain the proposed improvements in MHEW in your country.
- Present how this improvement is expected with the participation of HEIs members.
- Describe the possible benefits and limitations in the proposed changes.

(Half page with 3-4 paragraphs starting with each option at the beginning of each paragraph.)

Development of a multi hazard map targeting the coastal areas, integrate early warnings into development processes and public policies, align and update the existing frameworks and policies to match the global standards so that the country can gain international recognition and aid in developing are key proposed improvements in MHEWS for Sri Lanka.

Carryout training and public awareness campaigns in an effective manner to increase the participation of the villagers, target communities and the relevant officers, increase the input from HEIs in decision making and provide sufficient funds to carry out research work to strengthen the MHEWS, improve the data availability for investigating, forecasting/predicting and managing risks on different time scales, introduce mechanisms for sustaining the early warning dialogue and supporting the development are key improvements expected with the participation of HEIs.

Improvement in the interagency cooperation and use advance technological methods to improve the efficiency of the existing Early Warning System, Integrate soft and hard resilience mechanisms for coastal hazards, Involve in regional efforts on MHEWS and take a leading role to improve the performance of MHEWS are key benefits whereas the HEIs inputs and collaboration can be limited if the correct platforms and facilitation mechanisms are nott in place.

6. Conclusions

- Present the conclusion of the briefing paper.
- Present the importance of HEIs in the development of MHEW and coastal resilience and need to address their issues to enhance their participation in the development of MHEW

(One paragraph with 150 words).

Sri Lanka has a well documented Early Warning Dissemination System however, the productivity and efficiency of its practical use is questionable when considering the recent disasters. Identifying the impacts of coastal hazards at all levels is important before developing a Multi Hazard Early Warning System to ensure the coastal resilience. At present the lack of inter-agency cooperation and advanced technology has generated inefficiency in the existing early warning systems. Role of Higher Education Institutes in MHEWs and coastal resilience is very important in education and awareness programs as well as on research work for new inventions. Mismatch of expectations of the stakeholders and lack of engagement in the awareness programs are some of the barriers HEIs face in their role of MHEW. Training and public awareness campaigns, efficient funds, properly maintained hierarchy and concern to the coastal eco systems are some of the enablers associated with MHEW in coastal resilience.

Suggested structure of the briefing paper (4 pages)

1. Page 1 Summary and policy message with some photos of coastal hazards in your own country
2. Page 2 Introduction
3. Page 3 The body of the paper, can use graphs, tables or images to show the issue and its effects
4. Page 4 Policy implications, conclusions, authors, ackhnowledgement (disclaimer statement), publication details and some main references for further reading, there you can give your papers based on CABARET and CABARET website

Use boxes to present some definitions used in the briefing paper
We can arrange for professional typesetting and design for your briefing paper, subject to the text being ready by November 2019.

Disclaimer Statement