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Success Story

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Comprehensive Preparedness Planning at the Grassroots Level



Mr. Sunil Jayaweera, Director – Preparedness Planning of the Disaster Management Centre (DMC), Sri Lanka.

Landslides are one of the most common disasters in the world. Between **1998-2017, they affected an estimated 4.8 million people and caused more than 18,000 deaths**. Sri Lanka experienced only minor incidences of landslides in the recent past. **The annual average was less than 50 until the year 2002**. The frequency of landslides in the country has drastically increased as a result of human interventions such as unplanned cultivation, non-engineered construction, and deforestation. Mr. Sunil Jayaweera, Director – Preparedness Planning of the Disaster Management Centre (DMC), Sri Lanka, began his career at the National Building Research Organisation (NBRO). He has over 22 years of experience in tackling landslides and it has broadened his expertise in the field of disaster management.

The DMC was established in 2005 and Mr. Jayaweera joined six years later in 2011. The center had laid the foundation for the process of disaster management and also identified the key areas related to the process such as preparation, planning, awareness, risk mitigation, research, early warning, response and rescue operations, and providing relief assistance to the displaced by the time he joined. "DMC had

commenced preparing subnational operation plans related to preparedness planning at district levels and the team of directors including myself was entrusted with the responsibility of preparing the national disaster management plan (NDMP)", commented Mr. Jayaweera. He detailed how the plan has evolved from the national scale to every divisional level in Sri Lanka, "We have developed operational plans for all twenty-five districts in the country mainly focused on the two key monsoon seasons i.e. South West and North East, as the most significant impact from hazards is during these rainy seasons". He also stated that DMC's head office senior staff review these plans and regularly. Additionally, it is mandatory for District Disaster Management Units (DDMCUs) of DMC to complete this task well in advance with the support of all relevant stakeholders in the respective districts. "We have devised 200 plans at divisional level and 4,000 at the community level thus far and apart from these various practical drills, exercises, and similar programs are carried out to create awareness among communities."

Mr. Jayaweera's team is actively involved in tackling the common natural and man-made disasters mostly water-related and constantly trying to understand the best approaches to be adopted based on past experiences and research jointly done with reputed academia. He connected previous disaster events to motivation for extensive planning, "Sri Lanka as an island nation frequently exposed to floods, cyclones, landslides, etc. DMC has mapped the distinct impacts of each disaster after the significant devastation experienced in 2004 due to the tsunami which hit the Indian Ocean." He included that these plans anticipated the effects before, during, and after a disaster, "We have identified how best to address these impacts, what preemptive measures needed in terms of risk mitigation, creating awareness and providing training, developing standard operating procedures (SOPs), etc. to minimize the damage in terms of overall human fatalities and economic loss." Mr. Jayaweera concludes that the effectiveness of all these measures is very evident, especially during the recent Cyclone Burevi. The disaster hit Sri Lanka's north and east regions as the fatalities, damage to property, and overall economic impact were



very much minimal. He emphasized that the efficacy is the result of systemic operations that incorporated cooperation of all responders and stakeholders, "The proactive measures adopted by the relevant DDMCUs in those areas, especially at a challenging time amidst the COVID-19 pandemic and also the active role played by media and social media played a crucial role in averting any significant damages." DMC had created greater awareness by that time. This improvement materialized through monsoon preparedness planning sessions, distribution of pamphlets, constantly updating stakeholders with the help of technical agencies such as the Department of Meteorology, Irrigation Department, Ministry of Health, etc. using virtual or online platforms and also through popular government and private media channels. The response and rescue operations were well coordinated with the help of the tri-forces and Police and post-disaster relief assistance provided by the international non-governmental organizations (INGOs), NGOs and other volunteer organizations helped the temporarily displaced persons to return to their homes within a short period.

Take it to the Township - the Village-level Strategies

The DMC has approached disaster preparedness as a national prerogative. Mr. Jayaweera accredits it to better resilience in line with a systemic plan: "The center coordinates directs, and monitors the measures for disaster preparedness and response plans with the provincial, district and local authorities. Strengthening

local capacities is essential for emergency response. We understand that this will support our reach to the divisional and *grama niladhari* (village) levels." He added that meticulous approaches also need to include officials of relevant government departments and other key stakeholders including tri-forces, Police, etc. "Medical facilities must be on standby as their service is indispensable during disasters. We coordinate and support health authorities on preparedness plans for emergency response for hospitals. Our collaboration with the Ministry of Education has implemented the School Disaster Safety Plan," stated Mr. Jayaweera.

Sri Lanka's exposure to multiple disasters has led the DMC to create response procedures for hazards such as floods, cyclones, droughts, and landslides. Mr. Jayaweera concludes that disaster response requires specificity. He cites the case of vulnerable communities and the need to implement various activities to secure their safety - "Supporting these communities starts with forming disaster management committees and sub-committees. You must also involve them on awareness on disaster management, hazards, and vulnerability." A participatory method is applied to construct hazard maps for villages to know the safe locations and routes and conducting mock drills. He highlighted how these measures were successfully implemented in all communities, "Villages require provisions for enhanced capacity. We distribute equipment such as megaphones for early warning messaging and boats and *anguls* (canoe) for emergency response."

The planning efforts highlighted the success of community-based and consultative processes. The DMC witnessed the highest degree of engagement from the community during this operation. "The model was extensive in addressing the many aspects of disaster response. We noted that these plans have to begin with information to present risk analysis, risk mapping, and compiling risk information," stated Mr. Jayaweera. He emphasized including the community during the resilience building process - "The further development of early warning systems and safe centers, and test of innovation preparedness initiatives assured us that communities are better adapted to disaster impacts. Simulation drills and capacity-building activities instilled communities and stakeholders with a sense of ownership."

While the village-level comprehensive disaster preparedness plan has proven to be very advantageous, expanding it across Sri Lanka would lead to further complications. Mr. Jayaweera infers, "Our experience demonstrated that replicating the preparedness plan would have unique challenges. The availability of resources varies in different regions. Developing region-specific plans must incorporate financial assistance to procure resources." A systematic national plan needs to create and sustain networks and platforms. The director observes that local responders and stakeholders have to collaborate and participate in networks that connect them to the national platforms, "The common goal should be empowering these communities through capacity building. Our responsibility at the national level is to create communication channels that let local partners know their voices are heard. The authorities and stakeholders at all levels need to improve participation

in disaster risk reduction (DRR) planning, and implementation and monitoring activities."

The Sri Lanka Preparedness Partnership

The DMC is the leading disaster management agency in Sri Lanka. It is mandated to coordinate and implement national and subnational level programs to reduce the risk of disasters with all relevant stakeholders. Mr. Jayaweera expressed that the Sri Lanka Preparedness Partnership's (SLPP) - the national chapter of the Asian Preparedness Partnership (APP) in Sri Lanka - activities align with the DMC's vision for a wider network: "Our approach as a government agency is to expand to all potential partners. The SLPP has been instrumental in linking us with civil society organizations (CSOs) and the private sector. We have built strong, sustainable, and long-term partnerships." He views the national preparedness partnership as initiative-driven. "SLPP has ingrained itself into the disaster response environment through its strive reach every level. Affiliated institutes such as divisional level Emergency Operation Centers (EOCs) continue to closely work with the partnership. Representatives from the national to the grama niladhari support the SLPP's activities at the ground level."

The DMC and SLPP have partnered to incorporate national and local level disaster risk management plans as they move forward. Mr. Jayaweera notes that mitigation, preparedness and response, and recovery activities must be aligned with one plan and policy - "The SLPP has supported our coordination efforts. Moreover, their strive for localization has strengthened our collaboration and reach with local stakeholders. We also believe that cooperation will improve fundraising efforts





to address the specific needs of various communities. These commitments and support helped us leverage resources for monsoon preparedness and response from all sectors this year.”

Being prepared for disaster response starts at the policy level. Mr. Jayaweera points out the complexity of creating and engaging policies - “Any official guideline, mandate, or standard operating procedure (SOP) takes a prolonged time to develop because of the numerous considerations and the changing disaster climate. The SLPP has supported in initiating NDMP mandates, updating the DMC guidelines for institutional disaster management plans and SOPs, and developing local authority level disaster management plans.” The DMC is currently under the process of contextualizing humanitarian standards for safety center management under the SLPP. Knowledge is also the key to advancing the disaster response environment according to Mr. Jayaweera, “Seeing what worked around the world is the first step for your framework. The SLPP has built our technical capacity through national and international programs. The learning experience from the other APP member countries through the regional technical working groups and cross-learning discussion have been particularly insightful.” The director seeks to consolidate the knowledge and experiences into the context of Sri Lanka to meet and implement international standards to national preparedness and response plans.

Landslides demolish everything in its path, leaving only remnants of the community but there is always an opportunity to rebuild. The impacts made Mr. Jayaweera even more tenacious in his perspective for a resilient

Sri Lanka. The DMC forges ahead with strategies and policies that build the avenue optimal disaster response and preparedness. They progress with the scope of remodeling and update existing strategies to best address the changing needs of the country.

The National Disaster Management Plan

The National Disaster Management Plan (NDMP) of 2013-2017 is Sri Lanka’s official guideline for disaster-related activities. It details the procedures for all major phases of disaster response including mitigation, preparedness, emergency operations, and post-disaster activities. The DMC has given due consideration in incorporating relevant national policies and aspects of international frameworks such as the Sendai Framework for Disaster Risk Reduction (SFDRR), Sustainable Development Goals (SDGs), and the Paris Agreement on Climate Change when developing the NDMP.

The DMC envisions a disaster response environment that engages all stakeholders and the current NDMP is being updated at present mandating a multi-sectoral approach. It will link sub-national levels of administration, non-governmental organizations (NGOs); and grass-root level organizations as identified in the organizations’ National Emergency Operation Plan (NEOP). The plans are one step towards translating policies into tangible actions. The DMC is the focal agency for DRM and it prioritizes the execution of national plans with emphasis on provincial, local authority, district, divisional, and grama niladhari levels. With this consideration, the center has devised specific plans for risk assessment, disaster prevention and mitigation, disaster preparedness plan

for emergency response, contingency, and disaster rehabilitation and reconstruction.

Extensive strategies that coordinate response activities at various levels require specificity. Hence, these plans need to be reviewed and updated periodically, and as a stakeholder of DMC. SLPP has been supportive of the initiative taken by DMC in updating the current NDMP.

Comprehensive Disaster Preparedness Plan

The SLPP led the development Comprehensive Disaster Preparedness Plan (CCPD) with technical support from DMC, National Disaster Relief Services Center (NDRSC), and a team of specialized external consultants in 2018. These stakeholders engaged in an international dialogue that initiated the blueprint of the plan. The discussion conceptualized the need and purpose, essential components, and process to adopt for the strategy. It also identified possible disaster scenarios, geographic locations where the plan would be actuated, and key stakeholders involved. Fundamental components of the CCPD included processes to upgrade risk mapping, data collection, early-warning mechanisms, community response capacity, and strengthening safe centers.

Policies are the first step in regulating disaster response. Inopportunately, their efficacy, and application are often evaluated post-disaster. A simulated exercise to respond to scenarios similar to the 2017 floods was carried out. The activity provided realistic and measurable objectives, outputs, and activities to strengthen the coping capacity of communities. The Paragoda West GN Division in the Bulathsinhala Divisional Secretariat Division of Kalutara District is one of the most vulnerable to floods and difficult to access during floods. The district was selected after several consultation meetings because the CCPD would model itself around the most sensitive communities. This simulated response plan similar to the 2017 floods was executed following the finalization of CCPD. The focus of the activities and the proposed process was on the “last mile – last man” concept as shown below in **Figure 1** which encompasses all relevant and important stakeholders involved in responding to disasters.

The Paragoda West GN Division is located in the proximity of the Sinharaja forest reserve. It experiences 3,000 - 6,000 millimeters of rainfall during the two monsoon seasons from May to July and November to January. Major waterways include the Kukule river which

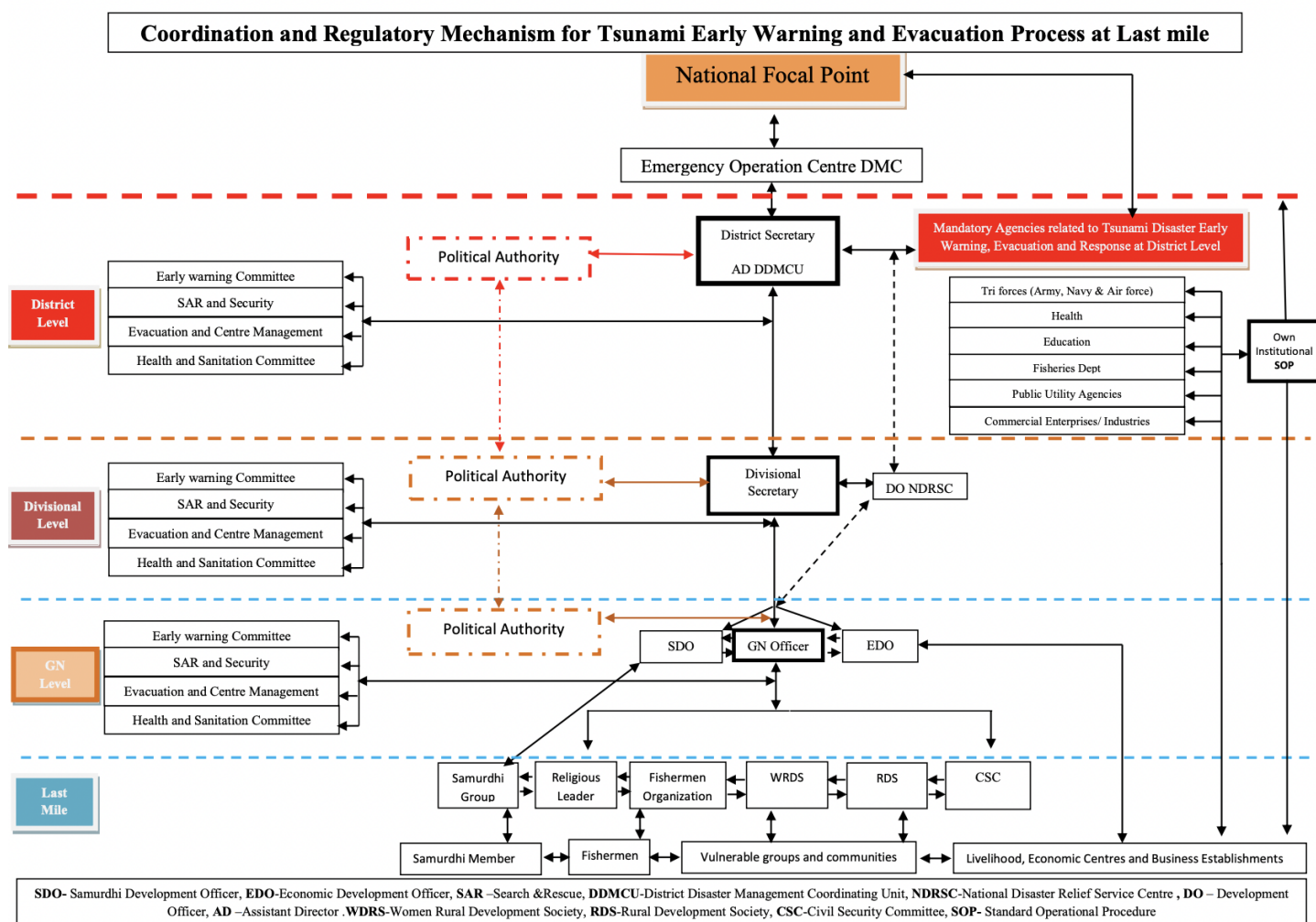


Figure 1: Proposed activities for the 'last mile - last man' process.

runs along the border of the vision. The river houses the Kukule Ganga Dam - a 100-meter run-of-river-type gravity dam. Pagoda West was one of the worst-hit regions during the 2017 floods. On 25 May 2017, the area received 553 mm of rain in 24 hours which is equivalent to one-sixth of the total annual rainfall. Extreme water volumes accumulated and inundated the downstream area. The flood levels reached the Paragoda West village above the street lamp posts resulting in a power outage. A few houses and the local school in higher elevations served as sanctuaries for community members rescued by volunteers. External relief efforts were inaccessible because the area was cut off from neighboring areas.

The CCPD execution in Paragoda West village was a multi-step process with several considerations and components that took place from 2018 - 2019.

Stakeholder consultation: Creating an inclusive and participatory process starts with including the community at the very beginning. Residents' testimonials of emergency response during past disaster events pinpointed needs and lackings in previous efforts. The local school served as a critical evacuation shelter and the optimal location to house response facilities. They included provisions for water, food, and sanitation, a storehouse for food and relief items, and kitchen space and utensils. A generator was also installed as blackouts were common during flood events. The campsites were equipped with boats to facilitate search and rescue missions. Capacity building for first aid, camp management, deaf and hard of hearing (HH) preparedness, and business continuity planning was emphasized and subsequently improved. Two navigation

systems were set into place for navy boats to reach areas in need and to gauge river flow levels for a village navigation system.

Devolved emergency management: Coordination mechanisms follow a top-down approach. The District Secretary is assisted by the District Management Coordinating Unit to lead incident command at the sub-national levels. This chain of command is followed by divisional and grama nildhari secretaries. A consultation process was enacted to streamline communication across the chain. These dialogues would particularly address the distinct needs of each village. The Paragoda West was able to procure loan schemes for households and micro-enterprises to build an upper story that would protect their assets from floodwaters through this communication line.

Upgraded early-warning systems (EWS): Communities that are alerted of impending disasters can better prepare for their impacts. With this in mind, the Divisional Secretary obtained consensus to receive level gauge data during heavy rains from the upstream Kukule reservoir and downstream Millakanda River Flow Gauge stations. The data reinforce flood warnings from the EOC in Colombo, Sri Lanka to the District Disaster Management Coordinating Unit (DDMCU) at the District Secretariat. A VPN communication system has synchronized the divisional secretariat, the DDMCU, and community leaders for timely early warning. This message is supported by community-centered early warning through mobile announcements to ensure that the warnings reach every household.



Geographic Information System (GIS) DataBase:

Location plays a vital role in a region's preparedness and how it is impacted by disasters. Therefore, tailored solutions are fostered through specific geographic and topographic parameters. The database for emergency preparedness mobilized the youth by instilling them with this knowledge through skills training. They participated in this GIS training along with divisional stakeholders to promote the sustainability of the system. A comprehensive GIS database called for household visits to collect information. The compiled data was validated by the community and has been meticulously contextualized for response and recovery interventions.

Floating storehouse: The isolation from the external relief motivated the community to propose a floating storehouse. The structure was set up using wooden platforms resting on empty plastic barrels. The storehouse was wrapped in waterproof material to protect it from rain and was made of lightweight material and on a platform. Furthermore, it was attached to four concrete pillars that prevented it from drifting away with the current.

Upgraded campsite: Communities understand the ideal solutions are both frugal and innovative. Paragoda West has converted containers into kitchens and storerooms. These edifices contained non-food relief items and dry rations. Additionally, the National Disaster Relief Services Center has allocated funds to upgrade the water and sanitation facilities.

Simulation Drill: The drill was conducted following the culmination of all the project's activities on 26 July 2019. Paragoda West inhabitants were informed of the drill the evening before. House-to-house visits were also carried out to guide evacuation announcement responses and inform members of the items they should carry with them. Furthermore, each household was assigned a number to record and determine their evacuation time. The simulation drill was an opportunity to test the evacuation plan and familiarize the village with the assistance would be provided by camp management sub-committees.

From Process to Purpose

The methodologies and execution of the CCPD in the Paragoda West were documented for stakeholders. The plan was devised through community and stakeholder consultations. It demonstrated the efficacy of a hybrid model that integrates an operational, tactical, procedural, and functional approach that can be modified based on the scenario and capabilities of the community.

The CCPD is not a stand-alone blueprint. It emanates from national policy and legal enactments, national operations planning, and emergency operations planning for delegated administrative jurisdictions. The plan seeks to bring all relevant stakeholders and the community to proactively prepare them for disaster risks. Moreover, the exercise illustrated a more collaborative and systematic emergency management approach. The plan delegates the roles and responsibilities of stakeholders and



community members avoids duplication of interventions and maximizes the use of available resources.

Allied for a Disaster Resilient

The APP enacted its national partnerships with the understanding that governments take a leading role. This perspective has propelled the DMC and SLPP to collaborate towards a disaster-resilient Sri Lanka. They have collaborated to coordinate with ministries, update existing guidelines, develop the local authority level plans, and SOPs under the National Emergency Operations Plan (NEOP).

One of SLPP's key targets is policies for better disaster response. The partnership has contributed to the National Disaster Management Planning Process in several ways. The DMC requested SLPP in 2019 to support the workshop to review and finalize the Institutional Disaster Management Guidelines. The national partnership assisted in bringing all relevant stakeholders for the revision and updating of the plan.

The successful collaboration prompted the SLPP's participation in updating SOPs for floods, landslides, cyclones as well as existing EWS. The partners joined a two-day stakeholder consultation workshop and the Disaster Management Centre represented the EOCs, Preparedness and Planning division, Human Resource Division, and Disaster Mitigation Division. District-level workshops were held at the Badulla, Batticaloa, and Kilinochchi districts after these meetings. These



events determined the expectations of local communities, indicated the needs on the ground, and minimized the operational gaps when it comes to implementation. They collectively identified gaps in the SOPs and EWS and developed an EWS flow chart and revised the existing SOPs. Technical agencies and relevant officials of the DMC consequently validated the guidelines for further dissemination to pertinent stakeholders.

The DMC was motivated to enlist SLPP in the workshop on 'Developing Local Disaster Risk Reduction Strategies' in April 2021. The strategies focused on how preventative measures can be

implemented in consideration of the roles of provincial councils, local authorities, and other local-level institutions.

In keeping with its vital objective 'Strengthening Capacity of Government, Local Humanitarian Organizations and the Private Sector on Preparedness for Response' the SLPP, continues to work closely with the government of Sri Lanka to enhance preparedness for effective disaster response by supporting the DMC to forge ahead with the national disaster management goals and targets towards creating a safer Sri Lanka.

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The Asian Preparedness Partnership (APP), established by the Asian Disaster Preparedness Center (ADPC), is a unique multi-stakeholder regional partnership that includes countries from South and Southeast Asia to better prepare for, respond to, and recover from disasters. Supported by the Bill & Melinda Gates Foundation (the foundation) and the United States Agency for International Development Bureau for Humanitarian Assistance (USAID BHA), the partnership strives to improve stakeholder coordination and dialogue between governments, local humanitarian organization networks, and the private sector for enhancing capacities through partnerships, knowledge resources, training, and networking opportunities.



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