

MHEW 2020

DRR Symposium



International Symposium on Multi-Hazard Early Warning and Disaster Risk Reduction

To promote the availability and application of research, science and technology to support implementation of Sendai Framework for Disaster Risk Reduction 2015-2030

14th - 16th December 2020

Virtual Conference - launched from BMICH, Colombo, Sri Lanka

For more information, please visit: http://cabaret.buildresilience.org/2020_Symposium/index.html

Experience over recent years of the impacts of tsunamis, cyclones, flooding and other major natural hazards has shown that inadequate preparation for, and response to, emergency situations have contributed to widespread damage and the avoidable loss of lives and livelihoods.

There are increasing calls for strengthened risk assessment and mitigation, community awareness and preparedness, and multi-hazard early warning systems at all levels. As emphasised by the Sendai Framework for Disaster Risk Reduction (SFDRR 2015-2030), this requires an integrated and holistic approach to early warning for multiple hazards, and for risks tailored to user needs across sectors and community awareness. Together these will help to mainstream disaster risk reduction and to support efforts towards the Sustainable Development Goals by 2030.

This high-level, international symposium, which will be organised in collaboration with Disaster Management Centre, Sri Lanka; Global Disaster Resilience Centre, University of Huddersfield, UK; IOCUNESCO IOTWMS, WG 1 on Tsunami Risk, Community Awareness and Preparedness, and other partners will be held to recognise achievements, and to highlight work that still needs to be done. It will promote collaboration among academia, research institutions and disaster management offices, and encourage multidisciplinary and multi sectoral interaction.

Special Features

- Align to global frameworks on DRR, sustainable development and climate change
- Understand key challenges in Sri Lanka and globally, including pandemics such as COVID 19
- Capture state of the art developments and recommendations for policy
- 4 Keynote speeches
- Several technical sessions will be held, with up to 120 presentations
- 5 Plenary sessions
- Capacity building in Sri Lanka DRM sector
- Launch of the Colombo 2020 DRR declaration

Media Partner: News 1st



Official Print Partner: [DailyMirror](http://www.dailymirror.lk)



Organised By:



State Ministry of
National Security,
Home Affairs and
Disaster Management



Disaster Management
Centre, Sri Lanka

University of
HUDDERSFIELD
Inspiring global professionals



University of Moratuwa
Sri Lanka



Asian Disaster
Preparedness Center

In Collaboration With:



MHEW 2020

DRR Symposium



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Experience over recent years of the impacts of tsunamis, cyclones, flooding and other major natural hazards and biological hazards such as COVID – 19 have shown that inadequate preparation for, and response to, emergency situations have contributed to widespread damage and the avoidable loss of lives and livelihoods. Between 1998 and 2017, climate-related and geophysical disasters killed 1.3 million people and left a further 4.4 billion injured, homeless, displaced or in need of emergency assistance. While the majority of fatalities were due to geophysical events, mostly earthquakes and tsunamis, 91% of all disasters were caused by floods, storms, droughts, heatwaves and other extreme weather events.

The current COVID -19 health crisis stress-tests our ability to cooperate, learn and adapt in the face of deep uncertainties and rising risks. It calls for an important reflection on the necessary contributions of the scientific community and the technological developments to enhance comprehensive risk management. It demonstrates that risk is systemic, and crises are cascading.

There are ever increasing calls for strengthened risk assessment and mitigation, community awareness and preparedness, and multi-hazard early warning systems at all levels. As emphasized by the Sendai Framework for Disaster Risk Reduction (SFDRR 2015-2030), this requires an integrated and holistic approach to early warning for multiple hazards, and for risks tailored to user needs across sectors and community awareness. Together these will help to mainstream disaster risk reduction and to support efforts towards the Sustainable Development Goals by 2030.

This high-level, international symposium, which is organised in collaboration with Disaster Management Centre, Sri Lanka; Global Disaster Resilience Centre, University of Huddersfield, UK; IOC-UNESCO IOTWMS, WG 1 on Tsunami Risk, Community Awareness and Preparedness, together with several other partners will be held to recognise achievements, and to highlight work that still needs to be done. It will promote collaboration among academia, research institutions and disaster management offices, and encourage multidisciplinary and multi sectoral interaction.

Main themes of the symposium



Theme 01 - Climate Change & Early Warning

Institutionalizing and sustaining early warning systems – technical, human and operational capacity, and localization
Measuring early warning effectiveness and ongoing evaluation Multi – Hazard Early Warning (MHEW) Systems, including exploring the potential for synergizing tsunami early warning with other hazards

Theme 02 - Disaster Preparedness

Using GIS technology for disaster preparedness and early warning Local ownership, enhancing response capacity and community awareness Simulation exercises, drills and standard operating Procedures (SOPs) Disaster emergency food and sanitation.



Theme 03 - Sendai Framework for Disaster Risk Reduction 2015-2030 / Sustainable Development Goals

Institutionalizing and sustaining early warning systems – technical, human and operational capacity, and localization Measuring early warning effectiveness and ongoing evaluation Multi – Hazard Early Warning (MHEW) Systems, including exploring the potential for synergizing tsunami early warning with other hazards

Theme 04 - Risk Transfer / Insurance

Risk transferring and forecast based financing for DRR
Nature Based Solutions (NBSs) for managing disaster risks



Theme 05 - Innovation for Better Early Warning

The first mile – Hazard monitoring; forecasting and warning; new, innovative tools / products for strengthening EWSs.

Theme 06 - Communications for Better Early Warning

Early warning interface – legal and institutional framework, clearly defined actors, governance and institutional arrangements, vertical and horizontal coordination Reaching the last mile – technical, legal and socio – cultural complexities involved in communicating early warning to communities Next generation of TEW dissemination



Theme 07 - Disaster Risk Reduction

Transboundary disaster risk governance Displacement and relocation Disaster resilient urban planning and development

Theme 08 - Health

Integrating epidemic and pandemic preparedness into disaster risk reduction



Objectives of the conference

- Align to global frame works on DRR, sustainable development and climate change
- Understanding key challenges in Sri Lanka and globally, including pandemics such as COVID-19
- Capacity building in Sri Lanka Disaster Risk Management sector
- Capturing state of the art developments and recommendations for policy
- Launch of the Colombo 2020 DRR declaration - to promote the availability and application of research, science, and technology to support implementation of Sendai Framework for Disaster Risk Reduction 2015-2030

“The Colombo Declaration”

to promote the availability and application of research, science and technology to support implementation of Sendai Framework for Disaster Risk Reduction 2015-2030

The Colombo Declaration

This Symposium is not just intended as an opportunity to discuss important challenges, or to share potential solutions that tackle the impacts of climate change and growth in disaster risk, both within Sri Lanka and elsewhere.

This event provides an important opportunity to bring together and promote collective action among Ministers, National Government Officials, the Private Sector, Representatives from Cities and Local Government, Representatives from Non-Governmental Organisations, International agencies, Universities and other Research Organisations.

The Symposium is structured to bring together the outputs and outcomes from keynote addresses, technical papers and presentations, and plenary sessions, and culminate in the endorsement of a roadmap for disaster risk reduction in Sri Lanka.

The Symposium is structured to bring together the outputs and outcomes from keynote addresses, technical papers and presentations, and thematic events, and culminate in the endorsement of a roadmap for disaster risk reduction in Sri Lanka. This roadmap will set out national priorities and potential timescales for their adoption, as well as a declaration among key stakeholders to act upon those priorities. The roadmap will be setup to inform national policies and strategies in Sri Lanka.

The roadmap will attempt to address the following Symposium themes:

Climate Change & Early Warning

- Early warning in a changing climate
- Institutionalizing and sustaining early warning systems – technical, human and operational capacity, and localization
- Measuring early warning effectiveness and ongoing evaluation
- Multi – Hazard Early Warning (MHEW) Systems, including exploring the potential for synergizing tsunami early warning with other hazards

Disaster Preparedness

- Using GIS technology for disaster preparedness and early warning
- Local ownership, enhancing response capacity and community awareness
- Simulation exercises, drills and standard operating Procedures (SOPs)
- Disaster emergency food and sanitation

Sendai Framework for Disaster Risk Reduction 2015-2030 / Sustainable Development Goals

- Risk based / informed early warning and global agendas Sendai and SDGs
- Risk Transfer / Insurance
- Risk transferring and forecast based financing for DRR
- Nature Based Solutions (NBSs) for managing disaster risks

Innovation for Better Early Warning

- The first mile – Hazard monitoring; forecasting and warning; new, innovative tools / products for strengthening EWSs

Communications for Better EW

- Early warning interface – legal and institutional framework, clearly defined actors, governance and institutional arrangements, vertical and horizontal coordination
- Reaching the last mile – Bringing the message to communities at risk – Technical, legal and socio – cultural complexities involved in communicating coastal based hazard early warning to communities
- Next generation of TEW dissemination
- Formal and informal communication mechanisms in early warning

Disaster Risk Reduction

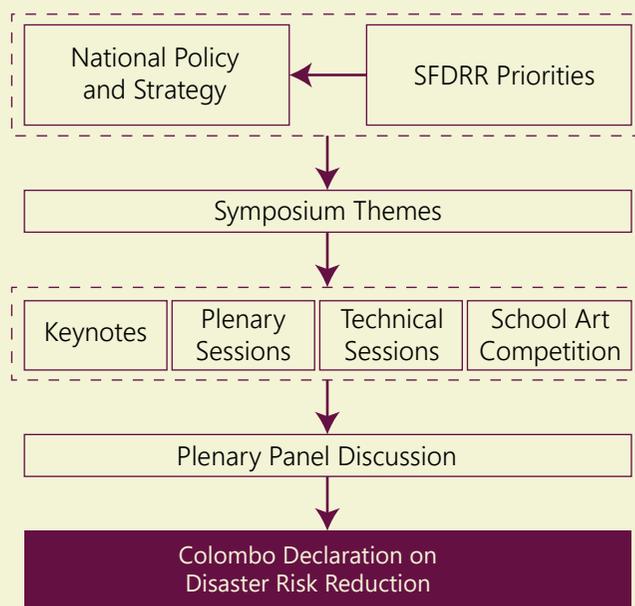
- Transboundary disaster risk governance
- Displacement and relocation
- Disaster resilient urban planning and development

This declaration of stakeholders will call upon the Disaster Management Centre, Government of Sri Lanka, together with

key stakeholders responsible for disaster risk reduction in the country, to work together to tackle the priority issues being addressed during the Symposium. The Declaration will also recognise the importance of ensuring coherence among the global frameworks such as the 2030 Agenda for Sustainable Development, the Paris Agreement on Climate Change, the Sendai Framework for Disaster Risk Reduction 2015-2030 (SFDRR), and the New Urban Agenda.

Deliberation of this session will reflect:

- Keynote addresses delivered by leading international experts to establish key challenges around Sendai priorities, in Sri Lanka and globally, including pandemics such as COVID 19
- State of the art developments, and recommendations to policy
- Linking current research to policy
- Key contributions and recommendations drawn together by the panel of experts
- Insights, suggestions and recommendations for 2030 DRR Research Agenda, and in particular, identify critical research gaps, strategic directions and areas of cooperation between scientific communities and policy and other stakeholder groups.



Message from the Secretary



G.D.H. Kamal Gunaratne
WWW RWP RSP USP ndc psc MPhil
Major General (Rtd)

Secretary, Ministry of Defence and Secretary,
State Ministry of Internal Security, Home Affairs
and Disaster Management, Sri Lanka

I am pleased and honoured to welcome all participants to this International Symposium on Multi-Hazard Early Warning and Disaster Risk Reduction in Colombo, Sri Lanka. This symposium is an excellent platform and an opportunity for professionals of various backgrounds and nationalities involved in disaster risk reduction activities to meet and exchange experience, knowledge and ideas related to this important field.

Disasters arising from natural hazards have a high potential to cause large scale damages and thereby negatively affect the country's livelihood and the economy. The Government of Sri Lanka, with a new vision for the future by His Excellency President Gotabaya Rajapaksa, is currently observing measures to improve the National Strategy on Disaster Risk Reduction. A collaborative interaction between policymakers, administrators and academia in

symposiums of this nature, plays an important role in meeting with such national endeavours.

I am pleased to give this welcome message for the International Symposium on Multi-Hazard Early Warning and Disaster Risk Reduction and I am confident that this symposium will create a platform for local and international participants to share their experiences, as well as exchange novel know-how and latest developments in the field of disaster risk reduction and mitigation.

I convey my best wishes for the International Symposium on Multi-Hazard Early Warning and Disaster Risk Reduction and trust this will be a wonderful thought-provoking experience to all participants. I express my sincere thanks to all the guests, keynote speakers, authors, financial sponsors and members of the organising committee who supported in making this very significant event a success.

Message from the Director General



Sudantha Ranasinghe
RWP RSP MSc ndu psc
Major General (Rtd)

Director General, Disaster Management Centre,
State Ministry of Internal Security, Home Affairs
and Disaster Management, Sri Lanka

It is my greatest pleasure and privilege to welcome you to this International Symposium on Multi-Hazard Early Warning and Disaster Risk Reduction. The purpose of this symposium is to promote the availability and application of research, science and technology to support the implementation of the Sendai Framework for Disaster Risk Reduction 2015 -2030. In an area such as disaster risk reduction, it is vital that academia, industry practitioners and government agencies all work together to achieve the goals and target.

In 2015, both the UN Sustainable Development Goals and the Sendai Framework for Disaster Risk Reduction were introduced. Target G, which looks at increasing the availability of and access to multi-hazard early warning (MHEW) systems and disaster risk information to people, has been identified of special importance to

Sri Lanka. The wider development of new technologies enables the development of novel, technology-based MHEW. The adaptation of these systems successfully into countries more prone to natural hazards can be very helpful in disaster risk reduction.

It is my belief that this symposium will bring professionals of various disaster management backgrounds together in an environment that will allow them to address the existing and emerging gaps in the disaster risk reduction and multi-hazard early warning, and to develop potential solutions that can address these challenges.

I convey my sincere thanks to the symposium guests, keynote speakers, authors, financial sponsors and members of the organising committee for their dedication in making this event a success, and hope that you have a fruitful time in Colombo, Sri Lanka.

Message from the University of Huddersfield, UK

As members of the scientific community who have been working with Sri Lanka over the past fifteen years, it is our pleasure to join our co-organisers in welcoming delegates to this International Symposium on Multi-Hazard Early Warning and Disaster Risk Reduction. We are especially pleased to see coming to fruition, an event that brings together actors from across policy, practice and science.

It is worth recalling that in the 2005 Hyogo Framework for Action, science was called for only in general terms: "Use knowledge, innovation and education to build a culture of safety and resilience at all levels". The successor agreement, the 2015 Sendai Framework for Disaster Risk Reduction (SFDRR), has a much-enhanced role for science and knowledge, including explicit mention of co-production. Science is called to action repeatedly in the text, be it in education and training, post-disaster reviews, research into

disaster scenarios or early warning systems. Modelling and early warning are especially emphasised, but there is also recognition of wider social processes, including culture. There is also renewed emphasis on training and, within this, on integrated approaches.

Within the SFDRR, the role of academia, scientific and research entities and networks is specifically recognised, and they are encouraged to: [...] focus on the disaster risk factors and scenarios, including emerging disaster risks, in the medium and long term; increase research for regional, national and local application; support action by local communities and authorities; and support the interface between policy and science for decision-making.

The need for academia, scientific and research entities to co-produce new knowledge is greater than ever. The Covid-19 pandemic has exposed the multi-hazard threats we face and the complex nature of

risk, which is interconnected and transboundary. It has also challenged our existing disaster and emergency management policies and strategies.

It will be important to leverage science and technology to address the challenges posed by emerging threats such as Covid-19, but also, systemic risk more broadly. Decision making must be informed by science, but that science is only emerging and there are challenges in how we accept and manage some of the inherent uncertainty around it.

Effective communication of science will also be vital to build trust and also counter the type of disinformation that has been undermining policy responses, and amplifying distrust and concern among citizens.

During the Symposium, we anticipate three days of fruitful discussions and a coherent dialogue between science, policy and practice. We believe that the planned Colombo Declaration of

Stakeholders will reinforce the need for a strong partnership that brings together academia, scientific and research entities with the many other actors who are responsible for and engaged with disaster risk reduction efforts in Sri Lanka and beyond. We look forward to working with partners in implementing the outcomes of the Symposium.



Professor Dilanthi Amaratunga and Professor Richard Haigh
Symposium co chairs

Global Disaster Resilience Centre,
University of Huddersfield, UK

Plenary Sessions

Plenary Session 1

14th December 2020 16:45 - 18:00 IST

Science, Policy and Practice Nexus for Risk Analytics, Early Warning Systems, and Emergency Operations Centers: Perspectives from the Asian Countries

Emergency Operation Centers (EOCs) usually serve as the nerve center for the risk communication and coordination of the emergency response. On the other hand, Early Warning Systems (EWS) are an integral component of disaster preparedness, and it has been proven that early actions can prevent loss of life, and reduce the economic and infrastructure impacts of disasters. Risk analytics provides a shared understanding of risks for planning and coordination of required risk reduction initiatives and response capacities.

In order to reduce disaster impacts on vulnerable communities, strengthening the nexus between Risk Analytics, EWS, and EOCs is important, and timely policy debate. The role of the research, policy enablers, and scaling up of good practices in this arena can specifically accelerate the implementation of Target G and E of the Sendai Framework. It is also important to understand how the multiple stakeholders including the government, LNGOs, the civil society organizations, the private sector, and the academia have a role to play in strengthening this nexus. With this regard, the plenary session on 'Science, Policy and Practice Nexus for Risk Analytics, Early Warning Systems, and Emergency Operations Centers: Perspectives from the Asian Countries' will bring together different perspectives from multiple stakeholders and will lead to multi-sectoral interaction and overall collaboration between stakeholders for promoting locally-led actions.

Co-Chairs



Prof. Richard Haigh

Professor in Disaster Risk Management, University of Huddersfield, United Kingdom



Major Gen. Sudantha Ranasinghe

Director General (DG), Disaster Management Center (DMC), Ministry of Defense, Government of Sri Lanka

Panelists



Mr. Hans Guttman

Executive Director, Asian Disaster Preparedness Center (ADPC), Bangkok, Thailand



Mr. Muhammad Idrees

Member, National Disaster Management Authority (NDMA), Pakistan



Ms. Veronica Gabaldon

Executive Director, Philippine Disaster Resilience Foundation (PDRF), Philippines



Mr. Sushil Bhandari

Section Officer, NEOC, Ministry of Home Affairs (MoHA), Nepal



Ms. Thiri Maung

Deputy Director, Emergency Operation Center, Department of Disaster Management (DDM) Ministry of Social Welfare, Relief and Resettlement, Myanmar

Register at: <https://bit.ly/mhewp1>

Plenary Session 2

15th December 2020 16:30 - 18:00 IST

Integrating Epidemic and Pandemic Preparedness into Disaster Risk Reduction

The unprecedented effects of the COVID-19 outbreak have engulfed almost the entire world. The health sector has been overwhelmed devastatingly. Over 55 million cases have been reported along with a death toll exceeding 1.3 million worldwide. Extending beyond the health sector, diverse effects of COVID-19 have cascaded into socio-economic implications. COVID-19 has evidenced the systemic nature of risk dismantling not only discrete parts of a system but also leading to the failure of the entire system. This has stressed the need for integrating biological hazards into Disaster Risk Reduction [DRR] planning while harping on the significance of emulating a multi-sectoral and multi-hazard approach to preparedness planning for biological hazards. It is clear that the world needs a quantum shift in the approach and architecture in pandemic preparedness.

Session Chair



Dr. Nishara Fernando

Senior Lecturer, University of Colombo, Sri Lanka

Panelists



Prof. Dilanthi Amaratunga

Global Disaster Resilience Centre, University of Huddersfield, UK



Dr. Hemantha Herath

Deputy Director General of Public Health Services, Sri Lanka



Major Gen. Sudantha Ranasinghe

Director General, Disaster Management Centre, Sri Lanka



Dr. Chandana Siriwardana

Senior Lecturer, University of Moratuwa, Sri Lanka



Mr. Sunil Jayaweera

Director Preparedness Planning, Disaster Management Centre, Sri Lanka

Project Researchers



Ravindu Jayasekara



Naduni Jayasinghe

Register at: <https://bit.ly/mhewp2>

The process of disseminating disaster early warning information is complex as it involves a wide array of jurisdictional agencies and response partners, including national contact points, specialist agencies, and sub-national emergency operational centres and related actors. Recent events have highlighted some of the challenges associated with the media and early warning, including the need to understand the barriers and enablers for the next generation of early warning dissemination, including its ability to deal with emerging challenges such as cascading hazards and social media. Formal dissemination of warnings works alongside and sometimes in competition with other communication channels, including social media platforms, which may reinforce official messages, but also have the potential to undermine efforts, for example through social media's potential role as a catalyst for spreading misinformation and false news. There is a need to understand how formal and informal communication mechanisms can better co-exist to more effectively disseminate warning information.

Plenary Session 3

15th December 2020 16:30 - 18:00 IST

Nature Based Solutions (NbS) for a Resilient Future

Climate Change is a major threat to the sustainability of global eco-systems and therefore Nature Based Solutions (NbS) are one of the fundamentals in enhancing adaptive capacity by providing vital links between sustainable socioeconomic development, biodiversity and ecosystem conservation to achieve climate resilience. The session aims to share evidence from field and explore strategies to mainstream NbS into climate resilience narrative, policies and actions.

Session Chair



Dr. Asiri Karunawardena

Director General, NBRO

Panelists



Dr. Ananda Mallawatantri

Country Representative, IUCN, Sri Lanka



Ms. Priyanka Dissanayake

Disaster Risk Management Specialist, WB Office, Sri Lanka



Mr. Susith Arambepola

Team Leader, NbS for Landslide Risk Management project, ADPC



Dr. Udeni Nawagamuwa

Snr. Lecturer- University of Moratuwa and Consultant ADPC



Dr. Anurudda Karunarathna

Snr. Lecturer, University of Peradeniya and Consultant ADPC, Sri Lanka



Prof. Champa Navaratne

Team Leader, Building Resilience in Tropical Agro-Ecosystems Project (BRITAE), University of Ruhuna

Register at: <https://bit.ly/mhewp3>

Plenary Session 4

16th December 2020 15:45 - 17:15 IST

Media and disaster risk communication

Panelists



Prof. Rohan Samarajiva

Board Chair & Founder LIRNEasia, Sri Lanka



Major General Sudantha Ranasinghe

Director General, Disaster Management Centre, Sri Lanka



Mr. Chevaan Daniele

Group Director, Capital Maharaja Organization, Sri Lanka



Mr. Nalaka Kaluwewa

Director General, Department of Government Information, Sri Lanka

Session Moderator



Dr. Chandana Siriwardana

Senior Lecturer, University of Moratuwa, Sri Lanka

Register at: <https://bit.ly/mhewp4>

Plenary Sessions continued...

Plenary Session 5

16th December 2020 17:15 - 18:15 IST

“The Colombo Declaration”

to promote the availability and application of research, science and technology to support implementation of Sendai Framework for Disaster Risk Reduction 2015-2030

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This event provides an important opportunity to bring together and promote collective action among Ministers, National Government Officials, the Private Sector, Representatives from Cities and Local Government, Representatives from Non-Governmental Organisations, International agencies, Universities and other Research Organisations.

The Symposium is structured to bring together the outputs and outcomes from keynote addresses, technical papers and presentations, and plenary sessions, and culminate in the endorsement of a roadmap for disaster risk reduction in Sri Lanka. This declaration of stakeholders will call upon the Disaster Management Centre, Government of Sri Lanka, together with key stakeholders responsible for disaster risk reduction in the country, to work together to tackle the priority issues being addressed during the Symposium. The Declaration will also recognise the importance of ensuring coherence among the global frameworks such as the 2030 Agenda for Sustainable Development, the Paris Agreement on Climate Change, the Sendai Framework for Disaster Risk Reduction 2015-2030 (SFDRR), and the New Urban Agenda.

Deliberation of this session will reflect:

- Keynote addresses delivered by leading international experts to establish key challenges around Sendai priorities, in Sri Lanka and globally, including pandemics such as COVID 19
- State of the art developments, and recommendations to policy
- Linking current research to policy
- Key contributions and recommendations drawn together by the panel of experts
- Insights, suggestions and recommendations for 2030 DRR Research Agenda, and in particular, identify critical research gaps, strategic directions and areas of cooperation between scientific communities and policy and other stakeholder groups.

Register at: <https://bit.ly/mhewpl5>

Session Co-Chairs



Prof. Dilanthi Amaratunga

Global Disaster Resilience Centre, University of Huddersfield, UK



Sisira Madurapperuma

Asian Disaster Preparedness Centre (ADPC), Thailand.



Dr. Ananda Mallawatantri

Country Representative, IUCN, Sri Lanka

Panelists



Major General G.D.H. Kamal Gunaratne

Secretary, Ministry of Defence and Secretary, State Ministry of Internal Security, Home Affairs and Disaster Management



Prof. Kapila Perera

Secretary, Ministry of Education, Sri Lanka



Prof. Ranjith Dissanayake

Secretary, State Ministry of Rural Roads and other Infrastructures, Sri Lanka



Major General Sudantha Ranasinghe

Director General, Disaster Management Centre, Sri Lanka



Prof. Ranjith Senaratne

Chairman, National Science Foundation of Sri Lanka



Dr. Hemantha Herath

Deputy Director General (Health Services), Sri Lanka

Keynote Speakers



Indian Tsunami Early Warning System

Dr. Srinivasa Kumar Tummala

Director, Indian National Centre for Ocean Information Services, Ministry of Earth Sciences, Government of India

14th December 2020 14:45 IST



Green Infrastructure and Nature Based Solutions towards Disaster Risk Reduction

Dr. Ananada Mallawathantri

Country Representative, International Union for Conservation of Nature (IUCN) in Sri Lanka

15th December 2020 13:30 IST



People-Centered Early Warning System in the Face of Near Field Tsunami

Dr. Harkunti Rahayu

The International Oceanographic Commission of UNESCO (IOC-UNESCO), Intergovernmental Coordination Group for the Indian Ocean Tsunami Warning and Mitigation System (ICG/IOTWMS) ICG/IOTWMS WG 1 on Tsunami Risk Community Awareness and Preparedness)

15th December 2020 14:00 IST



Disaster Risk Reduction through Multi-Hazard Resilient Infrastructure

Professor Priyan Dias

Senior Professor, Department of Civil Engineering, Faculty of Engineering, University of Moratuwa, Sri Lanka

Disaster Management Center (DMC), is the implementing arm of National Council for Disaster Management (NCDM) which is the apex body for Disaster Management, headed by H.E. the President of Sri Lanka. Disaster Management Act No 13 of 2005 mandated the implementation of NCDM and DMC enabling establishment of institutional mechanisms at the District, Divisional and Local community levels.

DMC is mandated to lay down the policies, plans and guidelines for Disaster Management following the directives of subject Ministry and the NCDM. Sri Lanka envisions the development of an ethos of Disaster Management Cycle, such as Prevention, Mitigation, Preparedness and Response and Recovery.



The DMC strives to promote a national resolve to mitigate the damage and destruction caused by natural and man-made disasters, through sustained and collective efforts of all Government agencies, Non-Governmental Organizations and community participation. This is planned to be accomplished by adopting a Technology-Driven, Pro-Active, Multi-Hazard and Multi-Sectoral strategy for building a culture of Safety among the communities, Disaster Resilient and sustainably developed country.

DMC has six major divisions' viz. Mitigation Research and Development, Preparedness, Training & Awareness/Education, Emergency Response, Human Resources and Finance. Functions of Disaster Risk Management has been decentralized through District Disaster Management Coordinating Unit established in District secretariats of the all 25 districts.

Functions and Responsibilities

All the functions and responsibilities of DMC has been clearly spelled out under the Section 8 of the National Disaster Management Act NDMA, which is mandated to assisting the NCDM to lay down the policies, plans and guidelines for Disaster Management to ensure timely and effective response to pre- and post-disasters. Following responsibilities are dictated for this endeavor:

- Assist the NCDM to lay down policies on disaster management.
- Assist to NCDM to prepare the National Disaster Management Plan and National Emergency Operation Plan.
- Taking responsibility for the implementation of the National Disaster Management Plan and the National Emergency Operation Plan.
- Ensuring the various Disaster Management Plans prepared by Ministries, Government

Departments or public corporations conforms to the National Disaster Management Plan and submit to the NCDM for approval.

- Preparing and implementing programmes and plans for disaster preparedness, mitigation, prevention, relief, rehabilitation and reconstruction activities and coordination of organizations which implement such programmes and plans as well as obtaining financial assistance from the Treasury for such activities and release the same to the relevant regions and monitor and evaluate these activities.
- Issuing instructions and guidelines to appropriate organizations, non-governmental organizations, district secretaries and divisional secretaries on activities relating to disaster management and initiating and implementing work programmes in co-ordination with such organizations and secretaries
- Promoting research and development programmes in relation to disaster management and setting up and maintaining a data base on disaster management;
- Submitting reports to the Council from time to time and whenever required by the Council in regard to its activities.
- Implementing the directions and advices given in the Vistas of Prosperity and Splendour.



Disaster Management Centre

Key Achievement

The Disaster Risk Management framework has been prepared and implementing after due deliberation and keeping in view the National Vision: "Vistas of Prosperity and Splendour" to build a safe and disaster-resilient Sri Lanka by developing a holistic, proactive, multi-disaster and technology-driven, innovative strategy for Disaster Management. This will be achieved through principles of prevention, mitigation and preparedness training to generate a prompt and efficient response during disasters. The entire process will focus the community and will be provided momentum and sustenance through the collective efforts of all strata of the country.

In order to translate vision into policy and plans, programme and activities, the DMC has adopted a



mission-mode approach involving a number of initiatives with the help of various institutions operating at the national, and local levels. Line ministries and other stakeholders have been involved in the participatory and consultative process of evolving plans, programmes and guidelines.

The Disaster Risk Management framework of the country is also in conformity with the International Strategy for Disaster Reduction, the Paris Agreement; the Sustainable Development Goals and the Sendai Framework for Disaster risk Reduction 2015-2030.

The DMC has underpinned following key areas during the last fifteen years:-

- Establishment of Multi Hazard Early warning system including Tsunami Early warning towers covering the coastal belt of the country
- National Emergency Operation center including 117 Call Center serving 24 X7
- Launch Community based Application Named "APADA" to report any emergencies
- Maintaining and updating Data sharing Platforms www.desinventar.lk and www.Riskinfo.lk
- Complete Post Disaster Need Assessment for Major Disasters
- Complete and published Hazard profile for the country covering 09 frequent hazards.
- Scientifically developed the National Risk Index at Grama Niladari Level on four hazards
- Under Mainstream Disaster Risk Reduction into Development sector DRR has been in cooperated to Local Government Policy, National Housing policy, Coastal Zone Development Plan, Environment Impact Assessment etc.
- Ensure the availability of Training and Education Materials for disaster risk Management



Associated publications



International Symposium on Multi-Hazard Early Warning and Disaster Risk Reduction

- Complete monograph/book with up to 60 detailed book chapters selected from the symposium will be published by Springer Nature. Book title: Multi-Hazard Early Warning and Disaster Risks
- Colombo 2020 DRR declaration - State of the art developments and recommendations for policy
- Selected high quality papers will be published in the SCOPUS indexed International Journal of Disaster Resilience of the Built Environment
- Conference book of abstracts and proceedings



University of HUDDERSFIELD

Inspiring global professionals

Global Disaster Resilience Centre

Working with Sri Lanka

Based in the UK, the University of Huddersfield's Global Disaster Resilience Centre (GDRC) is a global leader in research, education and advocacy to improve the resilience of nations and communities to disasters.

Since 2014, GDRC has secured twenty-six externally funded research grants on disaster risk reduction and resilience-related topics. These have been from prestigious funding bodies, including EU Lifelong Learning, EU FP7, EU Horizon 2020, EU Tempus, EU Erasmus+, British Council, Newton Fund, Australian Research Council, NERC - Natural and Environmental Sciences Research Council, and the UK Global Challenges Research Fund.

- Winner of the prestigious Newton Prize 2019 which recognises the best research and innovation project in 2019 which creates an impact socially and economically
- Managed over 20 research grants worth £10m since 2014
- Collaborate with higher education, government, private sector and non-government partners in Europe, Asia, Australia/Oceania, Africa, North America and South America
- Founding Steering Committee Members and UK Advocates of UN Making Cities Resilient campaign
- Member of European Science and Technology Advisory Group (E-STAG)
- Founders of the International Conference on Building Resilience Series
- Editors of International Journal of Disaster Resilience in the Built Environment, published by Emerald, indexed and abstracted in SCOPUS
- Expert members - IOC UNESCO ICG/IOTWMS ICG/IOTWMS WG-1 on *Tsunami Risk, Community Awareness & Preparedness*, and inter-sessional Task Team on Tsunami Preparedness for a Near-Field Tsunami Hazard
- Winner of the UALL International Award 2018 for innovative engagement, including partnerships, that create change in an international and transnational context.

20 international projects in collaboration with Sri Lankan institutes and worth more than €8 million **International research projects**

16 major events sharing knowledge and strengthening collaborations with other scientists and actors in disaster risk reduction **Conferences**

39 technical sessions and capacity building events with universities, government organisations, strengthening national capacities on disaster risk reduction **Workshops, technical & training sessions**

7 keynote addresses, disseminating research findings and setting research and policy agendas **Keynotes addresses**

7 policy briefs that inform the disaster risks policy agenda in Sri Lanka **Briefing papers**

Authoring, advising and editing **8** key scientific documents on disaster risk reduction in Sri Lanka **Reports & documents**

Co-authoring over **40** peer-reviewed scientific papers on disaster risk reduction and management **Joint peer reviewed papers**

Our work in Sri Lanka since 2014

Some of the research projects that are being carried on currently...

- Integrating epidemic and pandemic preparedness into disaster risk reduction
- Developing and harmonising local capacities for tsunami early warning
- Improving COVID-19 and pandemic preparedness and response through the downstream of multi-hazard early warning systems
- REGARD – Rebuilding After Displacement
- CABARET (Capacity Building in Asia for Resilience Education)
- BEACON (Built Environment Learning for Climate adaptation)
- Research Network in tackling climate change as an underlying disaster risk driver (CCA-DRR)



Emergency Contact

In an emergency call the DMC

Call Center



117



Emergency Operation Centre - 0112 136 222 or 0112 670 002

Web Sites

- Disaster Management Centre - www.dmc.gov.lk
- Sri Lanka Disaster Risk Information Platform - www.riskinfo.lk
- Disaster Information Management System – Sri Lanka - www.desinventar.lk

Download the DMC developed APADA app to report disaster incidents online!



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