2020 ANNUAL REPORT

adpc

Floods amidst COVID-19

Asian Disaster Preparedness Center

Reducing disaster risks amidst the COVID-19 pandemic

Asian Disaster Preparedness Center

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ADPC Board of Trustees

ADPC is governed by its nine founding member countries:
Bangladesh, Cambodia, China, India, Nepal, Pakistan, the Philippines, Sri Lanka, and Thailand.

In 2020, ADPC completed its transition from a foundation to an autonomous international organization after signing the Host Country Agreement with the Ministry of Foreign Affairs (MOFA), Thailand in November 2019.

ADPC is governed by its Board of Trustees (BOT), whom represent National Disaster Management Offices, Government Ministries and Foreign Missions of ADPC's 9 Founding Member Countries as outlined below:

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Ministry of Disaster Management and Relief

Cambodia
National Committee for Disaster Management

China
Ministry of Emergency Management

India
National Disaster Management Authority

Nepal
Ministry of Home Affairs

Pakistan
National Disaster Management Authority

Philippines
Department of National Defense (Office of Civil Defense)

Sri Lanka
Embassy of the Socialist Democratic Republic of Sri Lanka to Kingdom of Thailand

Thailand
Ministry of Foreign Affairs

A health worker wearing mask and safety gear before testing for COVID-19 at old Delhi Chandani Mahal, India.

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Message from the Executive Director

Dear readers,

The impact of COVID-19 has struck through the heart of not only the health sector, economic activities, and the consequences of increased poverty and vulnerability, but also to our interpretations of what makes a resilient society. As we usher in a new decade, the COVID-19 pandemic serves as a critical reminder that each individual, community, government, organization and industry are responsible for preparing for all types of health, disaster, and climate risks.

The 'New Normal' presents different opportunities and constraints as to how the international community manages a recent pandemic alongside the effects of recurring and emerging disasters. How do we implement quarantine measures when floods wash away the settlements built to protect us? How do we practice physical distancing when storms force anxious people into confined emergency shelters?

In 2020, Asia and the Pacific experienced a new wave of deadly typhoons, cyclones, earthquakes, droughts, heat waves, flooding, and landslides. Cyclone Amphan was recorded as the costliest cyclone in the North Indian Ocean since Cyclone Nargis in 2008, with an estimated $13.7 billion in damages across four countries. In the Philippines, the Taal Volcano eruption affected 846,000 people with volcanic earthquakes and ashfall.

I am grateful that we were able to hold the 15th Meeting of the Regional Consultative Committee on Disaster Management (RCC) in January 2020 before the global pandemic was announced and thank the Thai Government for hosting and its support. ADPC, as the secretariat to RCC, closely interacted with RCC member countries and observer organizations to enhance regional cooperation and coherence for resilient and inclusive societies. The meeting also resulted in the issuing of the Bangkok Statement that calls upon the parties of global frameworks to uphold their commitments.

I wish to personally thank all of ADPC's partners for their continued support during these uncertain times and I also extend my gratitude to ADPC's staff for their tireless commitment and perseverance in facilitating the implementation of new and existing projects during COVID-19. I hope that you find this year's Annual Report informative, interesting and inspiring.

Sincerely,

Hans Guttman
Executive Director
Asian Disaster Preparedness Center

Foreword

Dear readers,

While the COVID-19 pandemic requires us to stay physically apart, it has brought together the people and professionals of Asia and the Pacific to develop healthy and resilient communities. Throughout 2020, ADPC has maintained close and effective relations with its partners near and far to implement new projects for COVID-19 support and to minimize the pandemic's impacts on the outcomes of ongoing activities. Specifically, ADPC also organized and was invited to contribute to a series of intellectually stimulating webinars on topics such as supporting private sector resilience during lockdowns and developing training and capacity development in the era of COVID-19.

With less than a decade left to implement the commitments of the Sendai Framework for Disaster Risk Reduction (2015-2030) and the 2030 Agenda for Sustainable Development, we must adequately address all challenges that hinder our progress and take advantage of all opportunities as an international community dedicated to building safe, prepared, resilient and healthy societies.

ADPC, as an autonomous international organization, will continue to promote regional cooperation on disaster risk reduction and climate resilience initiatives through a diverse set of expertise in its strategic themes. The ADPC Strategy 2030 is also currently being revised with close consideration to the changing global disaster risk landscape and the overarching needs of different stakeholders in Asia and the Pacific region.

I hope that you find this year's Annual Report intriguing and informative as it uncovers ADPC's efforts on responding to the COVID-19 pandemic, leveraging geospatial information, strengthening urban resilience, enhancing regional cooperation, amplifying climate change adaptation, gender and rights-based approaches, preparedness for response and recovery and tracking implementation of the Sendai Framework. I would also like to personally thank all of our partners for their continued effort and support and look forward to meeting with you again in-person once COVID-19 subsides.

Sincerely,

Aslam Perwaiz
Deputy Executive Director
Asian Disaster Preparedness Center

ADPC in 2020

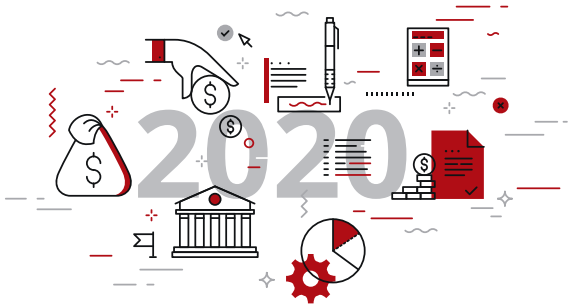
38 countries

See ‘Country Highlights’ on page 13 for more details

Afghanistan, Australia, Bangladesh, Bhutan, Cambodia, China, Cook Islands, Ethiopia, Fiji, India, Indonesia, Iraq, Japan, Kazakhstan, Kiribati, Kyrgyzstan, Lao PDR, Malawi, Malaysia, the Maldives, Myanmar, Nauru, Nepal, New Zealand, Niue, Pakistan, Papua New Guinea, the Philippines, Republic of Korea, Singapore, Sri Lanka, Tajikistan, Thailand, Tokelau, Turkmenistan, Tuvalu, Uzbekistan, Viet Nam

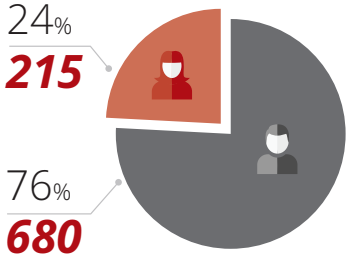
39 Projects in **38** Countries

$8.2 million Financial summary

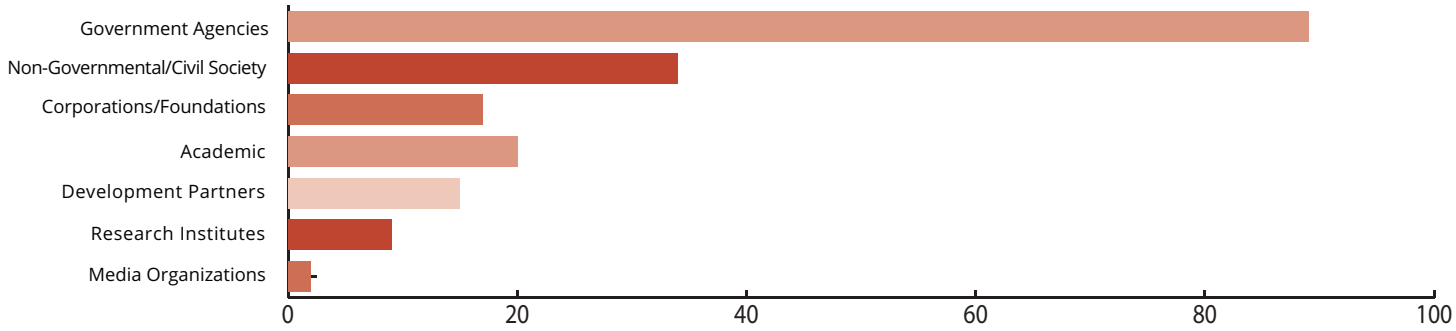


231,395 People reached

895 People trained of which

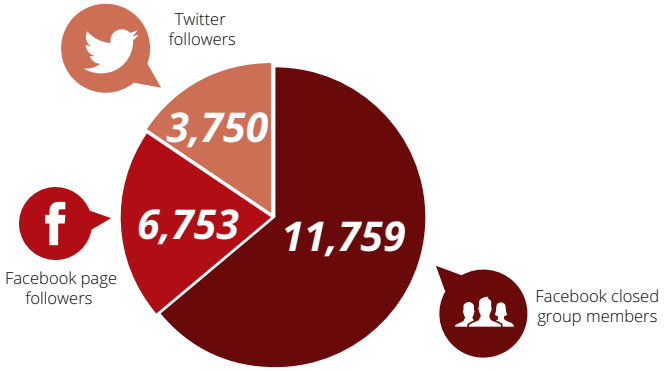


186 Partners



455,110
Social media reach

50,000
Website reach



15 Webinars held

4,658 Online attendees

Highlights

Supported the Cambodian Government and humanitarian partners with near **real-time satellite data to develop new flood maps**.

Helped increase **flood forecasting** lead time in the Lower Mekong from six days to fifteen days through new satellite-based rainfall data and products.

Conducted a hazard and risk assessment in Dala Township, Myanmar that can be used for local analysis on **flood evacuation routes and shelters.**

Assisted the Government of Bihar, India to reach over 200,000 families through **Lightning Early Warning Systems (LEWS)** to alert and protect them against lightning strikes.

Organized orientations for over **28 volunteers at quarantine centers** in Myanmar to enhance their knowledge and empower them to teach others.

Redesigned and published an online **disaster damage and loss reporting system** in Sri Lanka to increase speed and efficiency of allocating budgets for efficient recovery.

Distributed 7,000 information, education and communication materials on COVID-19 among seven provinces in Sri Lanka reaching millions of residents.

Organized a webinar on **mental health and psychosocial support** (MHPSS) with a diverse range of speakers reaching over 428 viewers.

Developed DRR status report for countries across Asia and the Pacific through national consultations which include sections on COVID-19.

Published a **Pre-Strategic Plan Study** on Indonesia Disaster Management Education and Training Center

Organized an ADPC Alumni Forum webinar **reaching 140 alumni around the world** to discuss initiatives for blended e-Learning amidst COVID-19.

Using satellite data from NASA, co-developed the **Mekong Air Quality Explorer tool** to monitor and forecast air quality in Thailand for informed decision-making.

Supported youth innovations at the Smogathon in Thailand, where the winning team developed a board game on causes and solutions to air pollution.

Co-developed a mobile application for Beppu City, Japan to track the safety of persons with disabilities (PWDs) during flood events.

Hosted 200 disaster management officials and experts at the 15th Regional Consultative Committee on Disaster Management (RCC) Meeting.

Supported 7 Pacific Small Island Developing States (SIDS) in scaling up their climate risk and early warning systems against storms and floods.

Co-developed **a COVID-19 Small Business Continuity and Recovery Planning Toolkit** with UNDRR to strengthen private sector resilience.

Launched the **Climate Adaptation Platform South Asia (CAP-South Asia)** with officials from 8 countries to bolster access to climate adaptation finance in the region.

Supported officials in the Philippines to **integrate rights and gender-based approaches** into existing systems and developed a similar roadmap for Nepal.

Conducted **climate change scenarios for a new pilot study in Myanmar and Lao PDR** against flooding and landslides that has been presented to ASEAN

Engaged with officials and academia in Chiang Rai, Thailand to adopt **satellite-based fire risk data** into a local fire hotspot management app.

Organized a co-creating workshop to discuss multi-stakeholder cooperation between government, civil society and private sector **in Lao PDR.**

Launched **a five-year project** to enhance climate adaptation and resilience in water, agriculture, road infrastructure, policy, planning and finance sectors **in South Asia.**

Revising the Rajshahi Metropolitan Development Plan (RMDP) with support from **Government of Bangladesh to help review the city's** current urbanization trends and evaluate related issues.

ADPC at a glance

Asian Disaster Preparedness Center (ADPC) is an autonomous international organization that works to build the resilience of people and institutions to disasters and climate change impacts in Asia and the Pacific.

Established in 1986, it provides comprehensive technical services to countries in the region across social and physical sciences to support sustainable solutions for risk reduction and climate resilience.

ADPC supports countries and communities in Asia and the Pacific in building their Disaster Risk Reduction (DRR) systems, institutional mechanisms, and capacities to become resilient to numerous hazards, such as floods, landslides, earthquakes, cyclones, droughts, etc.

Working across a broad range of specialist areas, ADPC develops and implements cross-sectoral projects/ programs on the strategic themes of risk governance, urban resilience, climate resilience, health risk management, preparedness for response, and resilient recovery. Our strategic themes are complemented and underpinned by the cross-cutting areas of gender and diversity, regional and transboundary cooperation, and poverty and livelihoods.

The ADPC Academy designs and delivers specialist capacity-building and training courses at all levels and also enhances the capabilities of national training centers on DRR.

ADPC is governed by its nine founding member countries: Bangladesh, Cambodia, China, India, Nepal, Pakistan, the Philippines, Sri Lanka, and Thailand.

Our Vision

Safer communities and sustainable development through disaster risk reduction.

Core Principles

ADPC's efforts to strengthen disaster and climate risk management systems in Asia and the Pacific are anchored in three principles:
Science. Systems. Applications.

These principles encompass the utilization of scientific knowledge and technology to understand risk better, the institutionalization of systems to build resilience, as well as the application of risk-reduction measures across a range of development sectors and different national contexts within Asia and the Pacific.

Our Offices and Representation

The ADPC headquarters is in Bangkok, Thailand with country offices in Myanmar, Bangladesh, and Sri Lanka. ADPC also has country representation in Cambodia, Indonesia, India, Nepal, Pakistan, the Philippines, Viet Nam, and Ethiopia which host experts who work towards achieving our vision—safer communities and sustainable development through disaster risk reduction.

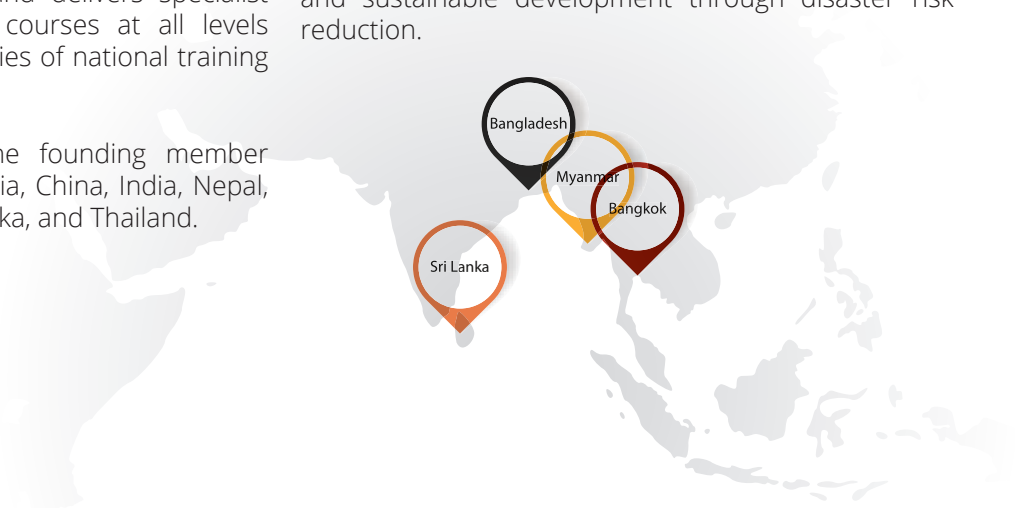


Photo by tascha1 / Freepik.com

Responding to the COVID-19 pandemic

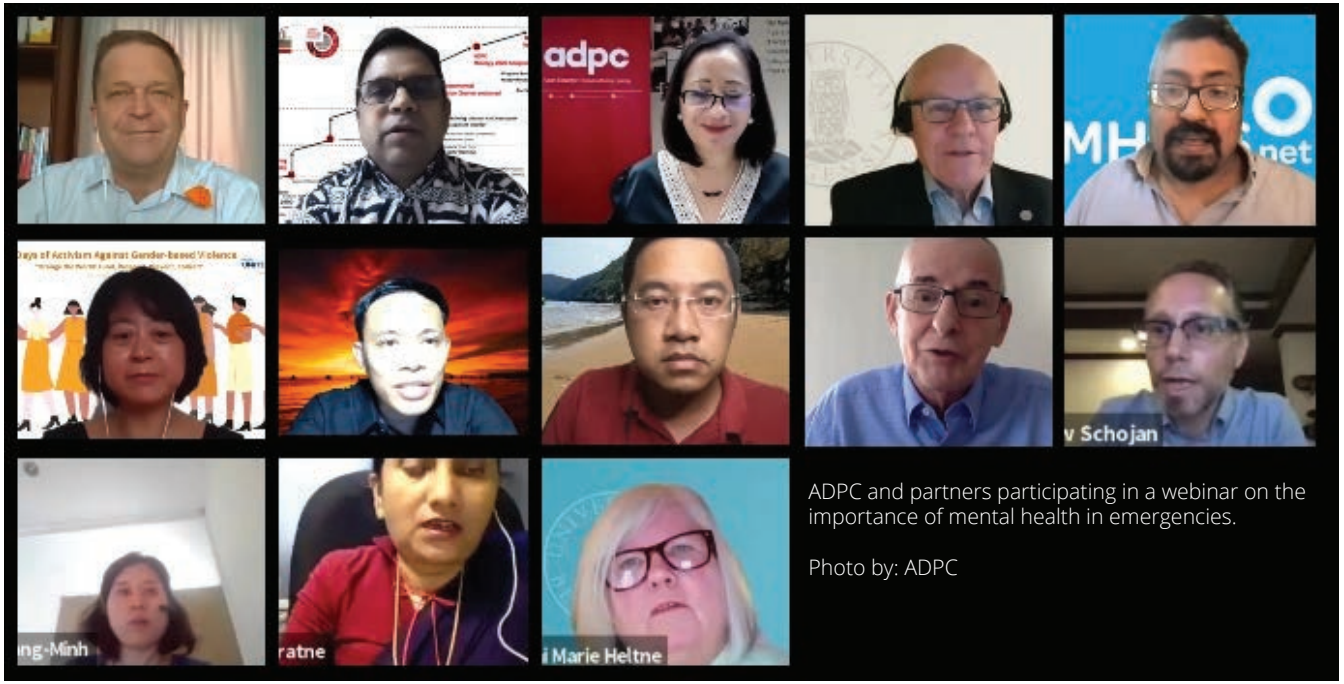
The coronavirus pandemic (COVID-19) caught the world off-guard in late 2019. It caused millions of deaths, pushing the health systems to the brink of failure and spurring a widespread lockdown. The COVID-19 pandemic unleashed unprecedented and multifaceted challenges to governments and people alike. Job loss, education halts, travel restrictions, social distancing, and economic slumps led to emotional suffering, eroded resilience, and increased vulnerability of communities and countries.

Leveraging disaster preparedness networks for COVID-19 response at the local level

In 2020, Asia and the Pacific faced double challenges when disasters hit many countries in the region in the thick of the pandemic. The world was poorly prepared to deal with a pandemic of this scale. However, local capacities, networks, and multi-stakeholder coordination mechanisms developed over decades for disaster management proved to be profoundly helpful in responding to both crises simultaneously.

ADPC and the Bill & Melinda Gates Foundation came together in 2016 to strengthen local humanitarian organizations' emergency response capacity in Asia. They later formed the Asian Preparedness Partnership (APP)—a unique regional multi-stakeholder network of National Disaster Management Offices (NDMOs), local humanitarian organization networks, and the private sector from Cambodia, Myanmar, Nepal, Pakistan, the Philippines, and Sri Lanka.

Over the period of four years, ADPC had established strong local networks by establishing national-level preparedness partnerships in each country. ADPC had also been gradually building the capacities of local



ADPC and partners participating in a webinar on the importance of mental health in emergencies.

Photo by: ADPC

humanitarian networks in various areas while establishing a chain of coordination with provincial and national level institutes.

When COVID-19 hit this region, existing capacities, networks, and synergies, developed initially to prepare for disasters, became instrumental in responding to the pandemic by eliminating the risk of miscommunication and duplication of efforts.

The National Preparedness Partnerships in Cambodia, Myanmar, Nepal, Pakistan, the Philippines, and Sri Lanka collaborated with public health sectors and ministries in each country to generate and disseminate risk communication materials in line with World Health Organization (WHO) and locally contextualized prescribed guidelines.

The materials were produced in 22 national languages and local dialects of the partnership countries that benefited millions of people by reinforcing the message of preventive measures bringing about desired behavioral change against COVID-19.

The Preparedness Partnership of Cambodia (PPC) organized training workshops with the National Institute of Public Health (NIPH), Ministry of Health (MOH), during which authorities of 29 health centers shared their experiences in responding to COVID-19. The Myanmar Preparedness Partnership (MPP) collaborated with the Myanmar Medical Association (MMA) to organize orientations for volunteers in quarantine centers.

Over 28 volunteers at public quarantine centers at government hospitals in the Magway District, the University of Medicine, and civil society organizations (CSOs) enhanced their knowledge to be further shared with other volunteers.

The Nepal Preparedness Partnership (NPP) leveraged this partnership for further support from its private sector partners in strengthening preparedness for emergencies. The partnership has facilitated consultations between national emergency and public health emergency operation centers for a more integrated response to COVID-19 at the national and sub-national levels.

For COVID-19 preparedness and response, the Sri Lanka Preparedness Partnership (SLPP) strengthened the functional information management systems for the Disaster Management Centre (DMC) and the Disaster Preparedness and Response Division (DPRD), Ministry of Health, Nutrition & Indigenous Medicine.

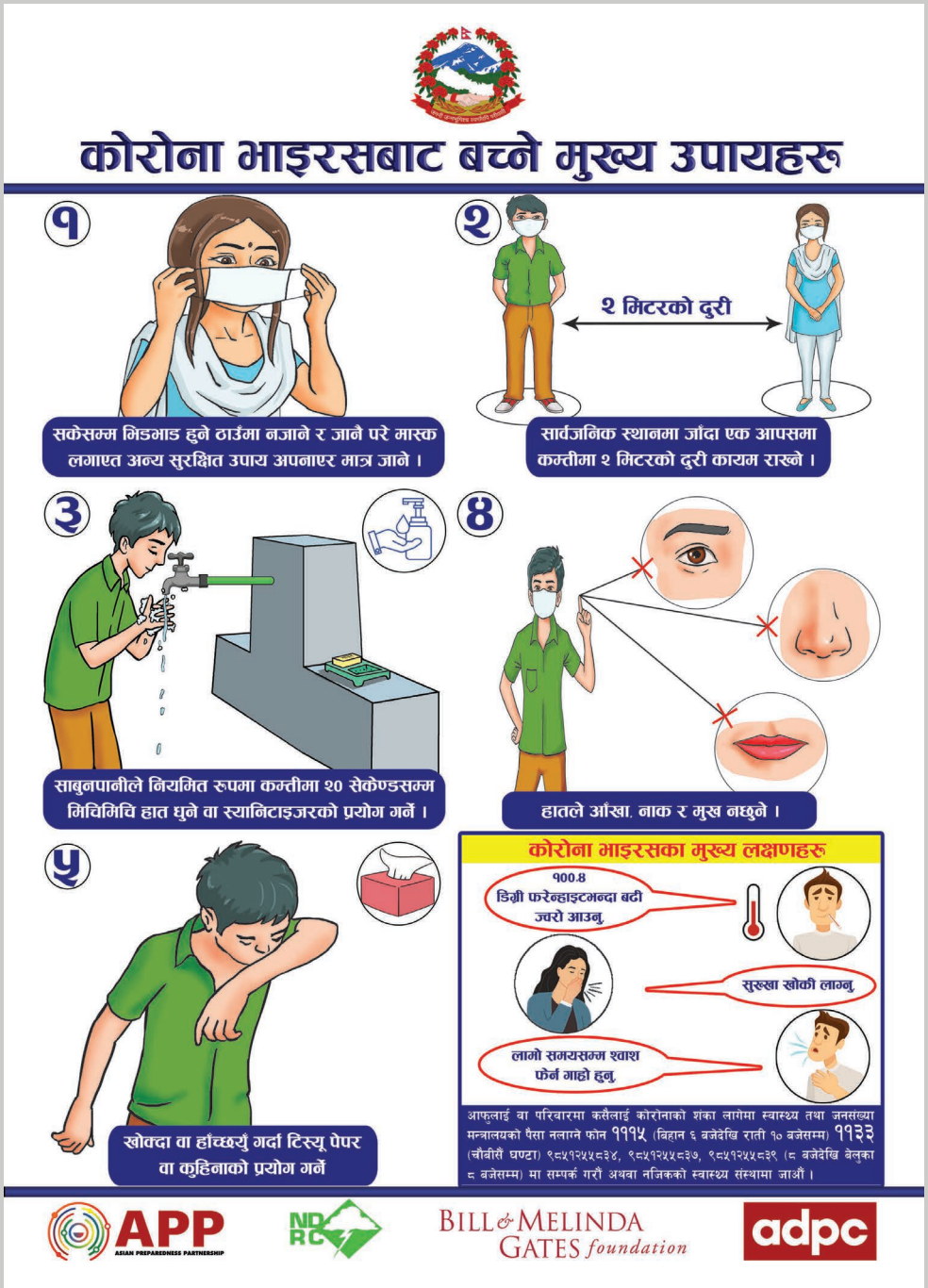
The partnership reached out to millions of people by distributing over 7,000 information, education, and communications (IEC) materials among the community and provincial centers across seven provinces of Sri Lanka. Orientation sessions organized for 175 local health workers improved their knowledge about government-approved SOPs, guidelines, policies, plans, and protocols for pandemic preparedness.

ADPC also conducted training workshops for local health workers and humanitarian organizations in seven municipalities with 256 participants. The sessions enabled participants to acquire crucial skills to share lessons learned within their circle and beyond.

While the COVID-19 pandemic has drawn significant attention to physical health, its impacts on mental health should not be overlooked. The loss of loved ones and livelihoods due to lockdowns can increase stress, anxiety and depression.

ADPC prioritizes Mental Health and Psychosocial Support (MHPSS) as part of its preparation of health sectors for emergencies. In 2020, ADPC organized a webinar on "Mental Health in Emergencies: Greater Investment, Greater Access" and conducted a training needs assessment in Myanmar to develop an MHPSS learning module.

Activities carried out to respond to the COVID-19 outbreak enhanced partnership between provincial health training centers, local governments, the private sector, ADPC, and local non-governmental organizations in six APP countries.



A Nepali poster highlighting precautionary measures to prevent the transmission of COVID-19.

Photo by: APP/ADPC

Stakeholders in Lao PDR identifying priority actions to strengthen multi-sector cooperation on disaster preparedness and response.

Photo by ADPC. The photo was taken during a period of relaxed national COVID-19 measures.

Scaling out APP to Lao PDR

With support from the USAID Bureau for Humanitarian Assistance (USAID/BHA), ADPC initiated 'Strengthening Multi-Stakeholder Cooperation for Emergency Preparedness for Response in Southeast Asia' in Cambodia and Lao PDR.

The project draws upon APP's experience to create a more inclusive environment for DRR with local, civil society, and the private sector organizations at national and sub-national levels. It seeks to strengthen the capacity of at risk-communities to prepare for, respond to, and recover from disasters through locally-led actions in Lao PDR.

The project will create a national platform, led by the Government, to mobilize the private sector and non-profit associations (NPAs) under one umbrella to cultivate multi-stakeholder efforts for disaster preparedness. From a broader perspective, the interventions in Lao PDR will ultimately be synergistic with the existing APP platform at the regional level while promoting South-South learning between Southeast Asia and South Asia.

Leveraging geospatial information

ADPC focuses on using Earth observation technologies to inform and solve development problems and environmental challenges involving disaster and climate risks. In 2020, ADPC continued improving drought forecasting and agricultural planning in Viet Nam, improving flood forecasting capacity with satellite-based rainfall estimates across four countries in the Lower Mekong River basin and improving the region's near-real-time flood monitoring.

In 2020, ADPC took part in several international geospatial platforms such as the UN-SPIDER's Regional Support Offices, and Sentinel Asia Data Analysis Nodes.

Addressing developmental and environmental challenges in the Lower Mekong Region

Through a unique partnership between the U.S. Agency for International Development (USAID) and the U.S. National Aeronautics and Space Administration (NASA), SERVIR-Mekong is a project that harnesses space technology and open data to help address developmental and environmental challenges in the Lower Mekong region. Over the last year, notable achievements of SERVIR-Mekong are as follows:

Helping farmers prepare for and respond to droughts: contribution to the Mekong River Commission's Drought Management Strategy (2020-2025)

The Lower Mekong Basin (LMB) produces over 50 million tonnes of paddy crop annually, contributing to a quarter of the world's rice exports. In 2019, the region exported US$ 6.6 billion worth of rice. Due to a shorter-than-usual monsoon season in 2019, countries in the LMB are experiencing an ongoing drought. This not only adversely impacts the economy of the region but also increases social inequality. SERVIR-Mekong provided satellite imagery, data and decision support tools to the Mekong River Commission Secretariat (MRCS) to assist the MRCS in implementing its Drought Management Strategy (2020 - 2025).

SERVIR-Mekong's data products and services help MRCS to prepare and respond to droughts. As a result, farmers have advanced information to mitigate the impact of droughts on their crops, and policymakers have actionable data and easy to use tools to develop and implement drought prevention and mitigation strategies. The United Nations Economic Commission for Asia and the Pacific (UNESCAP) has recognized ADPC's work on drought management in its recently released report, "Geospatial Practices for Sustainable Development in Asia and the Pacific 2020: A Compendium".

Increasing the effectiveness of flood forecast in the Lower Mekong Region

Countries in the Lower Mekong region experience seasonal floods, caused by heavy monsoon rain and tropical storms. According to the MRCS, the average annual cost of floods in the LMB ranges from US$ 60-70 million. Cambodia and Viet Nam account for almost two-thirds of this loss. There is a strong demand for more reliable and accurate flood forecasts to prepare for and respond to floods. To meet this demand, SERVIR-Mekong developed new generation satellite-based rainfall data and products that were adopted by the MRCS to increase the effectiveness of flood forecasts. The new products not only improve the accuracy of flood forecasting but also give fifteen days lead time (as opposed to six days earlier) to respond to extreme monsoon rains and tropical storms, thereby reducing flood risk.

The photo was taken during a period of relaxed national COVID-19 measures.

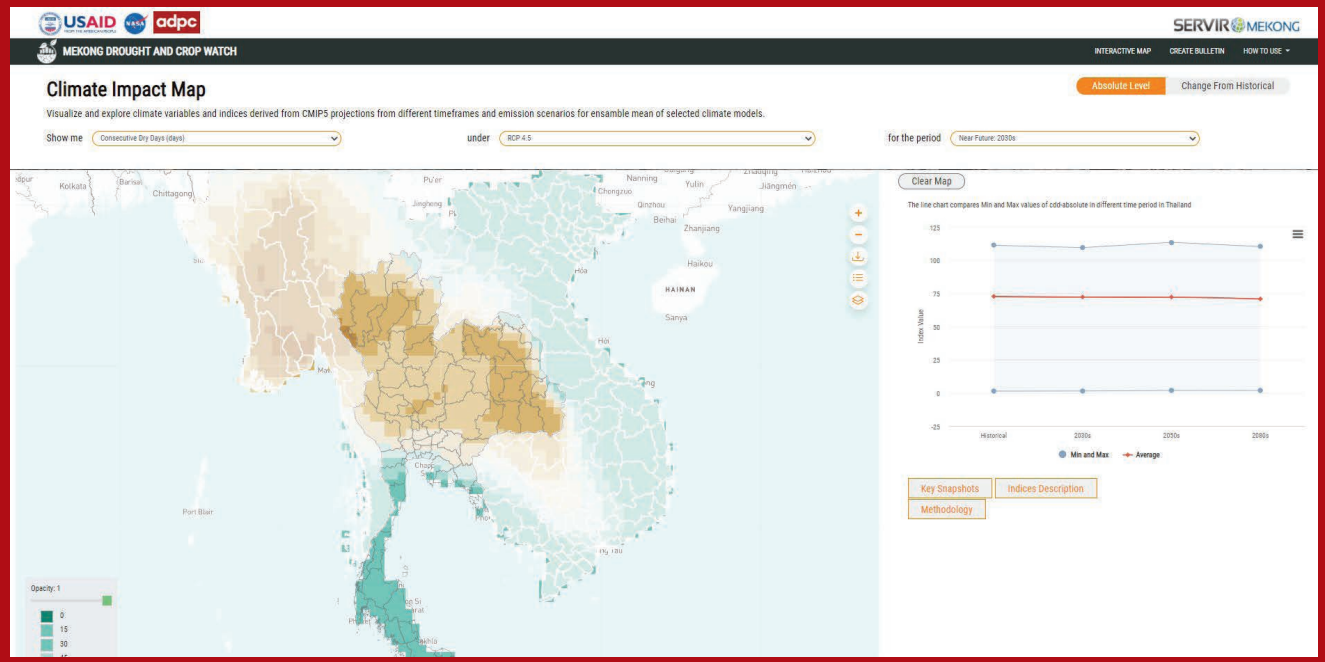
Mr. Aslam Perwaiz, Deputy Executive Director and the SERVIR-Mekong team posing for a group picture with partners at the launch of the Mekong Air Quality Explorer Tool.

Photo by SERVIR-Mekong/ADPC

The photo was taken before WHO's announcement of the COVID-19 pandemic

No Grant SMOG team with U.S. Consul General Sean O'Neill after being awarded first prize at the Smogathon event supported by ADPC in Chiang Mai, Thailand

Photo by SERVIR-Mekong/ADPC



A screenshot of the Mekong Drought and Crop Watch Tool.

Photo by SERVIR-Mekong/ADPC

Providing satellite-based flood extent data to respond to widespread flooding in Cambodia.

In October 2020, extensive flooding in Cambodia affected over 792,000 people. To support the World Food Programme (WFP) Cambodia in supplying immediate assistance to the affected areas, SERVIR-Mekong provided daily satellite-based flood extent data that was integrated into WFP's comprehensive disaster risk management platform (Platform for Real-Time Impact and Situation Monitoring – PRISM).

The high frequency and ease of access to data enabled WFP to produce flood map products for regular briefings with the Government and humanitarian partners and to produce a series of situation reports. As a result, the Government, WFP, and humanitarian partners had a better understanding of the geographic extent of the floods as they targeted life-saving emergency assistance where it was most needed. This SERVIR-Mekong-WFP collaboration has been acknowledged by the World Meteorological Organization (WMO) in its "2020 State of Climate Services" report.

Using satellite data and machine-learning analytics to tackle air pollution in Thailand.

Air quality in the Lower Mekong region is getting worse due to deforestation, human-induced burning of agricultural areas, and forest fires. In Thailand, air pollution has become a serious health issue due to seasonal agricultural burning coupled with rapid industrial growth. ADPC, in collaboration with the Royal Thai Government's Pollution Control Department (PCD) and the Geo-Informatics and Space Technology Development Agency (GISTDA), developed the Mekong Air Quality Explorer Tool. This decision support tool combines satellite data from NASA with ground-sensor data and machine-learning analytics to enable monitoring and forecasting of air quality in Thailand.

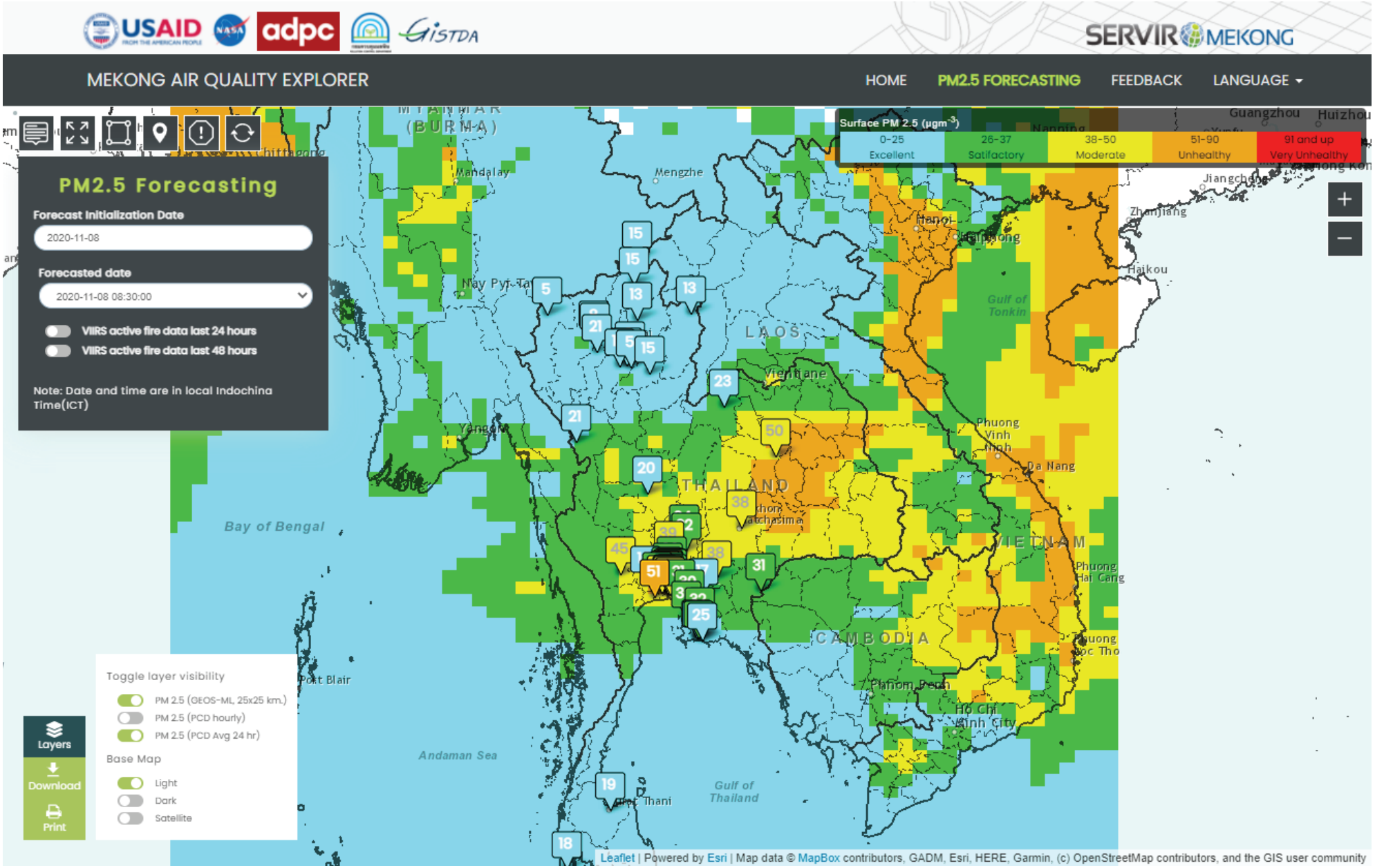
This information helps authorities devise data-driven policies and strategies to tackle air pollution in Thailand. The Air Quality Explorer Tool will be scaled up to address regional and transboundary issues related to sustainable landscape management through fire detection and air quality forecasting.

To combat air pollution, ADPC organized a Smogathon to engage with youth. A number of youth groups came together, and the winner developed a board game to educate elementary school children about the root causes of air pollution and preventive measures students can take.

Building capacity to use geospatial information and tools

While providing decision support tools and services to governments and other stakeholders in the Lower Mekong region, SERVIR-Mekong also invested in building people's capacities to use these tools and services. In 2020, over 155 personnel were trained, including officers within national governments, NGOs, regional organizations, and academia, through twelve capacity-building programmes.

In the future, SERVIR-Mekong aims to increase the scope and scale of tools and services offered beyond the Mekong River region. The ambition is to expand its reach to the ASEAN region to include Indonesia, Brunei, Malaysia, the Philippines and Singapore. Existing services and tools under the four thematic areas, namely agriculture and food security; land cover, land-use change and ecosystems; water resources and hydroclimatic disasters and weather and climate will continuously be strengthened as new technologies, methods and datasets emerge.



A screenshot of the Mekong Air Quality Explorer Tool.

Photo by SERVIR-Mekong/APDC

Strengthening urban resilience

Promoting sustainable urban development

Bangladesh seeks to create livable urban environments that are inclusive, sustainable and affordable as part of its Vision 2004-2024. ADPC with support from the Bangladeshi government is helping revise the Rajshahi Metropolitan Development Plan (RMDP) to help review the city's current urbanization trends and evaluate related issues such as development control mechanisms for changing circumstances.

This year, ADPC and its partners conducted 9 surveys covering sectoral topics like land use, transportation, environmental monitoring and building vulnerabilities to help determine key areas for improvement.

A participatory rapid appraisal (PRA) was also conducted in the city area's 44 administrative units to identify existing spatial and non-spatial problems. These survey findings and PRA report were submitted to the Rajshahi Development Authority (RDA) to assist with the revision of the plan and decision-making processes.

Moving forward, the project aims to develop 9 working papers and 4 multi-hazard vulnerability and risk assessment reports to assist with the revision of the RMDP and promote sustainable urban development.

Enhancing urban resilience to disasters and climate change

Urbanization in coastal areas leads to increased development, population growth and density near waterfronts that exacerbate disaster risks. A resilient urban community can anticipate, prevent, absorb, adapt and respond to shocks and stresses of disasters and climate change variability. In Myanmar, ADPC with support from Norwegian Agency for Development Cooperation (Norad) has been helping local governments enhance urban planning and resilience through risk assessments, capacity development and providing actionable data on coastal areas for informed decision-making.

Understanding disaster and climate-related risks in a coastal urban setting

In 2020, ADPC conducted a hazard and risk assessment on urban population and infrastructure resilience to flooding, cyclones and storm surges for Dala Township of Myanmar. The assessment included assessing general building stocks, health facilities, power transmission facilities and road networks.

Dala Township is located on the banks of the Yangon River with a current population of 186,143 residents. Given its location, the township is highly exposed to climate-induced natural hazards such as cyclones, floods and storm surges. PONJA (2008) reports that Cyclone Nargis resulted in 14 lives lost in the township and Horton et al. (2016) notes that maximum temperature rises in the area ranged between 0.25ºC and 0.40ºC per decade from 1981-2010. This rapid warming also contributes to the township's various climate-related disasters.

Yangon City Development Committee (YCDC) has also categorized Dala as a redevelopment zone within its Strategic Urban Development Plan. It provides government and communities with a great opportunity to mainstream disaster risk reduction and climate change concerns into the development planning process.

Providing information for risk-sensitive land use planning

ADPC's assessment revealed that most buildings in Dala are prone to 1-2 meters of flooding and nearly the whole area is prone to very severe cyclonic

storms. Specifically, an estimated 133,407 people and 161.91 kilometers of roads in Urban Dala are potentially exposed to strong winds that can reach between 118-165 km/h. ADPC also mapped the locations of critical infrastructure such as hospitals and schools in its assessments and concludes that further analyses can be done on possible evacuation routes and shelters.

The findings set the basis for determining the future direction for incorporating disaster risks in Dala's land-use planning. Disaster risks can be reduced by adopting risk-sensitive land-use management processes that encourage a better understanding of how natural hazards in and around Urban Dala interact with existing and future urban growth. The findings also help determine the type of investment that can be undertaken to promote development in a risk-sensitive manner.

Supporting health risk management

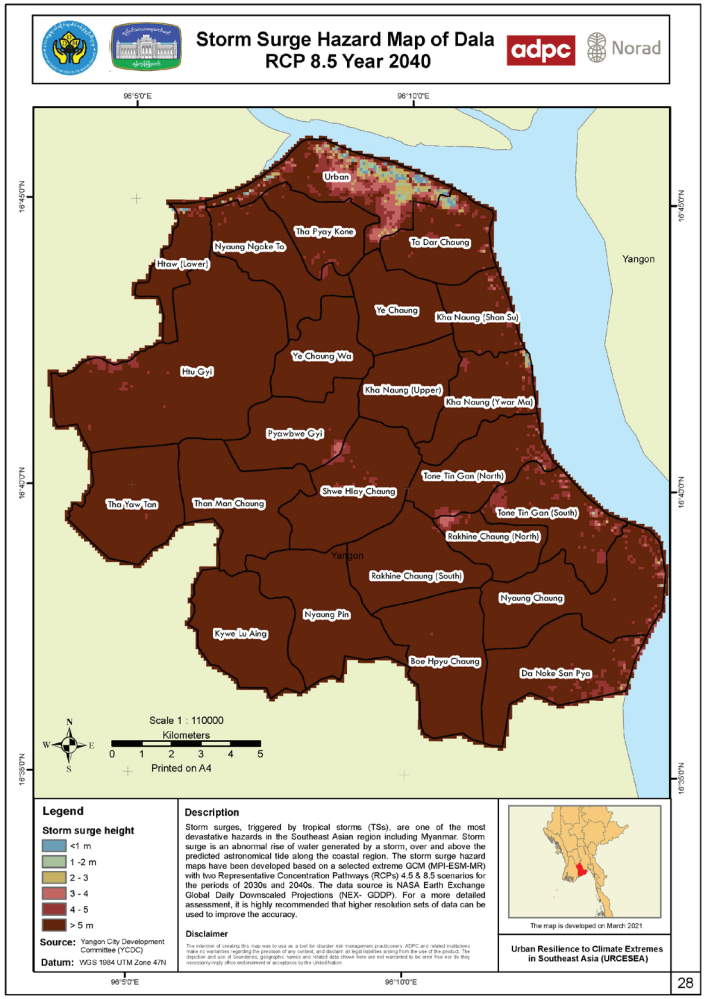
An expected outcome of the Urban Resilience to Climate Extremes in Southeast Asia (URCE) program supported by Norad is improved urban sectoral preparedness and emergency response. Capacity development initiatives help ensure the wellbeing of urban communities in target areas such as healthcare.

In February 2020, Training Needs Assessments (TNAs) were conducted in Yangon and Dala. Regional government officials from different agencies participated. The workshops covered initiatives on Mental Health and Psychosocial Support (MHPSS), Water, Sanitation and Hygiene (WASH), Nutrition in Emergencies (NiE), energy and transport and laying the foundation of the Health Risk Management Framework. An orientation of WHO's Health Emergency Disaster Risk Management Framework (Health-EDRM) was also provided.

Scaling up urban community readiness

ADPC also organized a workshop on community preparedness to enable a learning environment for government officials, township, and community leaders. An online training module on urban community preparedness with Gender Equality & Social Inclusion (GESI) considerations has also been developed as part of ADPC's upcoming Safer Cities Course.

Through the Building Resilient Urban Communities (BRUC) project, ADPC conducted an online community assessment and resilience planning workshop which prioritized interventions to address risks to climate change. The multi-purpose community shelter identified as one of the communities led project that would raise the community's resilience to climate extreme disasters. An open space with a relatively low probability of inundation was identified, where the hazard and risk assessment results further guided the recommended location of the shelter and possible evacuation routes.



A detailed map showing hazard storm surges in different wards and villages in Dala Township, Myanmar.

Photo by ADPC

The hazard map above is the preliminary result in 2020 to be validated with the relevant government agencies in Myanmar.

Enhancing regional cooperation

Participants from 18 RCC Member Countries and 36 observer organizations posing for a group photo at the 15th RCC Meeting from 15-17 January 2020.

Photo by ADPC

The photo was taken before WHO's announcement of the COVID-19 pandemic

Regional cooperation is crucial to prepare for and respond to disasters.

ADPC continued to strengthen cooperation among countries in Asia and the Pacific through different instruments, such as Regional Consultative Committee on Disaster Management (RCC), Climate Adaptation Platform South Asia (CAP-South Asia), APP and other regional technical groups.

15th meeting of the Regional Consultative Committee on Disaster Management (RCC)

The 15th meeting of RCC was co-hosted by ADPC and the Department of Disaster Prevention and Mitigation, Government of Thailand, on 15 – 17 January 2020 in Bangkok.

Eighteen RCC member countries and thirty-six observer organizations attended the meeting covering the overarching theme of enhancing regional cooperation and coherence for resilient and inclusive societies.

Participants discussed milestones, needs, and challenges in implementing the Sendai Framework, the 2030 Agenda for Sustainable Development, and the Paris Agreement.

To emphasize the critical role of data and technology in effective and efficient decision-making, meeting discussions centered around ways to leverage innovative tools to implement policies and practices, strengthen collaboration between stakeholders, and support risk-informed decision-making.

After three days of dialogue on a range of topics, the 15th RCC issued the Bangkok Statement on disaster risk reduction and climate resilience in Asia and the Pacific on behalf of over 200 participants.

The Bangkok Statement calls upon the parties of global frameworks to uphold their commitments. One of the main points of emphasis was to strengthenregional cooperation, particularly among countries prone to transboundary disasters.

The Bangkok Statement also highlights the need to effectively integrate gender equality into disaster risk reduction and climate resilience, which requires a comprehensive set of actions and meaningful participation of women, children and youth, persons with disabilities, indigenous peoples, and displaced persons.

The Regional Consultative Committee on Disaster Management (RCC) provides a platform for member countries and observers to exchange lessons and share best practices across various DRM disciplines. Represented by National Disaster Management Offices (NDMOs), over 20 countries from across Asia and the Pacific are members of the RCC mechanism.

RCC also provides a periodic platform for member countries to share information on regional needs, intending to systematically encourage and facilitate regional cooperation in DRM.

ADPC established RCC in 2000 and has been serving as its Secretariat since then. Its role as a consultative mechanism for regional cooperation is recognized and affirmed by the Charter of ADPC as of its four organs—including Board of Trustees, Advisory Council, and Executive Committee—in line with the organization's Charter.

Launched CAP-South Asia policy dialogue on climate adaptation

ADPC hosted the first Climate Adaptation Platform-South Asia (CAP-South Asia) regional policy dialogue on 9 December 2020 that highlighted the critical need to share lessons and bolster access to climate adaptation finance in the region.

Participants included government officials representing relevant technical ministries and departments from Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, and Sri Lanka, development partners, and other stakeholders.

Following up on the Bangkok Statement adopted by the RCC in early 2020, CAP-South Asia was established with support from the World Bank through the Climate Adaptation and Resilience (CARE) for South Asia project that promotes regional dialogue and knowledge-sharing on climate adaptation in the region.

Countries and experts discussed specific areas of interventions to enhance the adaptive capacities of climate-sensitive sectors such as agriculture, integrated water resources management, resilient infrastructure, and policy and planning in South Asia both at the national and regional level.

The dialogue called attention to exploring opportunities for integrating technology and science-based approaches into climate adaptation in South Asia.

Established Regional Technical Working Group on Inclusive Approaches in Localization (RTWG-IAL)

ADPC established a Regional Technical Working Group on Inclusive Approaches in Localization (RTWG-IAL) as a platform to strengthen knowledge sharing and learning through the development of capacity-building tools and guidelines.

The working group was established under ADPC's two programs; Building Resilience through Inclusive and Climate-Adaptive Disaster Risk Reduction in Asia-Pacific (BRDR), supported by the Swedish International Development Cooperation Agency (Sida); and the Asian Preparedness Partnership supported by Bill & Melinda Gates Foundation.

Initial BRDR interventions focused on integrating a conceptual framework on rights-based approaches in emergency preparedness and response through analyzing the status, gaps, opportunities as well as a way forward for incorporating inclusive interventions into the national roadmaps being developed by the APP member countries (Cambodia, Myanmar, Nepal, Pakistan, Philippines, Sri Lanka).

Amplifying resilience and climate change adaptation

ADPC aims to improve the resilience of people and systems against climate extremes and future trends in Asia and the Pacific. Collecting climate risk information and developing tools, techniques, and systems are the cornerstone of the ADPC's strategy.

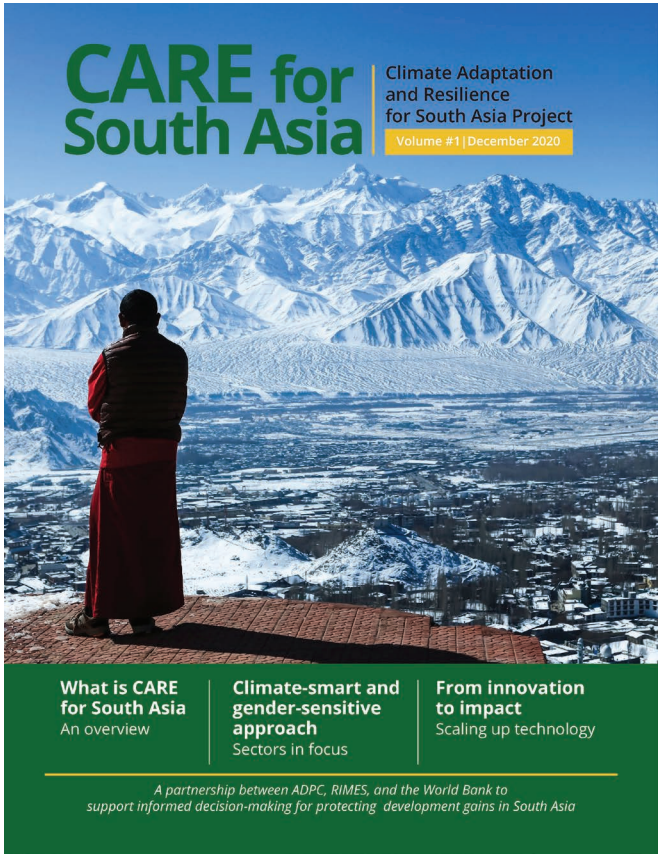
Climate Adaptation and Resilience (CARE) for South Asia

ADPC forged a partnership with the Regional Integrated Multi-Hazard Early Warning System (RIMES) and the World Bank to create an enabling environment for climate resilience policies and investments in climate-sensitive sectors-agriculture, transport, water, policy & planning, and finance sectors in South Asia.

In 2020, the partnership launched a five-year (2020-2025) regional project-Climate Adaptation and Resilience (CARE) for South Asia. The project's overall objective is to contribute to an enabling environment for climate resilience policies and investments in climate-sensitive sectors. With a regional outreach, the national-level activities will initially be implemented in Bangladesh, Nepal and Pakistan.

The project has two parallel but distinct components and ADPC is implementing the second component, which focuses on enhancing policies, standards, and capacities for climate-resilient development in South Asia. It also seeks to promote the transformation of policies, standards, and institutional capacities for climate-resilient development across the key sectors.

ADPC will facilitate high-level dialogues, develop climate-resilient guidelines, and promote innovation and adoption of disruptive technology at national and regional levels. Anchored in building on the governments' plans, the project will facilitate national institutions to meet commitments made under the Paris Agreement on Climate Change.



Cover of CARE for South Asia Newsletter Volume 1 comprising of articles on climate-sensitive.

Photo by ADPC

Promoting Nature-based Solutions (NbS) for landslide risk mitigation:

Sri Lanka experiences landslide disasters during its annual monsoon periods. Ten out of twenty-five districts in the country are declared landslide-prone by the National Building Research Organization (NBRO) and require NBRO clearance for all construction. Conventional engineering solutions (grey solutions) are common practice to mitigate landslide risk but are not environmentally sustainable.

NbS for landslide risk mitigation involves use of use of live plants and plant cuttings on the ground in various geometric arrangements to mitigate slope instabilities, and has been demonstrated in many Asian countries that NbS to be effective.

The Nature-based Landslide Risk Management project in Sri Lanka, funded by the World Bank with technical assistance from ADPC, paved the foundation for scaling up knowledge of NbS in the country. ADPC collaborated closely with NBRO to raise awareness of using NbS to protect vulnerable communities from landslide risk.

A Site Selection Criteria with key factors was developed to determine the site suitability for implementation of nature-based techniques. Next, a guiding framework was developed for plant selection which can be used by the practitioners in the country to hand pick befitting plant species for locations with landslide threats. A group of scientists were trained on how to develop NbS incorporated landslide risk mitigation plans. Six such plans were developed with the assistance of subject experts covering two different climatic zones of Sri Lanka.

As one of the final key outcomes, a Guidance Document on Use of Nature-based Solutions (NbS) for Site-specific Landslide Risk Mitigation was developed. The main objective of this document is to provide necessary know-how and technical guidance to the personnel involved in designing landslide risk mitigation measures on application of NbS for landslide risk reduction. A Plant Manual is also included in the document providing information on selected plants that are recommended for nature-based applications.

ADPC's Policy Brief Summary and Guidance Document (which includes a Plant Manual) on integrated and inclusive approaches on using NbS for managing landslide risks in Sri Lanka.

Photo by ADPC

Review of the existing policy context for creating an enabling environment for effective implementation of NbS

The project team carried out an assessment of existing policies, relevant legal, regulatory and institutional frameworks to understand the degree of relevance of the same to the subject area of NbS and the applicability of the same for the purpose of landslide risk management. The study revealed that there are policies that have a focus on ensuring sustainability of the natural environmental resources through application of NbS. For promoting application of nature-based solutions as one of the options for landslide risk management, the most appropriate action would be to undertake a collaborative approach. When adapting such a strategy it is suggested that NBRO work with number of like-minded key institutions in order to have collaborations in joint research programs, capacity building, and awareness raising in promoting NbS in the country.

Furthermore, a Policy Brief on Nature-based Solutions for Landslide Risk Management was developed in order to raise the awareness on this thematic lead among policy makers and decision makers. The policy brief summarizes the background, advantages, application aspects, and major challenges of NbS application for landslide risk management and suggestions for overcoming those challenges.

The project fulfilled a priority need by proposing utilization of NbS as one of the cost-effective measures to mitigate landslide risk and initiated the dialogue between NBRO and other agencies, who have a direct role in promoting NbS. This discussion can be used as a vehicle for future dialogue by converting it into a structured forum to have a process to promote NbS for DRR in Sri Lanka with the purpose of achieving multiple benefits. Moreover, the key outcomes and the project experiences demonstrating NbS as a viable solution for landslide disaster risk reduction were shared widely on national as well as international platforms by the project team.

As the world tries to bounce back from the adverse impacts of COVID-19 pandemic, NbS is one of the novel concept to catch up on in resolving societal challenges for achieving greater sustainability with better resilience.

Integrating gender and rights-based approaches into risk assessment

Promoting rights-based and gender-equal approaches in DRR and climate resilience

Translating gender-equal and rights-based principles into practice remains a significant challenge, and in some locations, the notion of human rights remains politically sensitive. While underlying causes of risk and unequal capacities such as power structures and dynamics are recognized, a greater understanding of them and how they can be addressed in DRR and climate resilience (CR) efforts remain a complex topic.

Under the building resilience through inclusive and climate-adaptive disaster risk reduction in Asia Pacific (BRDR) program, ADPC continued to reflect on these complexities while promoting the practical application of gender and rights-based approaches across various thematic areas in DRR and CR. The BRDR program is supported by the Swedish International Development Cooperation Agency (Sida)

Integrated Risk Assessment

With risk assessment being the first critical step in DRR planning, mapping underlying power relations, which shape people's differentiated vulnerabilities, should be a starting point. ADPC carried out research that suggests a gap in understanding how to integrate and operationalize gender-equal and rights-based approaches into risk assessment. It further explored that existing approaches also do not factor in the structural causes of exposure and vulnerability.

Based on the research findings, ADPC carried out stakeholder analysis, evaluated existing risk assessment tools, and identified entry points for integrating gender and rights-based approaches into risk assessment. The Philippine Institute of Volcanology and Seismology agreed to work with us to incorporate the gender and rights-based approaches into the existing Rapid Earthquake Damage Assessment System (REDAS).

Following an in-depth review of Nepal's risk assessment approaches, the Local Disaster and Climate Resilience Plan (LDCRP) was identified as a tool to combine disaster and climate resilience planning in one coherent approach. ADPC has proposed a roadmap and methodology to integrate gender-equal and rights-based approaches into risk assessment by enhancing the vulnerability and capacity assessment of the LDCRP in Nepal.

Harnessing buy-in for gender-equal and rights-based policies

A review of LDCRP's guidelines led to developing a set of recommendations corresponding to the five phases of the plan for the National Disaster Risk Reduction & Management Authority (NDRRMA) of Nepal to select as additional areas for implementation. The recommendations are expected to strengthen the local disaster and climate resilience planning process, leading to effective and meaningful integration of gender-equal and rights-based perspectives into DRR and CR planning at the local level in Nepal. Engagement with the Ministry of Federal Affairs and General Administration, Nepal and other stakeholders resulted in harnessing their buy-in for gender-equal and rights-based policies at all levels while mainstreaming DRR and CR.

In the Philippines, a mainstreaming needs assessment, supported by a thorough review and assessment of the comprehensive land-use plan's guidelines, have laid the foundation to develop recommendations for integrating gender-equal and rights-based approaches into each of the 12-steps of the planning process. These recommendations are currently being taken forward in the upcoming meeting of Itogon Municipality to update the comprehensive land use planning process taking the internally displaced populations/inhabitants, informal settlement, and vulnerabilities into account.

Strengthening localization of DRR with integrated gender equality

Inclusive approaches in localization, specifically in disaster risk management initiatives, are increasingly seen as an essential element of resilience. This is reflected in core international, regional, and national Disaster Risk Management/ Reduction (DRM/R) commitments.

In recognition of the limited understanding of gender and rights in the context of emergency preparedness and response, the BRDR program has helped identify strategies to mitigate these gaps through APP.

Initial BRDR interventions focused on integrating a conceptual framework on rights-based approaches in emergency preparedness and response through analyzing the status, gaps, opportunities as well as a way forward for incorporating inclusive interventions into the national roadmaps developed by the APP member countries (Cambodia, Myanmar, Nepal, Pakistan, Philippines, Sri Lanka).

It resulted in integrating gender-equal and rights-based approaches in the preparedness and response plans of each of the six APP countries, which has been scaled up in national implementation by local partners.

To strengthen the regional presence of the BRDR and APP collaboration, a Regional Technical Working Group on Inclusive Approaches in Localization (RTWG-IAL) was established to enhance knowledge sharing and learning while supporting in-country implementation through the development of capacity-building tools and guidelines.

Throughout 2020, BRDR program with technical guidance from the Raoul Wallenberg Institute of Human Rights and Humanitarian Law (RWI), as consortium partner of the program, provided extensive support to the RTWG – IAL, essentially to facilitate discussion, knowledge sharing, collection of case studies.

Furthermore, it supported the co-development of training curricula on rights-based and inclusive approaches to early warning, evacuation, and camp management, drawing upon ground experiences in different contextual challenges, including the immediate experience on COVID-19 response.

Institutional Transformation

ADPC has continuously undertaken actions to integrate gender equality into its institutional structure, organization and mandates since 2014. The organization recognizes that to institutionalize gender, the explicit commitment of leadership is a necessary prerequisite.

Through BRDR, a series of collaborative processes were implemented to ensure systematic and sustainable implementation of gender-related actions. This includes the adoption of the Gender and Diversity Framework. The landmark policy underlines ADPC's continuing work in institutionalizing gender. It reiterates the disproportionate impact of disasters and structural inequalities to women and the most marginalized and the need to undertake an all-of-society approach to empower and achieve equality.

ADPC commits to proactive and transformative actions to enable women and the most impoverished communities to participate in the process of managing risks and charting their development.

Moreover, the framework has been then supported by establishing the Gender and Diversity Working Committee (GDWC) to ensure gender equality across ADPC's ongoing work and operation structures.

The GDWC, along with relevant departments, are currently engaged in defining the vision and establishing the systems needed for institutional transformation. Some of the activities undertaken include:

i. A Gender Audit to establish a baseline for monitoring and evaluating gender, diversity and inclusion in the organization,
ii. Development of Guidelines to enhance the application of gender equality, diversity and social inclusion in ADPC's recruitment and performance evaluation
iii. Development of Guidelines for gender-responsive programming, and
iv. Establishment of Preventing Sexual Exploitation, Abuse and Harassment (PSEAH) mechanisms to facilitate the development of critical actions to prevent, mitigate, and respond effectively to PSEAH.

Strengthening systems to invigorate preparedness for response and recovery

Since its inception, ADPC has been building the knowledge and capacity of governments, response organizations, communities, businesses, and individuals to anticipate and effectively respond to emergencies.

Revitalizing an online system for reporting disaster damage and loss data

ADPC redesigned, updated, tested, and published an online system for reporting disaster damage and loss data in Sri Lanka.

With support from the Global Facility for Disaster Reduction and Recovery (GFDRR), the system was upgraded on the basis of the lessons learned during the 2017 floods in the country. The updated online reporting system helps calculate the cumulative sector-wise damages and losses after a disaster. With this new system, the Government will be able to systematically collate post-disaster effects and more effectively allocate budgets and resources for recovery planning.

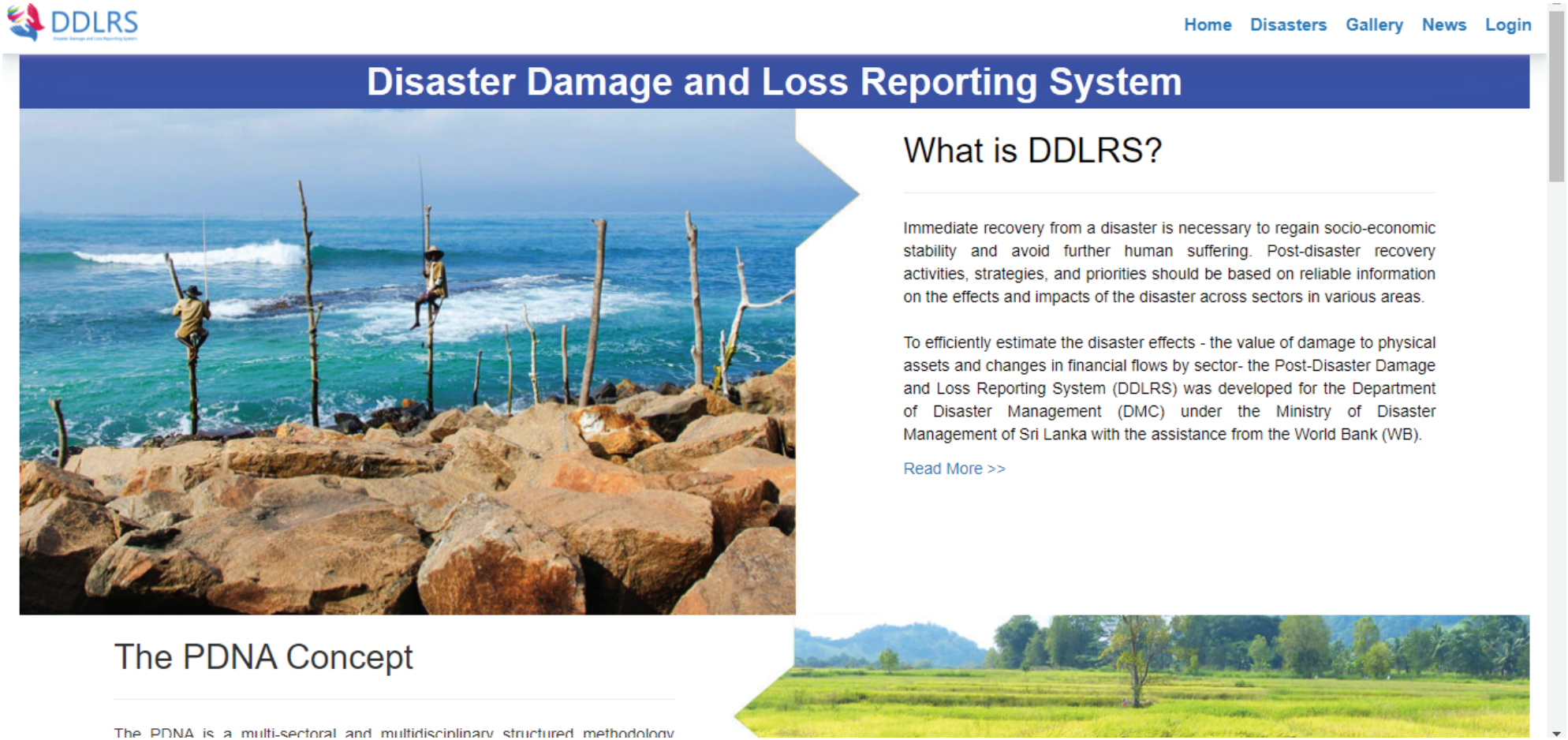
Previously, the Government relied on a manual system for collecting and analyzing baseline data for post-disaster needs and recovery data. With the help of an online reporting system, data can now be uploaded through software. Once the data is entered, the system calculates the final results for each sector. The second version of the system has been pilot tested and will be handed over to the Government.

ADPC also designed training courses for basic and advanced users and trained officials from the DMC Information Technology (IT) section on how to best use the system. The training material is available in three languages-English, Sinhala, and Tamil.

Developing agro-meteorological and lightning early warning systems

Through the Program for Strengthening Preparedness for Emergency Response and Recovery in India (PROSPER-India), ADPC assisted the Government of Bihar to reach over 200,000 families through the Lightning Early Warning System (LEWS).

In addition, over 800,000 farmers have been reached through agro-meteorological early warnings to improve the agricultural sector's productivity in changing climate. Considering the benefits of adopting a systematic approach to provide farmers with the latest information for agriculture, the Government of Bihar has invested US$ 8.9 million to upscale hydro-meteorological EWS across the state.



A screenshot showing the hompage of the Disaster Damage and Loss Reporting System (DDLRS).

Photo by ADPC

Tracking the status of Sendai Framework implementation

It has been five years since the Sendai Framework for Disaster Risk Reduction 2015–2030 (SFDRR) was adopted at the Third UN World Conference in Sendai, Japan. Countries in Asia and the Pacific have made significant progress in implementing the Sendai Framework across a variety of sectors. Most importantly, there is a growing realization of combining DRR and climate resilience as a better recipe to reduce a multitude of vulnerabilities, leaving no one behind.

In 2020, ADPC took stock of the status of implementing the Sendai Framework in Asia and the Pacific, including developing a regional synthesis report on Disaster Risk Management (DRM) legal policies and fiscal frameworks.

Developing disaster risk reduction status reports

Together with United Nations Office on Disaster Risk Reduction (UNDRR), ADPC developed disaster risk reduction status reports for 12 countries - Afghanistan, Australia, Bangladesh, Bhutan, India, Indonesia, Malaysia, Myanmar, New Zealand, Singapore, Thailand, and Viet Nam.

The status reports provide a snapshot of the state of DRR in 12 countries under the Sendai Framework's four priorities and highlight the current progress, challenges and gaps, and opportunities for implementing the future DRM strategies and plans. The status reports were developed through consultative meetings, desk research, and feedback from countries. The reports are aligned with the understanding that adopting national strategies by 2020, as per target E of SFDRR, is the first crucial step to achieving the other global targets by 2030.

In addition, the status reports highlight progress and challenges associated with ensuring coherence among all global frameworks at the national level; and make recommendations for strengthening overall DRM governance by government institutions and stakeholders at national and local levels.

These reports also include an update on the impact of COVID-19 and governments' approaches to response and recovery.

The set of twelve DRR reports are available on http://www.adpc.net/DRRreports/index.asp/

Assessing DRM institutions, legal policy, and fiscal frameworks of South Asian countries

A comprehensive study on the status quo of DRM institutions, legal policies, and fiscal frameworks for Afghanistan, Bangladesh, Bhutan, India, Nepal, Pakistan, Sri Lanka, and the Maldives was carried out with support from the World Bank.

These country reports were assessed, synthesized, and consolidated into two key regional documents:

i. Disaster Risk Management in South Asia - an institutional assessment which is supplemented by a compendium of seven case studies, complementing the trends in good practices, governance arrangements, and coordination operational roles; and
ii. Disaster Risk Management Legal Policy, and Fiscal Frameworks in South Asian Region - a regional synthesis report.

The outputs of the research and documentation of the regional and country studies resulted in a comprehensive understanding of the status of DRM in South Asia. The knowledge generated includes an in-depth understanding of the current capacities of seven countries focused on the four priorities of the Sendai Framework. These reports also take stock of critical issues on DRM capacities and provide recommendations to support DRM at national and regional levels.

In addition, country reports and the regional synthesis report on DRM legal policy and fiscal frameworks mapped the interlinkages of existing and future DRM policies, legislation, regulations, and strategies in each country. The reports elaborate on the legal basis of critical documents and the role of institutions responsible for declaring an emergency or crisis.

The reports identify and analyze disaster risk financing mechanisms of each South Asian country for emergency response, recovery, and reconstruction, which includes risk retention, contingency funds, and risk transfer mechanisms.

A collection of twelve Disaster Risk Reduction (DRR) status reports have been prepared by Asian Disaster Preparedness Center (ADPC) and United Nations Office on Disaster Risk Reduction (UNDRR).

Photo by ADPC

Webinars

As lockdowns were imposed and travel restrictions commenced in 2020, ADPC held 15 webinars reaching a total of 4,658 online attendees. Below is an overview of featured webinars available on ADPC's website and social media platforms.

The first webinar of 'The Leadership Lens - Fostering Innovations for COVID-19 Sensitive DRR' focused on leaders across Asia and the Pacific taking innovative approaches to DRR/DRM during the COVID-19 pandemic. The webinar Was concluded with key messages from each leader on going forward.

In the webinar "Resilience in the Private Sector: Amplifying the Sustainable Development", panelists addressed the impact of COVID-19 and disasters on businesses. Enabling policy support, gender considerations and partnerships with the concerned stakeholders were identified as imperative to optimize resilient practices in the business sector.

ADPC Academy organized a virtual alumni forum on 'Keeping Close Amidst the Distance: Training and Capacity Development in the Era of COVID-19' to shape global, regional, and national agendas on education through a dialogue-based discussion. Inputs from the forum will also guide ADPC Academy's initiatives to pursue 'blended' learning approaches that combine online and face-to-face learning modules to teach disaster risk reduction and climate resilience subjects.

ADPC and World Health Organization (WHO) experts discussing the future of training amidst COVID-19 during the ADPC Alumni Forum

Photo by ADPC

Projects and development partners

ADPC **Partners** in 2020

Government Agencies

Afghanistan Ministry of Public Health (MoPH)

Afghanistan National Environmental Protection Agency (NEPA)

Afghanistan State Ministry for Disaster Management and Humanitarian Affairs (SMDM) - National Disaster Management Authority (ANDMA)

Bangladesh Agriculture Research Council (BARC)

Bangladesh Department of Agriculture Extension (DAE)

Bangladesh Fire Service and Civil Defence Directorate (FSCD)

Bangladesh Local Government Engineering Department (LGED)

Bangladesh Ministry of Defence – Bangladesh Meteorological Department (BMD)

Bangladesh Ministry of Disaster Management and Relief (MoDMR) – Directorate of Disaster Management (DDM)

Bangladesh Ministry of Environment, Forests and Climate Change (MOEF)

Bangladesh Ministry of Finance (MoF)

Bangladesh Ministry of Fisheries and Livestock – Department of Livestock Services (DLS)

Bangladesh Ministry of Health (MoH)

Bangladesh Ministry of Housing and Public Works (MoHPW) – Rajshahi Development Authority (RDA)

Bangladesh Ministry of Road Transport and Bridges (RTHD)

Bangladesh Ministry of Water Resources (MoWR)

Bangladesh National Institute of Preventive and Social Medicine (NIPSOM)

Bangladesh Planning Commission (PC)

Cambodia Ministry of Environment

Cambodia National Committee for Disaster Management (NCDM)

Cambodia Ministry of Health (MoH) – National Institute of Public Health (NIPH)

China Ministry of Civil Affairs

China Ministry of Emergency Management

Ethiopia Ministry of Agriculture (MoA)

Ethiopia Ministry of Health (MoH)

Ethiopia National Disaster Risk Management Commission (NDRMC)

India Ministry of Environment, Forest and Climate Change (MoEFCC)

India Government of State of Bihar - Department of Disaster Management (DDM)

India Government of State of Bihar - Department of Health (DoH)

India National Disaster Management Authority (NDMA)

Indonesian Agency for Meteorology, Climatology and Geophysics (BMKG)

Indonesian National Board for Disaster Management (BNPB)

Japan City Government of Beppu, Oita Prefecture

Japan International Cooperation Agency (JICA)

Japan Science and Technology Agency (JST) - Science and Technology Research Partnership for Sustainable Development (SATREPS)

Republic of Korea Ministry of the Interior and Safety (MoIS)

Lao PDR Ministry of Labor and Social Welfare (MOLSW) - Department of Social Welfare (DSW)

Maldives Department of Meteorology

Maldives Ministry of Environment (MoE)

Maldives National Disaster Management Authority (NDMA)

Myanmar Department of Meteorology and Hydrology (DMH)

Myanmar Ministry of Social Welfare, Relief and Resettlement (MSWRR)

Myanmar Yangon City Development Committee (YCDC)

Nepal Department of Hydrology and Meteorology (DHM)

Nepal Ministry of Agriculture and Livestock Development (MoALD)

Nepal Ministry of Energy, Water Resources and Irrigation (MoEWRI)

Nepal Ministry of Federal Affairs and General Administration - Department of Local Infrastructure (MoFAGA-DoLI)

Nepal Ministry of Forests and Environment (MoEF)

Nepal Ministry of Finance (MoF)

Nepal Ministry of Home Affairs (MoHA)

Nepal Ministry of Health and Population (MoHP) - Health Emergency Operations Centre (HEOC)

Nepal National Planning Commission (NPC)

Nepal Ministry of Physical Infrastructure and Transport (MoPIT)

Norway Meteorological Institute (MET Norway)

Norwegian Ministry of Foreign Affairs (MFA) - Norway Agency for Development Cooperation (Norad)

Pakistan Agricultural Research Council (PARC)

Pakistan Government of Punjab – Department of Agriculture

Pakistan Meteorological Department (PMD)

Pakistan Ministry of Climate Change (MoCC)

Pakistan Ministry of Finance (MoF)

Pakistan Ministry of National Food Security and Research (MoNFSR)

Pakistan Ministry of Planning Development & Special Initiatives (MoPDSI)

Pakistan Ministry of Water Resources (MoWR) – Sindh Irrigation Department

Pakistan National Disaster Management Authority (NDMA)

Pakistan Rescue 1122 Punjab Emergency Service

Philippines Department of Trade and Industry (DTI) – Consumer Protection

Philippines Department of Science and Technology (DST) - Philippine Institute of Volcanology and Seismology (PHIVOLCS)

Philippines National Disaster Risk Reduction and Management Council (NDRRMC) - Office of Civil Defense (OCD)

Sri Lanka Department of Meteorology

Sri Lanka Ministry of Defence - Disaster Management Centre (DMC)

Sri Lanka Ministry of Health, Nutrition and Indigenous Medicine (MoHNIM) - Disaster Preparedness and Response Division (DPRD)

Sri Lanka Ministry of Mahaweli Development and Environment (MoMDE)

Sri Lanka Ministry of National Security, Home Affairs and Disaster Management (MoNSHADM) - National Building Research Organization (NBRO)

Sweden Ministry of Justice - Swedish Civil Contingencies Agency (MSB)

Sweden Ministry for Foreign Affairs - Swedish International Development Cooperation Agency (Sida)

Swiss State Secretariat for Economic Affairs (SECO)

Thailand Geo-Informatics and Space Technology Development Agency (GISTDA)

Thailand Ministry of Natural Resources and Environment (MNRE) – Pollution Control Department (PCD)

Thailand Ministry of Interior (MOI) – Department of Disaster Preparedness and Management (DDPM)

Thailand Ministry of Public Health (MoPH)

United Kingdom Department for Business, Energy and Industrial Strategy (BEIS) - Global Challenges Research Fund (GCRF)

United Kingdom Foreign, Commonwealth and Development Office (FCDO)

United States Agency for International Development (USAID) - Bureau for Humanitarian Assistance (BHA)

United States Department of Agriculture Forest Service (USDA) - Remote Sensing Applications Center (RSAC)

United States Department of State - Young Southeast Asian Leaders Initiative (YSEALI)

United States Government - SilvaCarbon

United States National Aeronautics and Space Administration (NASA)

Viet Nam Academy for Water Resources (VAWR)

Viet Nam Ninh Thuan Hydro Meteorology Station

Non-Governmental/Civil Society

All India Disaster Mitigation Institute (AIDMI), India

Bangladesh Red Crescent Society (BDRCS), Bangladesh

Build Change, United States of America

Cambodian Humanitarian Forum (CHF), Cambodia

Capacity Building Initiative (CBI), Myanmar

Centre for Disability in Development (CDD), Bangladesh

Center for Disaster Preparedness (CDP), the Philippines

Ceylon Chamber of Commerce (CCC), Sri Lanka
Chartered Institute of Logistics and Transport (CILT), Sri Lanka
Chaudhary Foundation, Nepal
Consumer Technology Association (CTA), United States of America
Disaster Resilience Network, Nepal
Disaster Risk Reduction Network Yangon, Myanmar
Duryog Nivaran (DN) - South Asia Network for Disaster Mitigation
East-West Management Institute Open Development Initiative (EWMI-ODI), United States of America
Federation of Associations of Small and Medium Enterprises in Cambodia (FASMEC)
Federation of Nepalese Chambers of Commerce and Industry (FNCCI)
Federation of Pakistan Chamber of Commerce and Industry (FPCCI)
Global Network of Civil Society Organisations for Disaster Reduction (GNDR)
Good Neighbors, Republic of Korea
Janathakshan GTE Ltd., Sri Lanka
Korean Environmental Professional Engineers Association, Republic of Korea (KEPEA)
Lao National Chamber of Commerce and Industry (LNCCI)
Lutheran World Relief (LWR)
Mental Health & Psychosocial Support Network (MHPSS)
Mercy Corps, United States of America
Myanmar Medical Association (MMA)
Myanmar NGO Consortium for Preparedness and Response Network (MNGO-CPR)
Myanmar Private Disaster Preparedness Network (MPD)
Union of Myanmar Federation of Chambers of Commerce and Industry (UMFCCI)
National Association of Software and Service Companies (NASSCOM), India
National Disaster Risk Reduction Centre (NDRC Nepal)
National Humanitarian Network (NHN), Pakistan
National Society for Earthquake Technology - Nepal (NSET), Nepal
Network for Empowered Aid Response (NEAR), Kenya
Pacific Disaster Risk Management Partnership Network (PDRMPN)
Pakistan Red Crescent Society
Partnership for Development in Kampuchea (PADEK), Cambodia
Save Earth Climate Services Ltd. (SECL), Bangladesh
Women's Chamber of Industry and Commerce (WCIC), Sri Lanka

Corporations/Foundations

Alphabet Incorporated – Google Earth Engine
Bill & Melinda Gates Foundation (BMGF)
Centro Internazionale in Monitoraggio Ambientale (CIMA) Research Foundation, Italy
Data Experts Private Limited (datEx)
Eac Marine Private Limited
ideaForge Technology Private Limited
International Business Machines (IBM) Corporation, United States of America
Lanka Solutions Private Limited
mPower Social Enterprises Limited
Oxfam International
Nabil Bank Limited
National Engineering and Planning Services (NEPS)
Nelen & Schuurmans Besloten Vennootschap
Numer8 Analytics (OPC) Private Limitedbandun
Philippine Disaster Resilience Foundation (PDRF)
Philkoei International, Inc. (PKII-Philippines)
Project OWL
Quantela Inc.
Rebel Group Limited
Resilience Innovation Knowledge Academy (RIKA)
Rockefeller Foundation
RMSI Private Limited
Thai Network for Disaster Resilience (TDNR) - Thai Network for Disaster Resilience (TNDR)
Troyee Associates Private Limited

Academic

Institut Teknologi Bandung, Indonesia
University of Bergen, Norway
Chiang Mai University, Thailand
Chulalongkorn University, Thailand
University of Houston, United States of America
University of Huddersfield - Global Disaster Resilience Centre, United Kingdom
Johns Hopkins University, United States of America
Mandalay Technological University, Myanmar
Naresuan University, Thailand
National University of Laos, Lao PDR
Nagoya Institute of Technology, Japan
Oregon State University, United States of America
Rajamangala University of Technology Lanna, Thailand
Royal University of Phnom Penh, Cambodia
University of Salford, United Kingdom
University of Southampton, United Kingdom
University of Southern Denmark - International Urban Resilience Academy (IURA)
Stenden University, Thailand
Thammasat University, Thailand
Technical University of Denmark, Denmark
University of Tokyo, Japan
Tribhuvan University, Nepal
Viet Nam National University-University of Science, Viet Nam

Development Partners

Asian Development Bank (ADB) - Urban Climate Change Resilience Trust Fund (URRCTF)
Asian Disaster Reduction Center (ADRC)
Asian Infrastructure Investment Bank (AIIB)
Association of Southeast Asian Nations (ASEAN)
Intergovernmental Coordination Group for the Indian Ocean Tsunami Warning and Mitigation System (ICG/IOTWMS)
Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC)
International Centre for Integrated Mountain Development (ICIMOD)
International Civil Defence Organisation (ICDO)
International Union for Conservation of Nature (IUCN)
Japan-ASEAN Integration Fund (JAIF)
Mekong River Commission Secretariat (MRCS)
Nordic Climate Facility (NCF)
Regional Multi-Hazard Early Warning System for Africa and Asia (RIMES)
South Asian Association for Regional Cooperation (SAARC)
The World Bank Group (WB)
United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP)
United Nations Office for Disaster Risk Reduction (UNDRR)
United Nations Environment Programme (UNEP)
United Nations World Food Programme (WFP)
World Health Organization (WHO)
World Meteorological Organization (WMO) - Climate Risk and Early Warning Systems (CREWS)

Research Institutes

Deltares, the Netherlands
Institute for Global Environmental Strategies (IGES), Japan
International Centre for Environmental Management (ICEM), Australia
International Rice Research Institute (IRRI), the Philippines
International Water Management Institute (IWMI), Sri Lanka
Norwegian Geotechnical Institute (NGI), Norway
Norwegian Meteorological Institute (MET), Norway
Raoul Wallenberg Institute of Human Rights and Humanitarian Law (RWI), Sweden
Regional Community Forestry Training Center for Asia and the Pacific (RECOFTC), Thailand

Spatial informatics Group (SIG), United States of America
Stockholm Environment Institute (SEI), Sweden
Stockholm International Water Institute (SIWI), Sweden

Media Organizations

British Broadcasting Corporation (BBC) – BBC Media Action
World Association of Community Radio Broadcasters (AMARC), Canada

ADPC **Projects** in 2020

A Landscape Research on Disaster Management and Disaster Risk Reduction Trends in the Asia and the Pacific Region
2019-2020
Donor: Government of China
Coverage: Asia and the Pacific

Analytical Inputs to an Integrated Flood Resilience Strategy for Yangon, Myanmar
2020
Donor: The World Bank Group (WB)
Coverage: Myanmar

A Regional Assessment of DRM Institutions in the South Asia Region
2019-2020
Donor: The World Bank Group (WB)
Coverage: Afghanistan, Bangladesh, Bhutan, India, Nepal, Maldives, Pakistan, Sri Lanka

A Study of the Upstream-downstream Interface in End-To-End Tsunami Early Warning and Mitigation Systems
2017-2020
Donor: Global Challenges Research Fund (GCRF)
Coverage: Indonesia, Maldives, Sri Lanka

Asian Preparedness Partnership: Phase 2
2019-2022
Donor: Bill & Melinda Gates Foundation (BMGF)
Coverage: Cambodia, Myanmar, Nepal, Pakistan, Philippines, and Sri Lanka

APP Program Support to Countries during COVID-19 (APP-COVID)
2020-2021
Donor: Bill & Melinda Gates Foundation (BMGF)
Coverage: Cambodia, Myanmar, Nepal, Pakistan, Philippines, and Sri Lanka

Assessing the capacities, gaps, and needs of National Meteorological and Hydrological Services (NMHSs) and their national (multi-hazard) early warning systems ((MH)EWS) including regional and global support mechanisms in Pacific Small Island Developing States (SIDS),
2020
Donor: World Meteorological Organization (WMO)
Coverage: Cook Islands, Fiji, Kiribati, Niue, Nauru, Tuvalu

Building Climate Change Resilience in Asia's Critical Infrastructure
2017-2020
Donors: Asian Development Bank (ADB) - Urban Climate Change Resilience Trust Fund (URRCTF), United Kingdom Foreign, Commonwealth and Development Office (FCDO), Swiss State Secretariat for Economic Affairs (SECO), Rockefeller Foundation
Coverage: Indonesia, Sri Lanka, Viet Nam

Building Resilience Through Inclusive and Climate Adaptive Disaster Risk Reduction in Asia-Pacific
2018 - 2022
Donor: Swedish International Development Cooperation Agency (Sida)
Coverage: Nepal, Philippines, Papua New Guinea

Climate Adaptation and Resilience (CARE) for South Asia
2020-2025
Donor: The World Bank Group (WB)
Coverage: Bangladesh, Nepal, Pakistan

Consultancy Services for Urban Disaster Resilience Sub-Sector Analysis
2020
Donor: Asian Infrastructure Investment Bank (AIIB)
Coverage: Thailand

Development of a White Paper on Thailand's New Normal Healthcare Solutions for Building Resilience in Healthcare Facilities
2020-2021
Donor: Thailand Ministry of Public Health (MoPH)
Coverage: Thailand

Disaster Damage and Loss Reporting System for Sri Lanka Phase 2
2019-2020
Donor: The World Bank Group
Coverage: Sri Lanka

Disaster Risk Reduction by Integration Climate Change Projection into Flood and Landslide Risk Assessment in ASEAN - Myanmar and Laos pilots
2018 – 2020
Donor: Japan-ASEAN Integration Fund (JAIF)
Coverage: Lao PDR and Myanmar

Enhancing Capacity of Cambodia on Drought and Flood Monitoring and Risk Management with Satellite-derived Information
2019-2020
Donor: United Nations World Food Programme (WFP)
Coverage: Cambodia

Enhancing Capacity of Myanmar on Drought and Flood Monitoring and Risk Management with Satellite-derived Information.
2020
Donor: United Nations World Food Programme (WFP)
Coverage: Myanmar

Innovative Business Models and Tools for Building Climate Resilience of SMEs in Sri Lanka
2018-2020
Donor: Nordic Climate Facility (NCF)
Coverage: Sri Lanka

Institutionalizing Sustainable Community Based Disaster Risk Management
2017 – 2021
Donors: United Stated Agency for International Development (USAID) and Global Network of Civil Society Organisations for Disaster Reduction (GNDR)
Coverage: South Asia (Bangladesh, India, Nepal, Pakistan, Sri Lanka) and Southeast Asia (Cambodia, Indonesia, Philippines)

INVEST DM: Investing in Human Capital for Disaster Management
2019-2020
Donor: United States Agency for International Development, Bureau for Humanitarian Assistance (USAID/BHA)
Coverage: Indonesia

Meteorology System and Services Integrator (MSSI), Bangladesh
2019-2022
Donor: The World Bank Group (WB)
Coverage: Bangladesh

Multi Hazard Risk Assessment for Jammu and Kashmir
2016-2021
Donor: RMSI Private Limited

Nature Based Landslide Risk Management Phase 2
2019-2020
Donor: The World Bank Group
Coverage: Sri Lanka

Program for Enhancement of Emergency Response (PEER) in South Asia
2019-2021
Donor: United Stated Agency for International Development Bureau for Humanitarian Assistance (USAID/BHA)
Coverage: Afghanistan, Bangladesh, Nepal, Pakistan, Sri Lanka

Program for Strengthening the Technical and Organizational Capacity of BNPB Training Center in Indonesia
2018-2020
Donor: United Stated Agency for International Development (USAID)
Coverage: Indonesia

Program for Strengthening Integrated Incident Management System in Bangladesh
2018 – 2021
Donor: Bill & Melinda Gates Foundation (BMGF)
Coverage: Bangladesh

Program for Strengthening Preparedness for Emergency Response Recovery in India (PROSPER-India)
2018 - 2021
Donor: Bill & Melinda Gates Foundation (BMGF)
Coverage: India

Program on Strengthening Preparedness for Emergency Response through Multi-Stakeholder Cooperation in Southeast Asia: (Cambodia and Lao PDR)
2020-2022
Donor: United Stated Agency for International Development Bureau for Humanitarian Assistance (USAID/BHA)
Coverage: Cambodia, Lao PDR

Promoting Urban Climate Change Resilience in Selected Asian Cities - Development of Pilot Activities and Project Development Support
2019-2021
Donors: Asian Development Bank (ADB) - Urban Climate Change Resilience Trust Fund (URRCTF), United Kingdom Foreign, Commonwealth and Development Office (FCDO), Swiss State Secretariat for Economic Affairs (SECO), Rockefeller Foundation
Coverage: Myanmar

Regional Resilience Enhancement through Establishment of Area-BCM at Industry Complexes in Thailand
2019-2020
Donor: Japan International Cooperation Agency (JICA)
Coverage: Thailand

Revision of Functional Master Plan and Detailed Area Plan [for Rajshahi city] to make RMDP Disaster Risk Sensitive Master Plan Project
2018-2021
Donor: Government of Bangladesh
Coverage: Bangladesh

SERVIR-Mekong
2014-2022
Donor: United Stated Agency for International Development (USAID)
Coverage: Cambodia, Lao PDR, Myanmar, Thailand, Viet Nam

Strengthening Disaster and Climate Resilience in Central Asia
2020-2022
Donor: United Nations Office for Disaster Risk Reduction (UNDRR)
Coverage: Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan

Strengthening Emergency Preparedness and Resilience in Bangladesh (SERB)
2019-2021
Donor: United States Agency for International Development (USAID) - Bureau for Humanitarian Assistance
Coverage: Bangladesh

Strengthening Institutional Capacity and Preparedness for Emergency Response in Ethiopia Program
2016-2021
Donor: Bill & Melinda Gates Foundation (BMGF)
Coverage: Ethiopia

Strengthening Integrated Incident Management System in Bangladesh (BPP)
2018 – 2021
Donor: Bill & Melinda Gates Foundation (BMGF)
Coverage: Bangladesh

Support to Bihar for Preparing and Responding to COVID-19
2020-2021
Donor: Bill & Melinda Gates Foundation (BMGF)
Coverage: India

Technical review and development of a capacity building program on the SEADRIF flood monitoring platform
2019-2021
Donor: The World Bank Group (WB)
Coverage: Lao PDR, Myanmar

Upgrading CLIMSOFT Climate Database Management System at DMH-Myanmar
2020-2021
Donor: Norwegian Ministry of Foreign Affairs (MFA) - Norway Agency for Development Coopeation (Norad)
Coverage: Myanmar

Urban Resilience to Climate Extremes in Southeast Asia
2018 – 2023
Donor: Norway Agency for Development Coopeation (Norad)
Coverage: Myanmar, Viet Nam

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