



Policy Brief

Current status and recommendations on the integration of pandemics within national/local DRR strategies in Sri Lanka

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1. Key Findings and Recommendations

Disaster Risk Reduction (DRR) Policing and Planning: Current Status

- 'Pandemics' have been addressed to a certain extent in national level DRR policies and plans.
- Attention paid to pandemics in sub-national level disaster preparedness and response plans is inadequate.
- Existing DRR policies and plans are obsolete as they have not adequately captured new developments in the Sendai Framework for Disaster Risk Reduction (SFDRR).

Hazard Risk and Vulnerability Assessments: Current Status

- Pandemics have been barely integrated into risk identification exercises carried out by disaster management authorities.
- Risk identification exercises for communicable disease outbreaks are pre-dominantly carried out by the public health sector of the country as part of the national disease surveillance mechanism.

Issue of Early Warning and Dissemination: Current Status

- The issue and dissemination of EW for pandemics and other biological hazards are currently carried out emulating a health sector led approach.

Policy Recommendations

- Consolidate and update existing DRR plans and policies so that 'pandemics' and 'epidemics' are separately identified in national level plans and policies. Attention should also be paid to incorporating pandemics and other biological hazards into sub-national level disaster management plans.
- There is a need for the formulation of new Disaster Risk Management [DRM] plans that address the preparedness, mitigation, response and recovery from pandemics and associated compound scenarios.
- It is vital that national and local level disaster management plans in the country are operationalized into national and local strategies. These strategies should adequately reflect pandemics and compound hazard scenarios featuring pandemics.
- Promote cross-sectoral data sharing to ensure that comprehensive risk assessments are carried out for pandemics.
- Advocate multi-sectoral collaboration, imperatively between disaster management and health sector collaboration in carrying out hazard, risk and vulnerability assessments for pandemics.
- Acknowledge the complexity of risk in risk identification exercises by promoting the development of composite risk matrices.
- Use the existing early warning system of the Disaster Management Centre (DMC) to disseminate early warning messages pertaining to epidemics and pandemics so that the work burden on local level public health officials is reduced during a pandemic.



2. Context

Pandemics have engulfed populations from time to time and have thus been one of the most common causes of mass casualties throughout the world's history. From the plague of Justinian in the 6th Century, the Black Death of the 14th Century to the Spanish flu, the Asian flu in the 20th Century and the recent COVID-19 pandemic, the world has had its fair share of devastation caused by biological hazards. However, globalization, the increase in population density and growth in livestock husbandry have aggravated the risk of infectious diseases. In today's globalized world, there is ample space for infectious diseases outbreaks to grow into large scale pandemics whose effects transcend system boundaries. COVID-19, the health effects of which immediately cascaded into a significant socio-economic downturn across the globe, has exemplified this. The recurring exposure of human populations to pandemics, coupled with the disastrous effects posed by such outbreaks, have rendered preparedness for biological hazards crucial.

A pandemic is "more than a health crisis; it is a socio-economic crisis, a humanitarian crisis, a security crisis, and a human rights crisis" (United Nations, 2020). Thus, pandemics conform to the definition of a disaster: "a serious disruption of the functioning of a community or a society at any scale due to hazardous events interacting with conditions of exposure, vulnerability and capacity, leading to one or more of the following: human, material, economic and environmental losses and impacts" (IOM, 2019, p. 48). A purely health based approach to the management of pandemics may easily overlook the multi-faceted nature of crises induced by pandemics and would be therefore be limiting. Similarly, a global, regional, national or a local disaster risk reduction agenda that fails to address biological hazards, including pandemics, would be indicative of a narrowly defined agenda. Nevertheless, most countries, including Sri Lanka have failed to take significant steps to broaden their view of risks to incorporate biological hazards, particularly pandemics and Public Health Emergencies of International Concern.

This policy brief provides an overview of policing and planning, risk identification and the Early Warning [EW] system of Sri Lanka, with a particular focus on the current integration of pandemics and associated compound hazards. The brief further provides policy recommendations for mainstreaming pandemics into national and local DRR strategies in Sri Lanka.

3. Approach

This policy brief has been developed based on the findings of a research study carried out between October 2020 and March 22 to explore how preparedness for COVID-19 and other pandemics can be improved through the downstream of multi-hazard early warning systems. This study is a research collaboration between the University of Huddersfield, UK; University of Colombo; University of Moratuwa and the Ministry of Health, Sri Lanka. The findings presented in this brief have been derived through:

- A desk based policy analysis carried out to examine the extent to which pandemics have been integrated within national and local disaster risk reduction (DRR) strategies in Sri Lanka.
- 26 key informant interviews carried out with purposively selected national and sub-national level (encompassing district, divisional and local/village levels) officials representing the public health and disaster management sectors of the country.
- 4 focus group discussions carried out with village/local level public health officials of 4 selected districts.



4. Mainstreaming Pandemics into National and Local DRR Strategies: Current Status

DRR POLICING AND PLANNING

Pandemics captured in national level DRR policies and plans

In certain national level DRR policy and planning documents, such as the Sri Lanka Disaster Management Act No. 13 of 2005 and National Disaster Management Plan 2013-2017, significant attention has been paid to epidemics and what has been termed as 'disaster epidemics', which are epidemics that grow into disastrous proportions. However, the term 'pandemic' has not been mentioned in any of the national level DRR policy and planning documents referred to in this study. These documents broadly acknowledge the importance of carrying out disaster risk management activities to reduce the risk of epidemics and 'disaster epidemics'. The Centres for Disease Control and Prevention in the United States (2012) defines an epidemic as "an increase, often sudden, in the number of cases of a disease above what is normally expected in that population in that area". A pandemic on the other hand has been defined as "an epidemic that has spread over several countries or continents, usually affecting a large number of people" (The Centres for Disease Control and Prevention, 2012) and has evidently been distinguished from an epidemic based on its extent of transmission and scope of impact. In a globalized world where national boundaries are barely perceptible, a pandemic, as opposed to an epidemic, can cause contagion effects leading to the collapse of systems in whole. For this reason, the effects of a pandemic can be deemed as more complex than an epidemic. Furthermore, pandemics can both interact and co-occur with other hazards, exacerbating vulnerabilities and complicating both effects of and responses to other hazards. Regardless, said national level DRR policies and plans have not adequately acknowledged the inherent complexity of risk associated with pandemics. There's a need to re-think current preparedness and response measures for pandemics and contexts where hazards which are significantly different in terms of their scope, duration and responses (e.g. biological and natural hazards) occur simultaneously.

Lack of attention paid to pandemics in sub-national level disaster preparedness and response plans

Advocating a de-concentrated approach to DRR in Sri Lanka, the Sri Lanka Disaster Management Act No. 13 of 2005 provides for the development of provincial, district, divisional and village level disaster management plans. While district level disaster management plans have been formulated for all districts of the country, provincial level disaster management plans are yet to be devised. Further, divisional and Grama Niladhari level disaster management plans have only been developed for certain identified vulnerable areas. The findings of this study reveal that sub-national level disaster management plans, where they have been developed, have placed emphasis on preparedness for and response to natural hazards. They have overlooked, to a significant degree, the prevalence of biological hazards and the need to proactively prepare for and effectively respond to them. One of the most common reasons cited for this omission, is the lack of prior experience and familiarity with pandemics.

Existing DRR policies and plans are obsolete

Existing DRR policy and planning documents, particularly the National Disaster Management Policy and the National Disaster Management Plan 2013-2017, have been developed in alignment with the Hyogo Framework for Action (HFA) 2005- 2015, which is the former global framework for DRR. It is important that these policy and planning documents are updated to align with the Sendai Framework for Disaster Risk Reduction [SFDRR], which constitutes the current global blueprint for DRR. This is because it is paramount that national and even local level DRR planning and policy documents capture new developments in DRR, including those that have been spelled out in the SFDRR but have not been adequately addressed in its predecessor. Proposals to build coherence between the policy areas of health and DRR represent one such development.

The absence of a joint preparedness and response plan for public health emergencies including pandemics

The WHO supported Joints External Evaluation [JEE] of IHR core capacities, which was conducted in Sri Lanka in 2017. Sri Lanka obtained a low score of 1 on the technical area of 'preparedness', which has been attributed to the absence of a national public health emergency preparedness and response plan, and the lack of public health risk



and response mapping activities. Accordingly, the National Action Plan for Health Security [NAPHS] 2019-2023, which was developed based on the recommendations of the JEE, has proposed for the development and dissemination of a 'Joint National Preparedness and Response Plan' for public health emergencies with cross-sectoral involvement of stakeholders (e.g. the Disaster Preparedness and Response Division [DPRD] of the Ministry of Health, Sri Lanka; the Disaster Management Centre (DMC), Armed Forces etc.). However, data gathered through this study do not indicate any improvements in the development of such a plan.

HAZARD, RISK AND VULNERABILITY ASSESSMENTS

Lack of integration of pandemics into risk identification exercises carried out by disaster management authorities

At the national level, hazard, risk and vulnerability mapping for biological hazards has not been carried out by Disaster Management authorities, although the importance of doing so was noted by most key informants. Instead, attention has been paid to natural hazards in carrying out risk and hazard assessments. However, certain respondents from the DM sector stated that risk identification exercises have been carried out for Dengue by the DMC in collaboration with health sector authorities. At the district level, risk mapping activities have been carried out for natural hazards based on their prevalence in the districts. However, biological hazards have been largely overlooked. The reasons cited for not capturing biological hazards in risk assessments carried out at the national and sub-national levels were that 1) the severity of impacts was not taken into account; 2) there was a lack of experience with large scale pandemics and 3) difficulties in identifying and demarcating the spread, and 4) difficulties in quantifying the risk. It was further revealed that risk mapping activities have failed to capture areas at risk of compound risk scenarios, particularly pandemic-natural hazard hybrid scenarios.

Health sector led approach to risk identification of pandemics

Risk mapping exercises for biological hazards are pre-dominantly carried out by the public health sector of the country as part of the national disease surveillance mechanism. At the divisional level, the Medical Officer of Health (MOH), with the involvement of Public Health Inspectors (PHIs), maintains a daily spot map and a cumulative spot map [reflecting monthly statistics] for selected communicable diseases. Guidelines on maintaining spot maps have been spelled out in the PHI manual. However, communicable diseases are mapped merely based on the incidence of cases. Social and economic vulnerability aspects, such as the income level, literacy level, poverty status and level of education, which may have a bearing on the risk of biological hazards such as epidemics and pandemics, have not been taken into consideration in mapping communicable diseases. Further, a lack of proactive steps have been taken to map areas at risk of complex risk scenarios associated with pandemics (e.g. natural hazard/pandemic hybrid scenarios).

ISSUE OF EARLY WARNING [EW] AND DISSEMINATION

A health sector led process followed in issuing and disseminating EW for pandemics and other biological hazards

As stipulated in the National Disaster Management Plan, the Department of Health Services and the Ministry of Health are the technical agencies responsible for forecasting and issuing Early Warning messages pertaining to biological hazards like epidemics and pandemics. The same plan designates the DMC as the responsible authority for dissemination of EW messages issued by the relevant technical agencies. However, currently both issuing and dissemination of the EW is carried out by health sector authorities. According to the IHR [2005], the epidemiology unit and quarantine unit are informed by the World Health Organization [WHO] about diseases that have originated in the other countries. The early warning messages are disseminated through the Director General of Health Services [DGHS] at the national level to the relevant stakeholders. At the District level, the Regional Director of Health Services [RDHS] receives EW messages disseminated by national level institutions. The RDHS thereby acts as the focal point for disseminating EW to hospitals and the Medical Officer of Health (MOH) offices. The EW messages received by the MOH are disseminated to the community via the Public Health Inspectors (PHIs) of the relevant PHI areas. For disease outbreaks detected at the local level, the EW is generated at the MOH/ Local hospital and is disseminated to the district and national level via the routine public health surveillance system.



During the COVID-19 pandemic in Sri Lanka, public health sector stakeholders were predominantly involved in risk communication activities. Findings of this study demonstrate that while in certain districts DDMCUs [at the district level] were involved in disseminating EW messages, in certain other districts, this responsibility was not assigned to disaster management authorities. It was further reported that public health officers, particularly those stationed at the local level, experienced burnout during the pandemic period as they were vested with the responsibility of managing numerous other tasks [e.g. quarantining families, carrying out PCR and Rapid antigen tests, vaccination etc.] in addition to raising awareness among the public. Another important observation was that the existing EW mechanism for pandemics may be inadequate in the face of compound hazard scenarios where, for example, a flood occurs in parallel with the pandemic.

5. Policy Recommendations

Consolidate and update existing DRR plans and policies

It is important that existing DRR legislations, plans and policies are revised to recognize the possibility for 'pandemics' to occur. 'Pandemics' and 'epidemics' should be separately identified, acknowledging the two have been distinguished by the WHO and the International Epidemiology Association based on their extent of spread. Particular attention should be paid to the revision of sub-national level disaster preparedness and response plans to incorporate pandemics. This consolidation of existing DRR legislative, policy and planning documents calls for a significant shift in the country's current approach to planning, which is largely siloed. Cross sectoral collaboration, particularly between disaster management and health sectors, should be encouraged in the domain of planning and policing at both the national and sub-national levels. Furthermore, efforts should be directed at updating national and sub-national level DRR planning and policy documents to resonate with the SFDRR. The SFDRR stands as the pioneering document where the fields of health and DRR have been interwoven at the global multi-sectoral policy level. This is demonstrated by the fact that the SFDRR makes 38 references to health aspects, including pandemics and epidemics. Consonance with the SFDRR would therefore provide the foundation for mainstreaming pandemics within the DRR policies and plans of Sri Lanka.

Devise new plans for pandemics and potential compound scenarios

There is a need for the formulation of new Disaster Risk Management [DRM] plans that address the mitigation, preparedness, response and recovery from pandemics and potential compound scenarios featuring pandemics. It is important that immediate steps are taken to implement the proposals put forward in the NAPHS, particularly those with regard to the development of a joint national preparedness and response plan for public health emergencies including pandemics. Further, scenario planning should be encouraged to identify potential compound, interacting or cascading hazard scenarios, mainly those which feature disparate hazards such as natural and biological hazards. Evidently, such planning efforts call for effective collaboration between the public health and disaster management sectors of the country.

Plans should be operationalized into strategies and action plans

Sri Lanka currently lacks a national DRR strategy. It is vital that national and local level disaster management plans in the country are operationalized into national and local strategies that spell out the short-term objectives to be achieved, implementation milestones, key roles and responsibilities of relevant stakeholders, and the resources required. Such national and local DRR strategies should adequately address biological hazards, mainly epidemics and pandemics, while simultaneously acknowledging the complexity of risk, i.e., the potential for hazards to co-occur, interact and cascade into other hazards. It is also crucial to ensure congruence between national and local level strategies.

Promote cross-sectoral data sharing

During a pandemic, people are subject to multi-dimensional vulnerability. For instance, the vulnerability of a family residing in an area where a high incidence of cases have been reported, would be exacerbated by the poor socio-economic conditions characterising the family (e.g. unemployment, higher number of dependents and poverty) and if the same area is prone to other natural hazards such as floods and landslides. Often, data pertaining to different sources of risk (e.g. exposure to floods, contracting communicable diseases, income levels etc.) are held and maintained by different stakeholders. Hence, data sharing across sectors should be promoted and facilitated to identify vulnerable households in a pandemic context both accurately and in a holistic manner.



Advocate disaster management and health sector collaboration in carrying out hazard, risk and vulnerability assessments for pandemics

Attempts to map the risk of pandemics merely based on the past and present incidence of cases would be limiting. Mere exposure to communicable diseases does not provide a comprehensive view of risk. It is important that socio-economic and demographic characteristics (e.g. the income level, employment status, number of dependents in the family, presence of family members with disabilities) are taken into account in mapping households or communities who are at risk of pandemics. For this reason, risk mapping exercises for pandemics will immensely benefit from cross-sectoral collaboration, particularly between health and disaster management sectors of the country.

Acknowledge the complexity of risk in risk identification exercises

Efforts should be directed at mapping areas at risk of compound hazard events, particularly pandemic/natural hazard hybrid scenarios. It is proposed that joint up thinking and action between health and disaster management sectors of the country are leveraged to develop composite risk matrices. These would involve building on a comprehensive and all hazard risk assessment approach to estimate risks, vulnerabilities and capacities of multiple hazards that occur simultaneously. Composite risk matrices can support future planning for all possible events. They can also facilitate better assessment of national, sectoral and local capacities for legal frameworks, community plans, and early warning systems, which to date, have been fairly independent from the hazard context or from the notion of multiple risks. Further, the development of such matrices can promote comprehensive and formalized multi hazard risk informed policy making.

Integrate pandemics into the existing EW system

It is recommended that the country-wide early warning system of the Disaster Management Centre (DMC) is utilized to disseminate early warning messages pertaining to epidemics and pandemics so that the work burden on local level public health officials is reduced, especially during a pandemic. There is also potential for EW for biological hazards to be improved through the use of DRR technologies such as satellite technologies given certain linkages between natural and biological disasters. Further, the existing EW system in the country should be adapted and strengthened to adequately cater to compound hazards, such as pandemic-natural hazard hybrid scenarios. This should be backed by a DRM plan that explicitly sets out who is accountable for what, the communication modes that could be used, the sequence of messages and flow of information.



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Further Readings

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