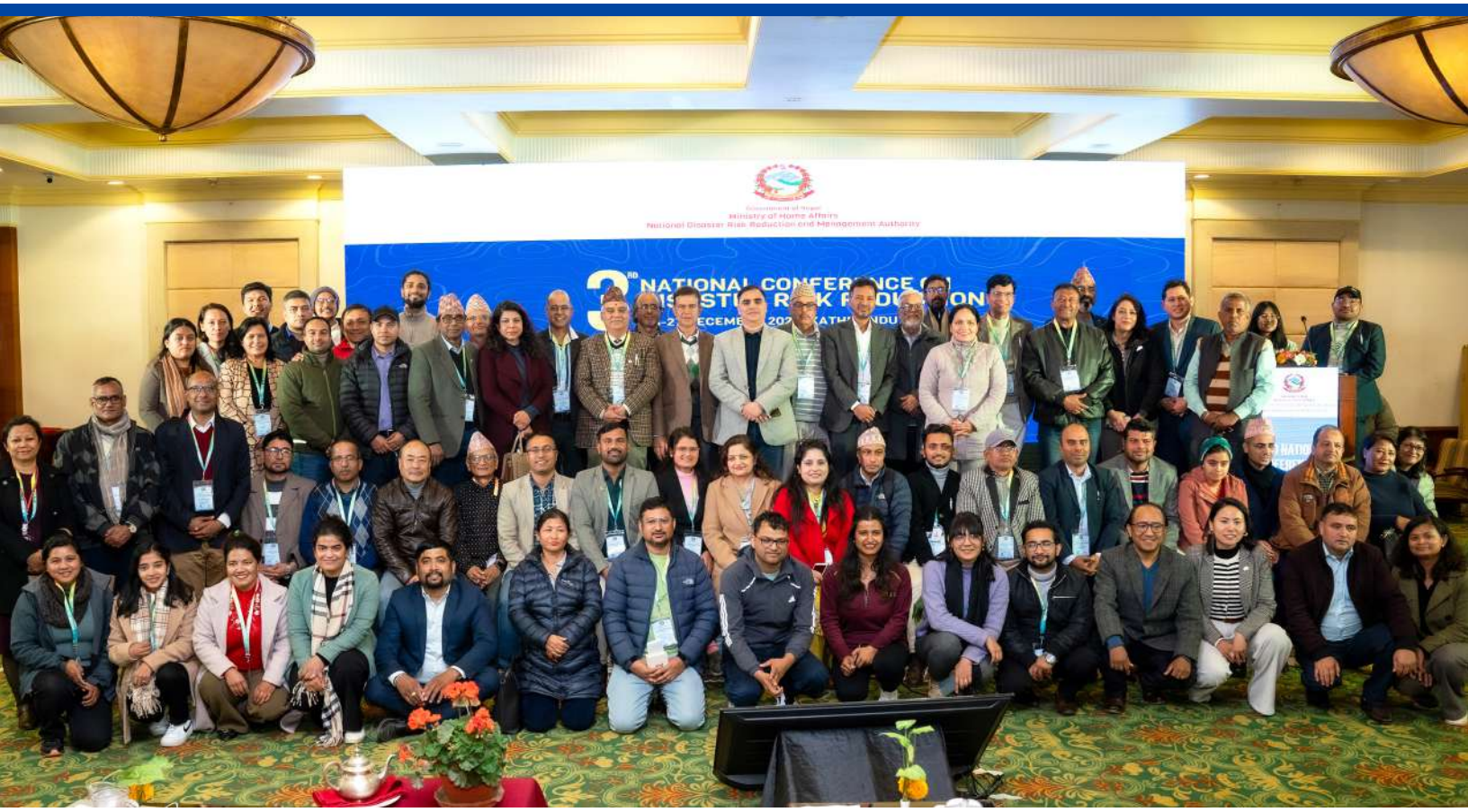
Government of Nepal
Ministry of Home Affairs
National Disaster Risk Reduction & Management Authority



3RD NATIONAL CONFERENCE ON DISASTER RISK REDUCTION

26-27 DECEMBER 2024, KATHMANDU

THIRD NATIONAL CONFERENCE ON DISASTER RISK REDUCTION (NCDRR): MONSOON 2024 AND BEYOND

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Acknowledgements

Dr. Raju Thapa
Chair, 3rd NCDRR/DPNet

Nepal has distinctive geographical and topographical features, along with high seismic activity, making it highly vulnerable to disasters. The country frequently experiences floods, landslides, fire, earthquakes, avalanches, resulting in devastating social, economic, and environmental consequences. Despite commendable progress in Disaster Risk Reduction policy formulation and implementation, Nepal continues to face challenges in effectively implementing and monitoring DRR activities.

The third National Conference on Disaster Risk Reduction (NCDRR), organized by the National Disaster Risk Reduction and Management Authority (NDRRMA) in coordination with DPNet-Nepal, was successfully held in Kathmandu. This year's conference focused on Monsoon Preparedness 2024 and served as a vibrant platform for knowledge sharing and collaboration among stakeholders from the local to the federal level. Participants included representatives from government agencies, UN bodies, donors, INGOs, NGOs, media, academia, the private sector, disaster-affected communities, experts, and students.

The conference prioritized inclusivity, effectiveness, and the alignment of DRR initiatives, with a particular emphasis on ensuring the meaningful participation of women and vulnerable communities like people with disabilities. It highlighted research findings, best practices, field-level learnings, and successful outcomes to promote resilience and foster a disaster-ready Nepal. Discussions were centered around three major themes: managing current and future risks and uncertainties in a rapidly changing climate and global context; prioritizing gender equality, accessibility, and inclusion to ensure no one is left behind; and accelerating action for a sustainable future, with an eye toward the upcoming Global Platform for Disaster Risk Reduction 2025.

I would like to extend my heartfelt gratitude to NDRRMA, NPDRR, our generous partners, including the GSMA-funded "ACT FIRST" project and the ADPC iCARE Innovation Project implemented by NAXA Pvt. Ltd., DCA Nepal, IHRR, NNSWA, VIAMO, NFL and Field Ready. I am also thankful to Food and Agriculture Organization of the United Nations (FAO), United Nations Development Programme (UNDP), IFRC/Danish Red Cross (DRC), Nepal Redcross Society, Catholic Relief Services, National Housing and Settlements Resilience Platform (NHSRP), ActionAid International, Save the Children, KIRDARC, OXFAM in Nepal, NEEDS Nepal, Practical Action, Plan International, CARE Nepal, United Mission to Nepal, Centre for Disaster Management (CDMS), WHDRRP, AWO International, and People in Need (PIN) for their kind support. Their contributions were contributory in making the event a success.

My sincere appreciation also goes to the many government and non-government agencies that supported the conference. I am especially thankful to Mr. Aparajit Koirala, Ms. Sneha Bhatta, Mr. Bijay Banstola, Mr. Vivek Dumre, and Ms. Biddya Bhandari for their assistance in drafting the conference proceedings. I am deeply grateful to the DPNet Secretariat, Advisory Board, Technical Advisory Team, Executive Committee, and all DPNet-Nepal staff for their hard work and dedication throughout the preparation and implementation stages.

A special note of appreciation is reserved for Er. Suraj Gautam, General Secretary of DPNet-Nepal, whose tireless efforts and round-the-clock commitment were central to the success of this conference. I firmly believe that the proceedings of this conference will serve as a valuable resource for all agencies and individuals working toward disaster risk reduction in Nepal.

I encourage everyone to visit https://DPNet.org.np/ncdrr3 to access detailed information about the conference, including the final report, news, photographs, videos, and presentations. Lastly, I appeal to all stakeholders to continue supporting NDRRMA in organizing the NCDRR on an annual basis, with DPNet committed to coordinating efforts to share our collective achievements and identify pathways for future progress.

Forewords

Dr. Bhisma Kumar Bhusal
Executive Chief, NDRRMA

The National Disaster Risk Reduction and Management Authority (NDRRMA), in collaboration with DPNet Nepal and the National Platform for Disaster Risk Reduction (NPDRR), successfully organized the Third National Conference on Disaster Risk Reduction (NCDRR) on 26–27 December 2024 at The Everest Hotel in Kathmandu. This vital event aimed to foster knowledge exchange, highlight innovations, and facilitate collaborative dialogue on the evolving landscape of disaster risk management in Nepal, with a special focus on Monsoon Preparedness 2024.

The conference brought together a wide range of stakeholders from federal to local levels including representatives from the government, media, academia, development partners, civil society, and disaster-affected communities. It served as a dynamic platform to analyze the multifaceted impacts of disasters, particularly those triggered during the 2024 monsoon season. Participants evaluated current response strategies, reflected on achievements and challenges, and proposed recommendations to strengthen Nepal's resilience and preparedness in the context of increasing climate-induced risks.

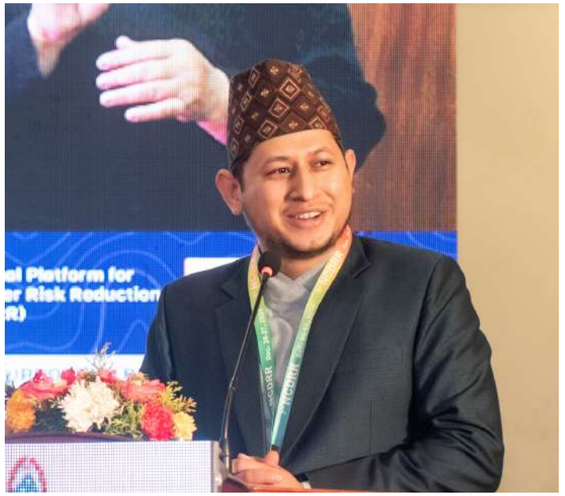
The 3rd NCDRR also provided an important opportunity to assess ongoing DRR efforts, identify implementation gaps, and integrate lessons learned for improved policy and programmatic interventions. As a hub for knowledge sharing, it encouraged the exchange of experiences, best practices, research findings, and innovative approaches among DRR practitioners and stakeholders. Moreover, the conference sought to gather contextual insights and recommendations to inform Nepal's engagement in the upcoming Global Platform for Disaster Risk Reduction (GPDRR) 2025.
Conference sessions were structured around four thematic areas: understanding risk; managing risks in a climate change scenario; promoting gender equality and social inclusion; and accelerating actions for a sustainable future. Each theme was explored through expert presentations, panel discussions, and interactive sessions, enabling participants to contribute meaningfully to the national DRR dialogue.

The success of this event would not have been possible without the collective efforts and unwavering support of numerous institutions and individuals. I extend my sincere gratitude to DPNet Nepal, NPDRR, all supporting organizations, paper presenters, and participants whose active involvement made the conference impactful and memorable. Special thanks go to the dedicated planning and execution team, whose professionalism and attention to detail ensured the smooth organization of the conference.

Following the conference, this report has been prepared to serve as a comprehensive resource for all stakeholders involved in disaster risk reduction and management. We hope that the insights, strategies, and collective knowledge shared during the event will guide future efforts to strengthen disaster preparedness, improve early warning systems, and build a more resilient Nepal. We deeply appreciate the continued support and collaboration of all partners and look forward to working together to advance disaster risk reduction across the country.

Thank you!

Preface



Er. Suraj Gautam
Convener, NCDRR & General Secretary, DPNet Nepal

This document is the outcome of the "National Conference on Disaster Risk Reduction (NCDRR)" which was held on 26 and 27 December 2024 at Everest Hotel, Kathmandu, Nepal. 3rd NCDRR was organized by National Disaster Risk Reduction and Management Authority (NDRRMA), in collaboration with the DPNet Nepal and National Platform for Disaster Risk Reduction (NPDRR).

The monsoon of 2024 has been catastrophic for Nepal, claiming hundreds of lives and displacing communities across the country. Heavy rains have led to unprecedented flooding, landslides, and destruction of property, with significant impacts on vulnerable populations. The impacts have been far-reaching, with the highest casualty toll in 15 years attributed to events such as Thame Glacier Lake Outburst Flood (GLOF), the unprecedented heavy rainfall across East and Central Nepal on September 27–28, and so on. Between July 7 and 8, 2024, Nepal experienced its highest-ever 24-hour accumulated rainfall, with an unprecedented 624 mm recorded at the Dodhara Station in Dodhara Chandani Municipality. Additionally, during the 2024 monsoon season, the Department of Hydrology and Meteorology (DHM) documented record-breaking rainfall at 26 meteorological stations across the country.

The 3rd National Conference on Disaster Risk Reduction (NCDRR) served as a vital platform for experts, policymakers, and stakeholders to come together and reflect on the challenges and lessons of Monsoon 2024. With increasing monsoon-related hazards such as floods, landslides, and lightning affecting communities across Nepal, the conference emphasized the urgency of better preparedness, response strategies, and long-term resilience building. The discussions covered a wide range of topics, from understanding monsoon-related risks to adopting inclusive approaches in climate change adaptation and disaster risk reduction. Local government representatives shared firsthand experiences, shedding light on the difficulties faced at the municipal level and the innovative solutions they implemented. Sector-specific sessions focused on critical areas such as road safety, infrastructure, education, health, and the role of communities in disaster response.

The sessions also highlighted key aspects of search and rescue, early interventions, and coordinated relief efforts. A special session was dedicated to the 2024 cloudburst event, exploring Impact-Based Forecasting (IBF) and the use of anticipatory action to minimize Loss and Damage. Technology and innovation in disaster management were highlighted as essential tools for improving response efficiency and long-term preparedness. The conference also provided a space for diverse voices, including local stakeholders, emergency operation centers, and international experts, to share insights. Discussions on risk assessment, visualization, governance strategies, and early warning systems reinforced the importance of collaboration across sectors. By bringing together these perspectives, the conference underscored the need for stronger policies, improved coordination, and greater investment in sustainable disaster risk reduction strategies to build a more resilient future.

Summary

The Third National Conference on Disaster Risk Reduction (3rd NCDRR), held in Kathmandu on December 26–27, 2024, brought together a broad range of stakeholders including government agencies, UN and donor agencies, INGO, NGO, civil society, media, academia, private sectors, experts, disaster-affected communities. Honorable Home Minister Ramesh Lekhak served as the Chief Guest and reaffirmed the government's dedication to enhancing disaster preparedness, announcing a monthly dialogue disaster management related dialogue with Home Minister. Participants stressed the need for urgent measures to mitigate potential large-scale disasters, drawing lessons from the devastating Monsoon 2024.

In anticipation of Nepal's participation at the upcoming Global Platform for Disaster Risk Reduction (GPDRR) 2025, the conference laid the groundwork for formulating an official statement and a cohesive position paper. Core recommendations emerging from the deliberations included revising the Disaster Risk Reduction and Management Act to improve coordination among federal, provincial, and local governments; strengthening early warning systems, hazard mapping, and risk communication while ensuring the meaningful inclusion of women, persons with disabilities, and marginalized communities; expanding local-level capacity through specialized training, resource allocation for rapid deployment, and the institutionalization of an Incident Command System; and promoting greater private sector involvement and risk-transfer mechanisms, particularly more accessible insurance products, to alleviate the economic burdens faced by communities hardest hit by disasters.

314 Participants (Male 237, Female 77)

16 Panelists

14 Technical Presentations

11 Person with Disability

10 Sessions Chairs

11 Market Place

4 Panel Discussions

2 Lightning Sessions with 7 Presentations

4 Parallel Sessions

2 Key Note Presentations

1 Voice Box Section

2 Spotlight Sessions with 6 presentations

Abbreviations

ADPC	Asian Disaster Preparedness Center
APF	Armed Police Force
APMCDRR	Asia-Pacific Ministerial Conference on Disaster Risk Reduction
ARRCC	Asia Regional Resilience to a Changing Climate
BMD	Bangladesh Meteorological Department
CDMC	Community Disaster Management Committee
CDO	Chief District Officer
CHIRPS	Climate Hazards Group InfraRed Precipitation with Station Data
CHS	Core Humanitarian Standard
CSRC	Community Self Reliance Centre
CSSR	Collapsed Structure Search and Rescue
CV	Community Volunteer
CVA	Cash Voucher As
DASTAA	Digital and Spatial Technologies for Anticipatory Action
DCA	DanChurchAid
DCC	District Coordination Committee
DDA	Detailed Damage Assessment
DDM	Department of Disaster Management
DDMC	District Disaster Management Committee
DHM	Department of Hydrology and Meteorology
DMG	Department of Mines and Geology
DPNet	Disaster Preparedness Network
DPRP	Disaster Preparedness and Response Plan
DRM	Disaster Risk Management
DRMC	Disaster Risk Management Committee
DRR	Disaster Risk Reduction
DRRM	Disaster Risk Reduction and Management
EIA	Environmental Impact Assessment
EP&R	Emergency Preparedness and Response
EWS	Early Warning System
FAO	Food and Agriculture Organization
FFWC	Flood Forecasting and Warning Centre
GESI	Gender Equality and Social Inclusion
GLOF	Glacial Lake Outburst Flood
GPDRR	Global Platform for Disaster Risk Reduction
GPS	Global Positioning System
GSMA	Global System for Mobile Communications Association
HDRMP	Household Disaster Risk Management Plan
HUD	Housing and Urban Development
IBF	Impact-Based Forecasting
IEC	Information, Education, and Communication
IEE	Initial Environmental Examination
IHRR	Institute of Himalayan Risk Reduction
INGO	International Non-Governmental Organization
IT	Information Technology
IVR	Interactive Voice Response
LAPA	Local Adaptation Plan of Action
LDMC	Local Disaster Management Committee
LDRMP	Local Disaster Risk Management Plan
LEOC	Local Emergency Operations Center
LWS	Lightning Early Warning System
MEOC	Municipal Emergency Operation Center
MoFAGA	Ministry of Federal Affairs and General Administration
MoU	Memorandum of Understanding
MPRP	Monsoon Preparedness and Response Plan
mRVI	Modified Radar Vegetation Index
NBC	National Building Code
NCDRR	National Conference on Disaster Risk Reduction
NDRRMA	National Disaster Risk Reduction and Management Authority
NNSWA	Nepal National Social Welfare Association
NPDRR	National Platform for Disaster Risk Reduction
NPR	Nepali Rupee
NTC	Nepal Telecom
PWD	Persons with Disabilities
R2R	Ready to Respond
RCC	Reinforced Cement Concrete
SALNet	South Asian Lightning Network
SDG	Sustainable Development Goals
SFDRR	Sendai Framework for Disaster Risk Reduction
SIAS	Southasia Institute of Advanced Studies
SMS	Short Message Service
SP	Superintendent of Police
SSP	Senior Superintendent of Police
SWMM	Storm Water Management Model
UKMO	UK Met Office
UN FAO	United Nations Food and Agriculture Organization
UNDP	United Nations Development Programme
VTC	virtual communication systems
WHO	World Health Organization

SECTION 1

INTRODUCTION

Conference Objectives

The Third National Conference on Disaster Risk Reduction (NCDRR) aimed to create a robust platform for fostering collaboration, dialogue, and knowledge exchange among a diverse group of stakeholders to address Nepal's escalating disaster challenges. With a focus on the catastrophic impacts of the Monsoon 2024, the conference brought together government bodies, civil society organizations, academic institutions, private sector representatives, and grassroots practitioners. The overarching goal was to share innovative approaches, research insights, and field-level experiences that can contribute to more effective disaster risk management in Nepal.

One of the key objectives of the conference was to evaluate ongoing disaster risk reduction (DRR) initiatives and document their progress. This helped to identify successes, gaps, and lessons learned, leading to the creation of a detailed report. This report will serve not only as a resource for national stakeholders but also as a foundational document for Nepal's contributions to global DRR discussions, including the Global Platform for Disaster Risk Reduction 2025.

Additionally, the conference aimed to provide actionable policy feedback to ensure that the insights and recommendations from these discussions are effectively integrated into future disaster management strategies, frameworks, and legislative tools. The event also aspired to promote a culture of inclusivity by prioritizing the voices of women, marginalized communities, and individuals with disabilities in DRR-related dialogues. By achieving these objectives, the 3rd NCDRR has contributed to build a stronger, more disaster-resilient Nepal while contributing to the global discourse on disaster risk reduction.

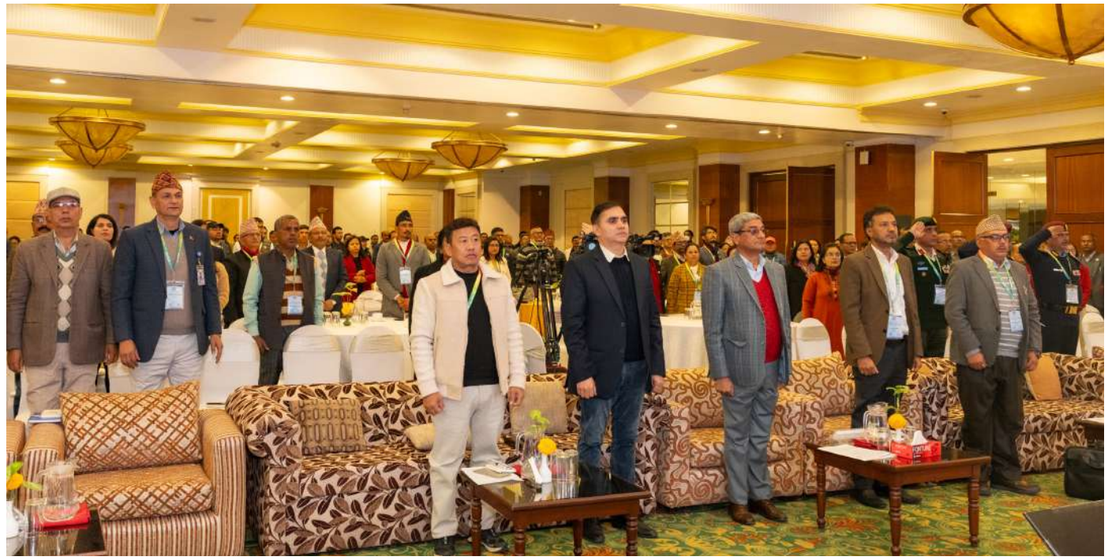
Theme and Scope

The theme of the Third National Conference on Disaster Risk Reduction was "Monsoon 2024 and Beyond: Turning Lessons into Resilient Strategies." This theme focused the urgent need to address the challenges posed by the devastating 2024 monsoon season, which brought unprecedented rainfall, severe floods, and widespread landslides. These events caused significant loss of life, displacement of thousands of families, and extensive damage to infrastructure, particularly in vulnerable regions. The conference theme emphasized the importance of translating the lessons learned from these disasters into actionable strategies that enhance resilience at all levels.

The scope of the conference was both broad and multidisciplinary, addressing critical areas such as understanding disaster risks, managing them in the context of climate change, promoting gender equality and inclusion, and accelerating sustainable actions. The conference featured technical sessions where experts presented their experience, learnings and innovative solutions while the panel discussions brought together diverse perspectives, and a dedicated marketplace showcased disaster risk reduction resources, tools, and best practices.

Furthermore, the conference explored how emerging challenges, such as intensifying climate change impacts, could be addressed through collaborative efforts that span local, national, and international levels. It aimed to equip participants with practical knowledge and strategies to strengthen disaster preparedness, response, and recovery. By prioritizing inclusivity, the conference also ensured that vulnerable groups, such as women, persons with disabilities, and marginalized communities, are at the forefront of disaster management discussions. Through this comprehensive approach, the NCDRR contributed to establish a unified vision for disaster risk reduction that is both effective and equitable.

THIRD NATIONAL CONFERENCE ON DISASTER RISK REDUCTION

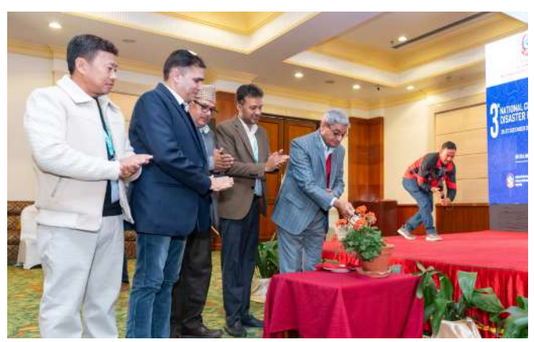


Opening Ceremony

The 3rd National Conference on Disaster Risk Reduction was held with the goal of reviewing current strategies, sharing best practices, and strengthening collaborative efforts to address disaster-related challenges in Nepal. The workshop commenced with the National Anthem, symbolizing unity and collective responsibility, followed by a formal inauguration ceremony.

The Honorable Minister of Home Affairs, Mr. Ramesh Lekhak, graced the conference as the chief guest, setting the tone for high-level guidance and policymaking contributions. The conference was chaired by the Chairperson of DPNet, Dr. Raju Thapa, whose expertise and leadership were instrumental in shaping the agenda and discussions. Meanwhile, Er. Suraj Gautam, the General Secretary of DPNet, served as the Master of Ceremonies, ensuring a well-coordinated program throughout.

A diverse group of distinguished representatives from various sectors joined the event, reflecting the broad-based engagement necessary for effective disaster risk reduction. Notable guests included Mr. Basanta Bahadur Kunwar, Inspector General of Nepal Police; Mr. C.P. Gharti, Mayor of Bheri Municipality; Mr. Kishor Kumar Limbu, Mayor of Dodhara Chandani Municipality; Mr. Padam Bogati, Mayor of Bhemdatta Municipality; Mr. Dinesh Lama, Chairperson of Roshi Gaupalika; Ms. Dipa Bohara, Chairperson of Sunkoshi Gaupalika; and Ms. Neelam Lekhak Joshi, Deputy Mayor of Bhemdatta Municipality.



Dr Dijan Bhattarai, Under Secretary/Spokesperson, NDRRMA

Welcome Remarks

Dr. Dijan Bhattarai, Spokesperson of NDRRMA welcomed the attendees and highlighted the significance of the 3rd NCDRR. He stressed the need for a unified approach involving government, non-governmental organizations, development partners, journalists, and other stakeholders to address Nepal's increasing disaster risks. He highlighted that the government alone cannot handle the growing challenges, especially with the added pressures of climate change, emphasizing the importance of collaboration across all sectors. He also stressed that Nepal has yet to establish a strong culture of disaster awareness and that public sensitization efforts must be expanded. Dr. Bhattarai pointed out key gaps, including inadequate mapping of disaster-sensitive zones, ineffective public awareness programs, and weak coordination among the three tiers of government under federalization. He called for increased investment in disaster risk reduction (DRR) from both public and private sectors, alongside improved preparedness plans, infrastructure, and research. He also emphasized the urgent need for high-tech early warning systems, risk transfer mechanisms, effective reconstruction efforts, and empowering local governments. Expressing gratitude to the collaborative agencies DPNet, supporting agencies and participants, the spokesperson acknowledged the importance of continuous dialogue and joint action in mitigating disaster risks. Dr. Bhattarai emphasized that this conference provides a crucial platform to address Nepal's challenges and solutions in preparation for the GPDRR. Given the substantial monsoon-induced losses this year, the forum aims to highlight practical solutions and strengthen collaboration to enhance disaster resilience.

Mr. Surya Bdr. Thapa, Immediate Chair, DPNet Nepal

Objective Highlights of 3rd NCDRR

Mr. Surya Bdr. Thapa, Immediate Chair, DPNet Nepal, highlighted the objective of the third NCDRR and emphasized the importance of the National Conference on Disaster Risk Reduction (NCDRR) as a platform to unify government, non-government, private, and technical sectors. He highlighted that DPNet-Nepal, although a non-governmental organization, strives to function as an extension of government efforts by organizing such forums to collect diverse suggestions and insights.

The conference aims to create a concise, unified presentation of Nepal's disaster-related challenges, experiences, and achievements for international forums, ensuring a cohesive representation at events such as the upcoming Global Platform for Disaster Risk Reduction in Switzerland. Drawing from lessons shared during the conference, it also seeks to strengthen policies and frameworks for disaster management, especially in light of the 2024 monsoon's impact.

Mr. Thapa noted that increased engagement and support, similar to past successes, could enable Nepal to host international DRR conferences in the future. He stressed the need for enhanced implementation across all sectors, urging each to fulfill its responsibilities efficiently. The conference's conclusions will provide strategic direction for advancing Nepal's disaster resilience. In his final remarks, Mr. Thapa requested the Honorable Home Minister to dedicate an hour monthly to discuss disaster-related matters, fostering stronger national preparedness and collaboration.

Dr. Bhisma Kr. Bhusal, Executive Chief, NDRRMA

Presentation on Strengthening NDRRMA Institutional Capacity

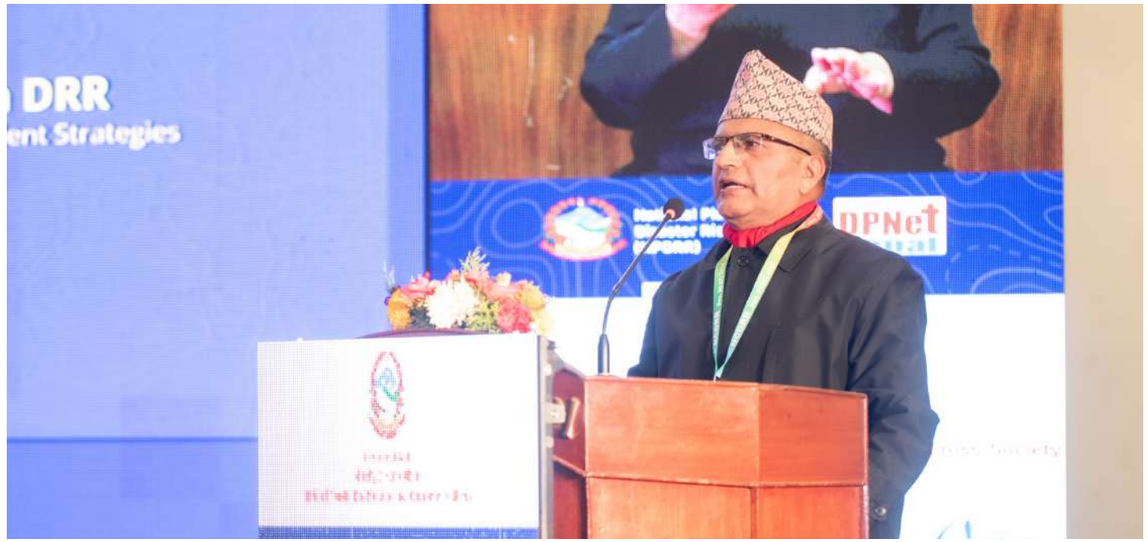
Dr. Bhusal began his presentation by extending heartfelt appreciation for the collaborative efforts of Nepal's Disaster Risk Reduction (DRR) stakeholders during the Asia-Pacific Ministerial Conference on Disaster Risk Reduction (APMCDRR) held in the Philippines. He highlighted how the joint effort, reflected through a unified position paper and official statement, enabled Nepal's meaningful participation on the regional platform and demonstrated the strength of coordinated action among government agencies, civil society, and development partners.

Reflecting on the five-year journey of the NDRRMA, Dr. Bhusal acknowledged both the achievements and the persistent challenges the NDRRMA faces. He emphasized the pressing need for institutional, legal, and operational reforms to strengthen disaster risk reduction mechanisms across the country. He noted that policy improvements are essential, especially in revising the DRRM Act to address gaps related to authority, accountability, and implementation. For instance, the unclear roles of expert groups, operational inefficiencies of the National Emergency Operations Centre, and the need to clarify the coordination between NDRRMA and the Ministry of Forests and Environment regarding climate adaptation must be urgently addressed. Moreover, he called for updating risk reduction strategies and ensuring that partners work in alignment with NDRRMA's plans and priorities.

Dr. Bhusal stressed the need for institutional strengthening by building internal human resources, enhancing technical capacity, and clearly defining roles and responsibilities within NDRRMA. He proposed the formation of specialized units such as a Loss and Damage Unit and a separate division for reconstruction and recovery. He also emphasized the importance of institutionalizing the Incident Command System and developing strong linkages between federal, provincial, and local governments for effective disaster management. He highlighted the central role of community engagement in disaster response. Stressing that communities are the first responders, he called for structured training for search and rescue teams at all levels of government. He emphasized promoting local leadership and involving schools, civil society, the private sector, and security forces in DRR awareness and preparedness programs.

Regarding coordination mechanisms, Dr. Bhusal highlighted for reducing bureaucratic hurdles and ensuring that facilitation comes directly from senior leadership within ministries. He proposed that line ministries avoid duplicating the roles of NDRRMA and instead work in clear coordination with it. He stressed the need for direct collaboration with security agencies, efficient communication systems from top to bottom and vice versa, and a one-door policy for relief and rescue operations. He also highlighted the importance of establishing a national certification system to strengthen Nepal's INSARAG capacity and enhancing international coordination. Dr. Bhusal further emphasized the need for significant investment in disaster-related infrastructure. This includes equipping municipalities and districts with standard search and rescue tools, using modern technologies such as remote sensing and drones, ensuring rapid deployment capability through helicopters, and establishing a National Disaster Management Training Institute. He advocated for setting up well-equipped provincial emergency operation centers and training hubs with the latest technology.

He also underlined the importance of evidence-based decision-making in disaster risk reduction. This includes fostering collaboration with academic and research institutions at national and international levels, maintaining updated data on risk and vulnerabilities, and encouraging localized risk assessments to guide effective interventions and policies. Finally, Dr. Bhusal highlighted the importance of flexible resource mobilization. He called for easier and more efficient use of the Disaster Management Fund, centralized budgeting for recovery and reconstruction through NDRRMA, and the establishment of rapid-response funding mechanisms. He stressed the need to mobilize resources through partnerships with development agencies, the private sector, and academic institutions, and to secure access to international climate finance such as the Green Climate Fund (GCF).



Mr. Ram Pd. Bhandari, Technical Advisor, DPNet Nepal

Monsoon 2024 in Nutshell

Mr. Ram Pd. Bhandari began his presentation by dedicating it to the lives lost during the Monsoon of 2024. Despite early preparations and forecasts, the devastation caused by this year's monsoon raised critical questions about the gaps in disaster preparedness and response. The monsoon, which lasted for 125 days from June 10 to October 12 (Jesth 28 to Ashoj 26), had been forecasted with a 35%-55% probability of above-average rainfall in many areas. The Monsoon Preparedness and Response Plan (MPRP), a 244-page document issued on Jesth 24 by NDRRMA, had instructed all 753 Palikas to develop and implement plans. However, significant failures in execution were evident when the first landslide incident occurred just five days later, on Jeth 29, in Sankhuwasabha.

Mr. Bhandari highlighted the importance of analyzing why the MPRP was not effectively implemented despite early circulation. His analysis, based on cross-referencing online news sources and Department of Hydrology and Meteorology (DHM) forecasts, revealed capacity gaps and systemic weaknesses. For instance, many incidents in Morang occurred despite being labeled a yellow zone by the DHM, raising concerns about the accuracy and dissemination of data. Similarly, the landslide in Kaski that buried an entire family occurred despite warnings from neighbors, underscoring issues of public awareness and community preparedness.

A series of other incidents further illustrated systemic failures. For example, temporary shelters built after the Rukum West earthquake were washed away in subsequent floods, showing shortcomings in rebuilding efforts. In Simaltal, while the Ministry of Home Affairs issued a midnight vehicular ban following a DHM red alert, similar decisive actions were absent during the Jhyaple bus incident, which led to the tragic deaths of children. Likewise, in Dakshinkali, despite an 8-hour window between DHM warnings and the subsequent flooding, no preventive actions were taken, resulting in significant damage to lives and property.

Mr. Bhandari emphasized the need for addressing weaknesses in the Disaster Risk Reduction and Management (DRRM) Act 2074 (1st Amendment). He recommended creating concise, actionable implementation documents and improving coordination between agencies. He also urged greater investment in building infrastructure and enhancing disaster response capabilities, stressing the importance of learning from the gaps identified during the Monsoon of 2081 to ensure a more robust framework for disaster risk reduction in the future.

Hon'ble Home Minister, Ramesh Lekhak, Ministry of Home Affairs

Remarks from Chief Guest

Hon'ble Home Minister Ramesh Lekhak began his address by extending his gratitude to the organizers of the Conference, acknowledging DPNet Nepal, NDRRMA, the Ministry of Home Affairs, and all other collaborating institutions for their efforts in bringing together key stakeholders to discuss disaster risk reduction. Minister Lekhak stressed the importance of continuous dialogue and coordination among stakeholders, highlighting a proposal made during the conference that suggested holding monthly discussions with Home Minister. He not only welcomed this idea but went further to suggest that such discussions should be extended beyond just one hour, advocating for more in-depth engagement. He expressed confidence in DPNet Nepal's ability to take the lead in coordinating these efforts and ensuring meaningful outcomes. Addressing the vital role of local communities, the minister highlighted that effective disaster response and mitigation start at the community level. He emphasized that while policies and frameworks are essential, real change happens when local communities are empowered and well-prepared. He noted that during disasters, the first responders are always the affected communities themselves, making it imperative to build their capacity and resilience. He also acknowledged the need for improved policies, early warning systems, and research-backed interventions to strengthen Nepal's disaster preparedness.

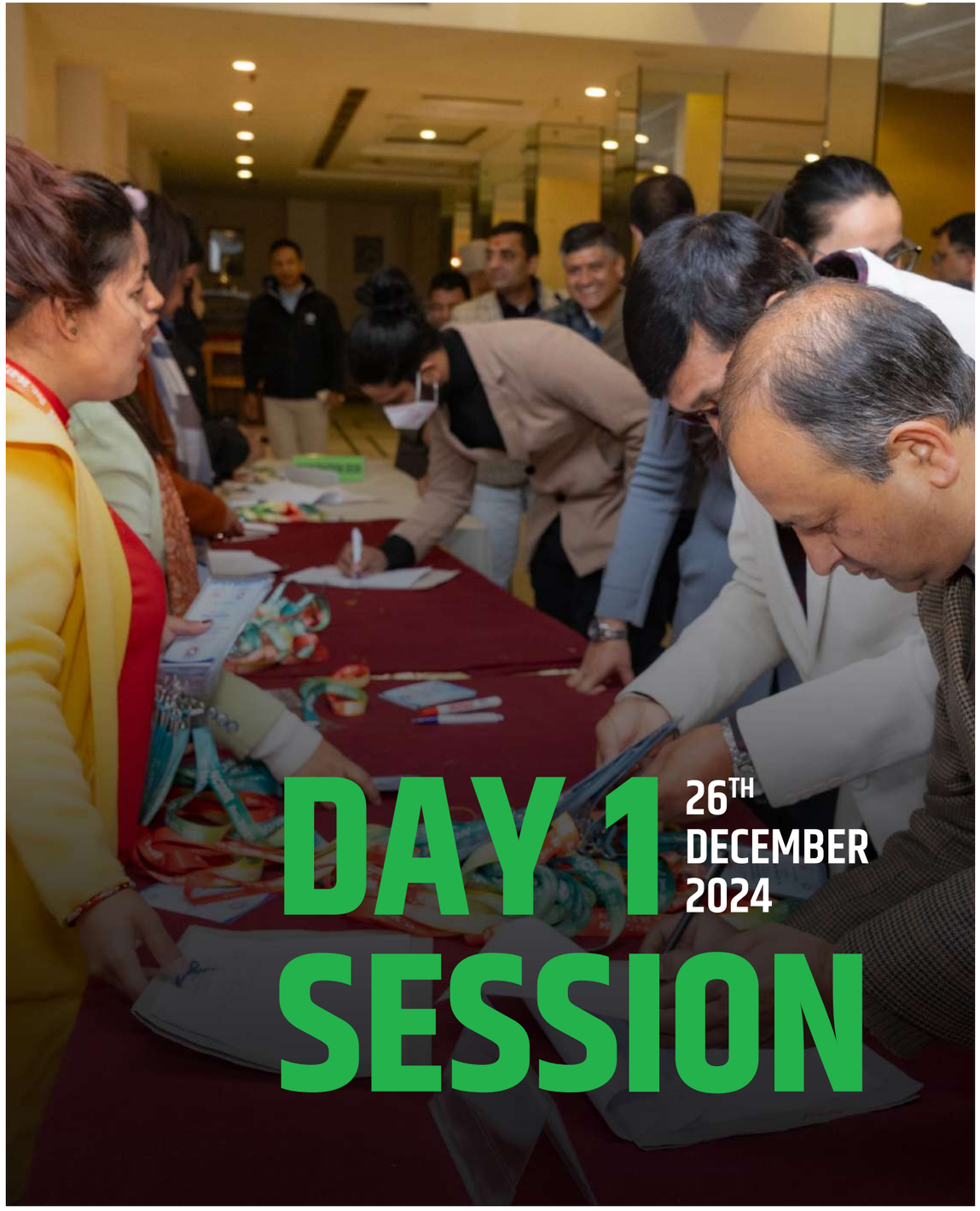
Furthermore, Minister Lekhak highlighted the importance of integrating global best practices and technological advancements into Nepal's DRR strategies. He emphasized that disaster resilience requires a combination of traditional knowledge, scientific research, and modern technology. He urged stakeholders to enhance collaboration, share experiences, and implement effective measures at both policy and grassroots levels. He also pointed out the necessity of investing in early warning systems, as timely information can significantly reduce disaster impacts. He further reiterated his commitment to strengthening Nepal's disaster risk management efforts. He called on all involved stakeholders including government agencies, non-governmental organizations, and international partners to work collectively to make Nepal more resilient. He assured that the government is committed to supporting and facilitating initiatives aligned with national priorities, emphasizing that DRR remains a key agenda for sustainable development and community well-being. He also wished the conference success and stated that the program schedule, presenters, and topics were engaging and worthwhile. He promised to attend the conference again, adjusting his schedule to make time for it.

Dr. Raju Thapa, Chair, 3rd NCDRR/DPNet

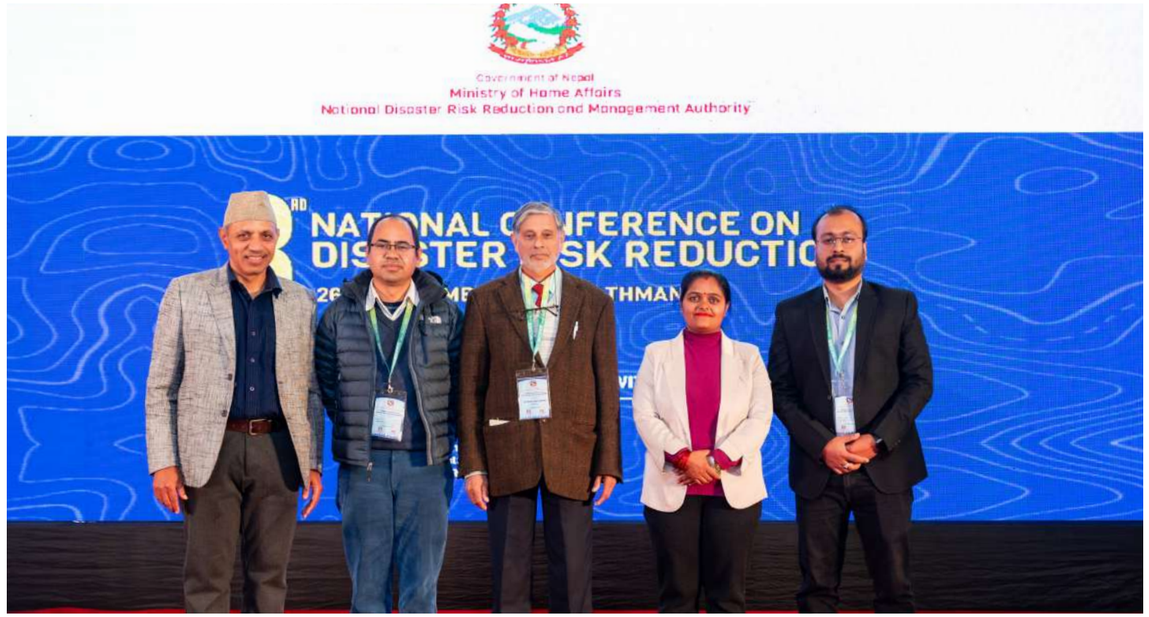
Remarks from the Chairperson

Dr. Raju Thapa opened his remarks by highlighting that DPNet Nepal, established 28 years ago, was formed to bridge the gap between government and non-government sectors in disaster risk reduction (DRR). With 181 member organizations, including NGO, INGO and UN agencies, DPNet has been actively working as the secretariat for the National Platform for Disaster Risk Reduction. He explained that the DPNet facilitates programs like this NCDRR to gather valuable suggestions and recommendations from various stakeholders. These inputs are then shared with the respective stakeholders to improve disaster preparedness and risk reduction efforts in Nepal. Dr. Thapa emphasized the importance of these consultations in creating a unified understanding of DRR challenges and solutions, particularly when representing Nepal in international forums such as the Asia-Pacific Ministerial Conference on Disaster Risk Reduction (APMCDRR) and the Global Platform for Disaster Risk Reduction (GPDRR).

Dr. Thapa also noted that the insights gathered during this conference will help develop official statements and position papers that reflect a cohesive national perspective on DRR. He emphasized that effective representation at global conferences requires careful preparation, and this conference plays a vital role in ensuring that Nepal presents a clear and impactful narrative on disaster management. Dr. Thapa also expressed gratitude to the Honorable Home Minister for his commitment to supporting DRR efforts. He promised that, through DPNet's virtual platform, voices from across the country will be collected and presented, and regular meetings with the minister will be organized to discuss and strengthen disaster management initiatives.



Technical Session I: Understanding Risk: Monsoon 2024 in Glance



Keynote Presentation

Hydro Meteorological Disasters in Monsoon 2024

Ms. Shanti Kandel, Senior Divisional Meteorologist, Department of Hydrology and Meteorology

Ms. Shanti Kandel, Senior Divisional Meteorologist at the Department of Hydrology and Meteorology (DHM), provided key insights into Nepal's 2024 monsoon season, which began on June 10 and lasted for 125 days, covering the entire country by June 24. Precipitation levels were exceptionally high, with Lumle Station recording the highest at 3,949.1 mm, and Jomsom receiving the lowest at 284.1 mm. This year's rainfall was among the highest since 1981, signaling an increase in hydro-meteorological event intensity. Major events included the July 7-8 rainfall, where Dodhara Chandani recorded 624 mm of rain in 24 hours, causing severe flooding across the Karnali and Sudurpashchim provinces, and a Glacial Lake Outburst Flood (GLOF) in Thame triggered by the collapse of Lake 1, affecting Lake 2's area. Additionally, extreme weather in September prompted Red alerts in 56 districts, with 25 stations breaking historical rainfall records.

During the Monsoon 2024 season, the Department of Hydrology and Meteorology (DHM) issued 127 daily flood bulletins and 250 weather bulletins, along with 10 special hydromet monsoon weather updates. A total of 9,740,771 mass SMS alerts were sent to the public, while 6,451 calls were received through NTC and 9,271 through Ncell. In total, over 30,000 calls were answered throughout the season, demonstrating significant public engagement with weather and flood alerts.

Disaster management efforts face several challenges, including record-breaking events in 14 districts, with increasing severity making them harder to manage effectively. Limited financial and technical resources have consistently hindered preparedness and response efforts. Further, the flooding and inundation in Kathmandu and central Nepal highlighted the need for effective preparedness and implementation of early action. Despite receiving general flood warnings, communities in Kathmandu reported a lack of localized risk information specific to their areas and were also unknown how to respond to those warnings. Additionally, gaps in coordination between authorities and local responders hindered timely and effective action. Besides, delays in disseminating early warnings reduce response efficiency, and unclear roles and responsibilities among organizations during critical lead times create significant gaps in coordination and action. A community survey results in Nakkhu Khola also revealed that significant portion of the population were not actively following weather forecasts, indicating a need for better outreach and education. Although early warnings were issued, some were delayed due to technical issues, hindering timely dissemination. However, on a positive note, the efforts of the DHM, local government and development partners, resulted in the successful piloting of impact-based forecasting in reducing the risks of the cloudburst event in Dodhara Chandani Municipality.

KEY TAKEAWAY MESSAGES

Resources – Enhancing DHM's forecasting capabilities with sufficient human, technical, and financial resources is essential for improving disaster preparedness.

Collaboration and Communication – Effective coordination among stakeholders and end users is crucial for timely and efficient disaster response

Implementing Early Action – Identifying, promoting, and implementing proactive measures can significantly reduce disaster impacts.

Localized, Impact-Based Forecasting – Developing region-specific forecasts with longer lead times improves preparedness and response strategies.

Enhancing Alert Systems – Expanding SMS coverage, minimizing alert dissemination delays, and utilizing tools like sirens and loudspeakers can enhance early warning effectiveness.

Addressing Communication Gaps – Strengthening communication channels ensures that critical warnings reach affected communities in a timely manner.

Public Awareness and Engagement – Encouraging the public to stay informed and monitor disaster alerts, especially under red or yellow codes, improves community readiness.

Government-Led Action Plans – Ensuring that households and organizations follow well-defined actions for each level of color-coded warnings minimizes disaster risks.

Community Outreach and Trust-Building – Conducting awareness campaigns helps communities understand and appropriately respond to disaster alerts.

Investing in Capacity Building – Strengthening disaster preparedness through training and resource development enhances overall resilience and response capabilities.

PRESENTATION 1

Geo-Hazards during Monsoon 2024

Mr. Shiva Baskota, Senior Divisional Geologist, Department of Mines and Geology

Dr. Shiv Kumar Baskota presented on the increasing frequency and severity of landslides during the Monsoon 2024, attributing them primarily to heavy rainfall, Nepal's diverse geostructures, and topography. He identified the Chure and Mid-Hill regions as highly vulnerable areas, with the Mid-Hill region experiencing greater socio-economic impacts due to its dense population. Dr. Banskota also highlighted how Nepal is facing significant challenges in landslide management due to its complex geological formations, making studies difficult. He also noted that poorly planned infrastructure projects, particularly road construction, have exacerbated landslide risks. Many settlements are unknowingly built on old landslide-prone areas, and a lack of detailed investigations leads to ineffective mitigation efforts, worsening the problem.

Dr. Baskota detailed initiatives by the Department of Mines and Geology (DMG), including the development of landslide susceptibility maps, drone-based damage assessments, and an AI-enabled early warning system app. However, he pointed out persistent challenges such as insufficient satellite data, logistical difficulties during monsoon seasons, and inadequate financial and human resources. He stressed the importance of transitioning from reactive responses to proactive risk assessments and mitigation strategies, emphasizing the need for better coordination among stakeholders to avoid duplicative efforts. Besides, Dr. Baskota also shared the experiences of DMG in conducting damage assessments in the areas of Tikabhairab, Panauti and Nallu in 2024 Monsoon.

KEY TAKEAWAY MESSAGES

Understanding Landslide Triggers – The increasing frequency and severity of landslides are primarily driven by heavy rainfall, Nepal's diverse geostructures, and topography, emphasizing the need for region-specific risk assessments.

Vulnerability of Specific Regions – The Chure and Mid-Hill regions are particularly susceptible to landslides, with the Mid-Hill region facing greater socio-economic impacts due to higher population density.

Impact of Poor Infrastructure Planning – Unplanned infrastructure projects, especially road construction, have significantly contributed to landslide risks, highlighting the need for sustainable engineering practices.

Advancements in Landslide Monitoring – The Department of Mines and Geology (DMG) has made progress in developing landslide susceptibility maps, drone-based assessments, and AI-enabled early warning systems, showcasing the role of technology in disaster risk reduction.

Persistent Challenges – Insufficient satellite data, logistical difficulties during monsoon seasons, and resource constraints continue to hinder effective landslide monitoring and response.

Proactive vs. Reactive Approaches – A shift from reactive responses to proactive risk assessment and mitigation is essential for reducing landslide-related disasters.

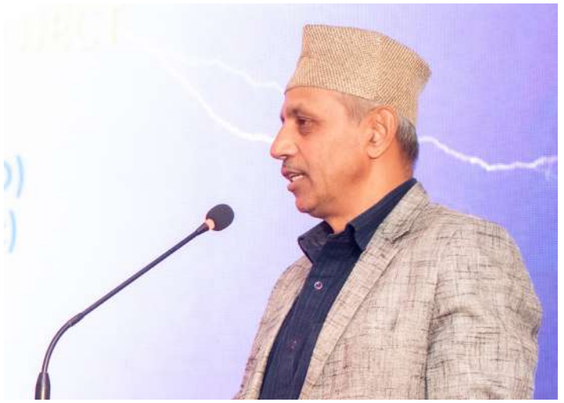
Need for Better Coordination – Strengthening collaboration among stakeholders can help avoid duplication of efforts and ensure more efficient disaster preparedness and response strategies.

Risk Awareness in Settlements – Many communities are unknowingly established on older landslide-prone areas, highlighting the importance of integrating geological studies into settlement planning.

Comprehensive Investigations – Landslide risk assessments must be thorough and data-driven to ensure that mitigation strategies are effective and sustainable.

PRESENTATION 2

Impact of Lightning & Deploying Lightning Warning System - A Pilot Project



Dr. Shriram Sharma, Chairperson, South Asian Lightning Network (SALNet)

Dr. Shriram Sharma, Chairperson of SALNet, provided key insights into the growing lightning risk in Nepal, which ranks as the 14th highest lightning-prone zone globally. Lightning has become one of the leading causes of natural disaster-related deaths in the country, with the highest frequency of occurrences during the pre-monsoon (March-May) and post-monsoon (June) periods, which are responsible for significant loss of life. The increase in lightning events is directly linked to climate change, making the need for adaptive measures more urgent. Makwanpur District experiences the highest impact from lightning, with the Terai region seeing peak lightning activity at night, while the Hilly regions face the most frequent lightning strikes between 4-6 PM.

The impacts of lightning are devastating, causing loss of life, injuries, and widespread disruption to daily activities. Rural households suffer significant economic losses, as lightning often kills livestock, which is essential for their livelihood. Infrastructure is also heavily affected, with lightning causing damage to electrical grids and widespread destruction of electronic equipment, disrupting communication and essential services. To address these challenges, SALNet, with support from People in Need, is set to introduce Nepal's first Lightning Early Warning System (LWS) by Baisakh 2082. The system will provide a 15-minute warning before lightning strikes, allowing individuals to take precautions and seek safety. It works by detecting electrical charges within clouds and triggering a siren to alert the community. The pilot project will be implemented in Rakshirang Municipality, Makwanpur District, one of Nepal's most lightning-prone areas, with plans to expand the system to other areas in the future.

Currently, the Department of Hydrology and Meteorology in Nepal has been providing information after the lightning. As of now, there is no well-established lightning early warning systems in the country. This gap highlights the urgent need for such systems, as well as increased public awareness to improve disaster preparedness. Dr. Sharma emphasized the importance of public awareness campaigns to ensure that the new warning system reaches as many people as possible, empowering them to take timely action and reduce the risks associated with lightning strikes.

KEY TAKEAWAY MESSAGES

Need of Awareness and Public Outreach – Raise awareness on lightning safety, such as taking shelter and avoiding tall structures.

Investing in Strengthening Infrastructure – Use lightning protection systems in buildings and infrastructure to reduce damage.

Investing in Monitoring – Better data collection and monitoring tools can improve forecasting and risk management.

Developing Safety Protocols for Vulnerable Areas – Establish clear safety measures for high-risk places like schools and hospitals.

Enforceing Regulations – Implement building codes focused on lightning protection.

Integrated Risk Management – Incorporate lightning risk reduction into broader disaster management strategies.

CHAIR

Prof. Dr. Bishal Nath Upreti, President, Nepal Centre for Disaster Management

Highlighting the importance of Early Warning Systems (EWS), Prof. Dr. Bishal Nath Uprety emphasized that disaster preparedness and response must be strengthened through systematic efforts. While the implementation of EWS has begun, its effectiveness depends on timely decision-making and efficient execution. He pointed out that delays in response, even by a few minutes, can have significant consequences.

Further addressing disaster-prone areas, Prof. Dr. Uprety acknowledged the necessity of well-equipped training centers and the importance of assessing high-risk locations. The discussion emphasized that certain regions face recurrent hazards, necessitating immediate interventions and strategic planning. Additionally, he underscored the need for thorough surveys and data collection to identify vulnerable communities and ensure targeted disaster risk reduction measures.

Prof. Dr. Uprety emphasized the commitment to enhancing Nepal's disaster preparedness by integrating EWS, strengthening infrastructure, and promoting community engagement.

Spotlight Session I: Inclusive Approach in Climate Change & DRR

Ms. Bandana Rana, GESI Officer, Centre For Disaster Management Studies

Ms. Bandana Rana delivered a presentation on the importance of inclusive strategies in addressing climate change and disaster risk reduction (DRR). She highlighted the disproportionate impact of disasters on vulnerable groups, including women, children, persons with disabilities (PWDs), and marginalized communities. Citing international studies, she noted that women and children are 14 times more vulnerable to disasters than men, while PWDs face a fourfold higher risk of death during such events. She linked the increasing frequency of extreme weather events to climate change, illustrating how vulnerable populations face compounding risks.

Ms. Rana emphasized the economic and social repercussions of disasters, such as the projected 160 million women and girls pushed into poverty by 2050 due to climate change. Additionally, she shared alarming statistics on the lack of inclusivity in disaster planning—only 15% of Local Adaptation Plans (LAPAs) address the needs of PWDs, and many early warning systems fail to reach marginalized communities effectively.

Despite the critical intersection of climate change and women's rights, global funding for initiatives addressing both remains exceptionally low at just 0.01% (UNDP, 2016). This financial shortfall, combined with limited gender-responsive budgeting and Disaster Risk Reduction and Management (DRRM) knowledge at local levels, constrains effective interventions. Furthermore, women are underrepresented in DRR policy structures across all governance tiers, and their leadership in humanitarian responses often goes unrecognized. The lack of disaggregated data hinders targeted disaster response and recovery, while existing Information, Education, and Communication (IEC) materials fail to accommodate diverse needs, perpetuating inclusivity gaps..

KEY TAKEAWAY MESSAGES

Inclusive Climate Financing – Ensure Climate and Loss & Damage funds address the disproportionate impact on marginalized groups, especially women with disabilities.

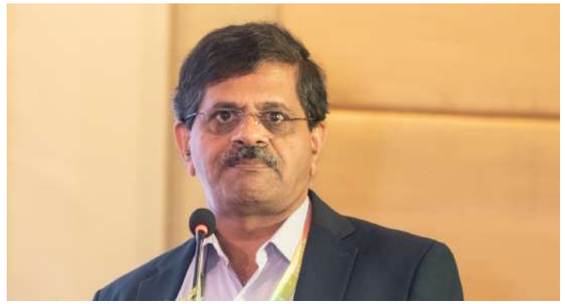
Meaningful Engagement – Promote inclusive participation of youth, PWDs, Indigenous groups, and local communities in decision-making.

Putting Inclusion into Practice – Implement gender equality and inclusion principles from global and national frameworks (SFDRR, SDGs, and Nepal's policies).

Women's Leadership – Resilience Empower women leaders to lead DRR, climate justice, and resilience-building efforts.

Localization – Localize GESI-responsive strategies with adequate resources and effective implementation.

Analyzing the Impact of Monsoon Disasters on Nepalese Agriculture



Dr. Hari Vajja, Emergency Specialist, UN FAO

Dr. Hari Vajja analyzed the impact of the monsoon disaster on agriculture in eastern Nepal (September 26–28, 2024) using CHIRPS Rainfall Data, Sentinel-2 Global Land Use Data (10m resolution), FAO flood data, and administrative data from Nepal's National Geo-Portal. A Flooded Crop Area Map at the municipality level was shared with the Ministry of Agriculture for validation.

An assessment visit conducted from October 28–30, 2024, revealed that floodwater stagnation in fields ranged from a few days to over 10 days. The impact on crop yield was most significant for crops in the flowering stage, while crops in earlier or later growth stages showed little to no yield loss. Satellite-based analysis using the Modified Radar Vegetation Index (mRVI) from Sentinel-1 satellite data allowed for the identification of flood-damaged crop areas and the assessment of crop growth stages from June to November 2024.

For Identifying Damaged Crop Areas, it has established two criterias:

- **Criteria 1:** Flowering stage (75–85 days after transplantation) was identified as most vulnerable. Crops transplanted between July 11–20, 2024, were in the flowering stage during the flooding (September 27–October 10, 2024).
- **Criteria 2:** Reduction in Radar Vegetation Index between September 11–30 indicated flood damage.

Based on these, 75 municipalities were identified as affected, with Saptari District showing significant damage to flowering stage crops. The use of Sentinel-1 radar data proved advantageous, as it is unaffected by cloud cover, providing accurate assessments even during monsoon conditions. These findings underscore the importance of targeted interventions and adaptive strategies to protect crops and support Nepal's agriculture amid increasing monsoon-related disasters.

Five Lessons to be Learned from the Monsoon 2024 Disasters

Dr. Dilli P. Poudel, Urban & Disaster lead Southasia Institute of Advanced Studies (SIAS)

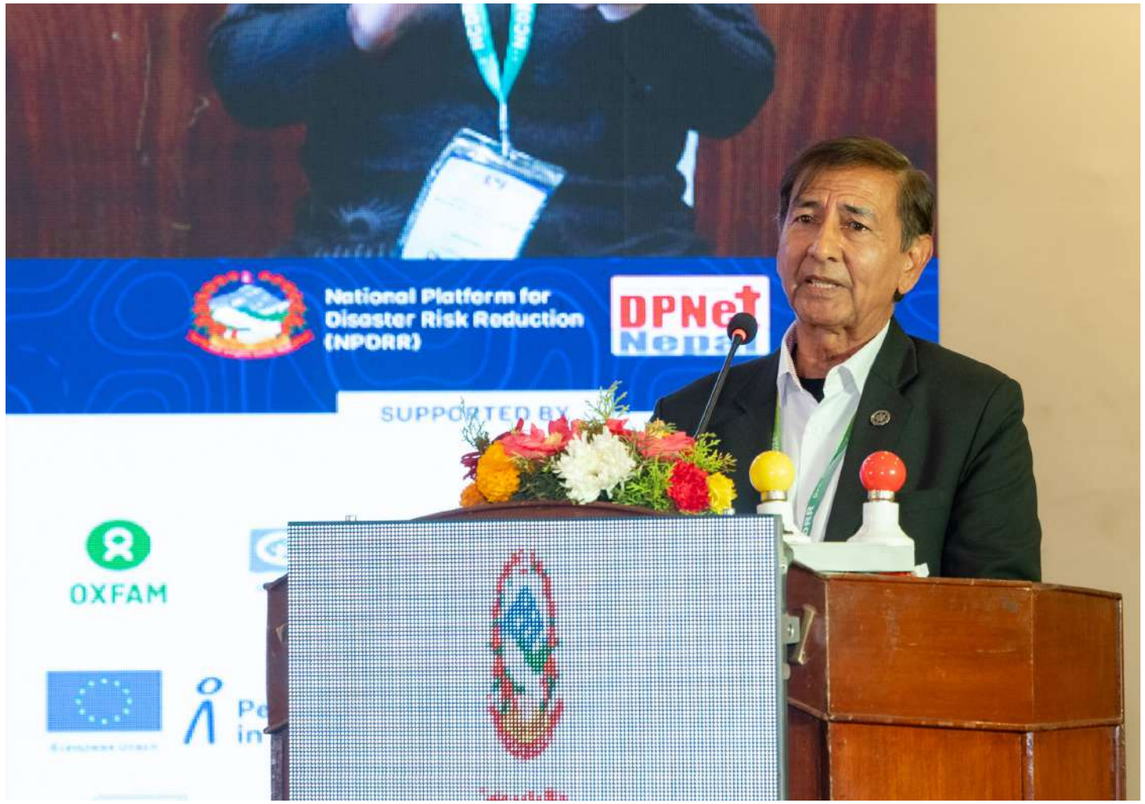
Dr. Dilli P. Poudel highlighted key lessons from the 2024 monsoon disaster, stressing Nepal's urgent need for risk management. With 99% of wards exposed to hazards, disaster preparedness is essential. The disaster (Sept 26–28) hit Bagmati Province hardest, with over 200 mm of rain in 24 hours, affecting 65,380 hectares of farmland and causing 46.6 billion NPR in economic losses.

A major lesson is preventing engineered disasters. Ignoring local geography and geology has led to avoidable losses. Incorporating local knowledge, regulating settlements, and controlling construction in landslide-prone areas are crucial. The June 21 Melamchi flood showed the need for early risk assessments, which could have reduced damage.

Institutionalizing risk management in government and local bodies is vital. Strengthening risk systems and integrating them into daily operations will improve disaster response, ultimately reducing future risks and protecting lives and livelihoods.

Key Takeaway messages:

- **Lesson no. 1** – avoid engineered disasters
- **Lesson no. 2** – regulate haphazard settlement expansion and excavation
- **Lesson no. 3** – control haphazard construction in the Mid-hills
- **Lesson no. 4** – conduct risk analysis
- **Lesson no. 5** – make risk management as an institutional instinct



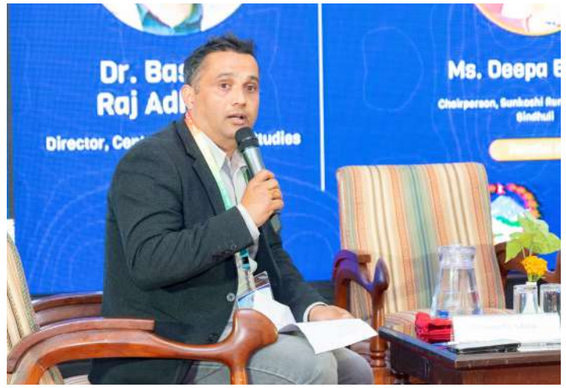
Dr. Meen Bahadur Poudyal Chhetri, Advisor of DPNet-Nepal

Highlighting the critical need for disaster preparedness, Dr. Meen Bahadur Poudyal Chhetri emphasized that disasters, particularly those related to water-induced hazards, require proactive planning and intervention. Reflecting on past disasters, he referenced significant flood events, stressing that local governments must take the lead in addressing these recurring challenges.

Dr. Chhetri highlighted the need for well-planned infrastructure, warning that informal settlements near rivers and poorly designed buildings increase disaster risks. He pointed out that homes, roads, and weak structures are becoming more vulnerable and said that before talking about smart cities, these basic issues must be fixed.

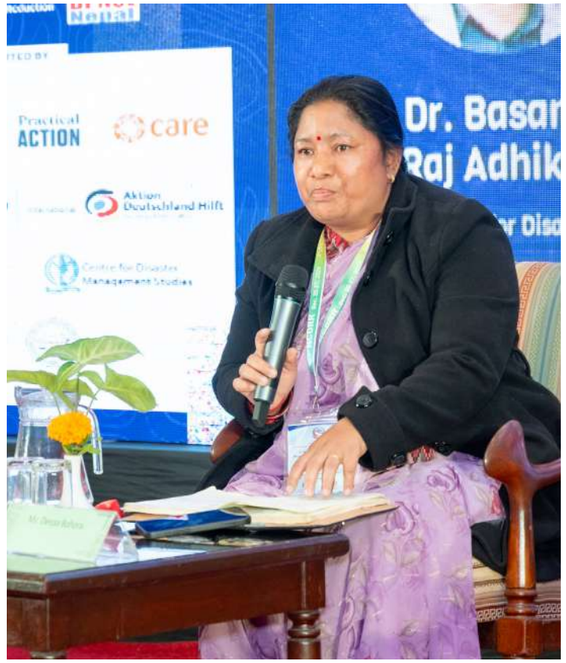
He also stressed that disaster risk reduction should go beyond planning and research—it must be put into action. He urged a shift from just talking about problems to finding real solutions, emphasizing the need for preparedness and proper execution to reduce future disasters.

Panel Discussion I: Monsoon Experience from Local Government



Chair: Dr. Basanta Raj Adhikari, Director, Centre for Disaster Studies, Tribhuvan University

The discussion began by addressing the impact of disasters in different regions of Nepal. Areas like Roshi and Sunkoshi Gaupalika are prone to floods, while Bheri Nagarpalika is particularly vulnerable to earthquakes. Local communities have faced severe difficulties, including disruptions to transportation and the loss of infrastructure.



Ms. Deepa Bohora, Chairperson, Sunkoshi Rural Municipality

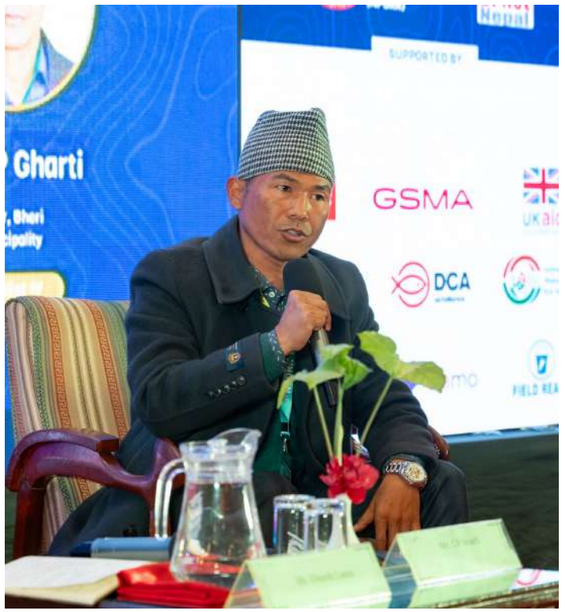
- **Pre-existing Vulnerabilities and Impacts:** Ms. Bohora shared that the damage caused by the recent disasters wasn't entirely unexpected, as risks had been present for a long time. This is not a sudden change; it has been a growing concern over time. Local governments have made significant efforts to address climate-related issues, but there is a feeling that more could have been done.

- **Sunkoshi Rural Municipality** has faced significant damage to houses, schools, agriculture, and water supply due to disasters, and efforts are underway to address these losses. 13 schools were damaged and 17 km of the BP Highway was severely affected. 120 irrigation canals were completely destroyed. 10,279 ropani of agricultural fields were destroyed by the flood. 43 drinking water systems were damaged. We are working on this currently. 420 houses were fully damaged and 131 houses were partially damaged.

- It's important to consider those affected **indirectly** by disasters, such as people who couldn't receive timely **medical treatment** due to disrupted services. These individuals should also be counted as **disaster casualties.**

Mr. Dinesh Lama, Chairperson, Roshi Rural Municipality

- **Mr. Lama** discussed the flooding and landslides in Roshi Rural Municipality, which were particularly severe in Mid-Asoj.
- **Casualties and Injuries:** 12 people died, and more than 35 were injured, out of which 3 are still receiving treatment; 2 at Dhulikhel Hospital and 1 at Teaching Hospital. As per the government's announcement to provide free treatment to flood and landslide victims, treatment has been provided under that provision.
- **Infrastructure Damage:** Over 504 houses were completely destroyed, and another 911 sustained partial damage. 2,544 households faced agricultural losses, **Damage to Bridges:** One of the bridges was washed away by the floods, For **2 weeks** transportation, electricity, and communication cannot be provided. We have gone through this situation and are now returning to normal.
- **Search and Rescue:** The Nepal Army provided crucial support in search and rescue efforts. Helicopters were used to rescue people and deliver relief supplies. **Save the Children** and other organizations have been instrumental in rebuilding efforts, including the construction of 30 temporary housing in ward number 2.
- **Emergency Relief:** Before Dashain, relief efforts, including the distribution of essential supplies, were completed for most affected families. Over 50% of affected individuals have been registered in the NDRRMA portal for assistance.



Mr. CP Gharti, Mayor, Bheri Municipality

- **Mr. CP Gharti** shared insights on the aftermath of the November 3, 2023 earthquake in Bheri Nagarpalika, which caused significant loss of life and property.
- **Casualties:** The earthquake led to the death of 154 people. Local authorities, security organizations, and disaster management teams were quick to respond.
- **Disaster Management Improvements:** Mr. Gharti pointed out that while significant relief efforts were made, there is still a need for better institutional mechanisms, such as the establishment of a dedicated Ministry of Disaster and Emergency Management to streamline responses. He emphasized the importance of strengthening NDRRMA and ensuring DDA for more effective planning and response.
- **Challenges in Infrastructure Reconstruction:** There is a need for more systematic coordination to prevent further delays. The DDA must be empowered to define the scope of reconstruction and allocate budgets accordingly.

QUESTIONS AND ANSWERS IN THE SESSION

Q1: In the context of the flood-affected Palikas, how many "dodgers" are present, what is the nature of road construction in these areas, and how many of the roads are properly engineered? Additionally, how many crushers are operating, are they situated near rivers, and have they been granted the necessary permissions to operate? Could these factors be among the major drivers of the damages observed during the 2024 monsoon?

Q2: Given that local governments now have significant decision-making authority, is it justifiable to place the blame solely on the federal government for the current issues? Considering that resource extraction in upstream municipalities can negatively impact downstream communities, shouldn't there be greater coordination among adjoining municipalities? How can local governments collaborate to manage shared resources—such as water sources, mines, and other assets—more sustainably and equitably? Shouldn't joint risk mitigation plans, mutual funds, and resource pooling mechanisms be developed and implemented to address these challenges collectively?

Q3: Given past examples like the Koshi Flood, where recovery plans were prepared and reconstruction was completed within a year, why hasn't federalism functioned effectively in the case of the Jajarkot Earthquake? Which level of government—central, provincial, or local—should be held accountable for the delayed response? While the Provincial and National Disaster Response Frameworks define activation levels and outline the responsibilities of each tier, what types of disasters should be managed by the central government, the province, or the local Palikas? Despite these frameworks, why has their implementation been lacking? Could it be that the central government often overlooks these responsibilities, while local Palikas lack the resources to lead recovery efforts on their own?

Q4: Although the Department of Hydrology and Meteorology (DHM) has circulated early warning messages and information centers are present in local Palikas, how are these warnings being communicated to households at the community and household level?

Q5: Instead of blaming engineering processes, shouldn't we be questioning our planning decisions—like building schools and hospitals in floodplains? If engineers are forced to design in high-risk areas, is it fair to hold them responsible when floods destroy these structures? Who should truly be accountable, and can we commit to avoiding such risky development in the future?

Q6: Have you developed a roster of Volunteers in your Palika? How are you managing it?

Answers

Sunkoshi Rural Municipality

- Sunkoshi has been coordinating with the Red Cross Volunteers while the Elected Representatives have also been working continuously as volunteers.
- Besides the losses near the flood plains, Sunkoshi had to bear losses in the areas very far from the flood plains. The flash floods and river originating from the Chure has been imposing severe risk. While rivers like Roshi and Koshi, along with engineering practices, are often blamed, the real drivers behind these issues are unprecedented weather events and the growing impacts of climate change.
- Even Sunkoshi has schools that are nearby to rivers. People with Intellectual Disability are studying in such schools. Sunkoshi is determined to work for the risk reduction measures.
- There were similar such flood incidents in SunKoshi in 1984, however, the probability of such reoccurrences were undermined and now that it has hit again after 40 years, the Rural Municipality is committed to be proactive in the coming days.
- Disaster not only destroy but also gives a valuable lesson and the important thing is to understand this and act accordingly.
- There are dodgers, crushers in my rural municipality. It has been observed that developing roads have been the foremost priority apart from the education, disaster risk management and so on. Our Rural Municipality has sections of BP Highway and the region also falls in fragile Mahabharat region. For the effective service delivery, there has been a high demand of proper road infrastructure. However, it is very important to consider development and disaster together. Various structural interventions have to be developed. We have learnt from this and look forward to working with the stakeholders in the coming days.

Roshi Rural Municipality

- The suggestions and recommendations were highly welcomed and the Rural municipality is looking forward to integrate them
- Proper Risk Assessment and Analysis will be carried out before implementation.
- Relocation of Hospitals, in collaboration with World Health Organization, semi-permanent hospital is being developed.

- 13km section of BP Highways was obstructed by the floods despite being developed by the top designers.

- Local government has been working with the mandate of the public. When the public demands and service delivery needs are focused on the transportation, the Rural Municipality has to work according to it. Otherwise, there are issues of performances and service delivery. However, the local government is in the process of learning and is committed to working

- Working in the scattered communities of hilly regions is challenging. Relocation should be guided by proactive strategies; otherwise, providing facilities to just a few households in sparse settlement could become costly and is also susceptible to risks.

- Earthquake has been resulting in the loss of public and private buildings. However, flooding and landslides have been resulting in the loss of agricultural lands, irrigation canals and livelihood opportunities. It is not just about reconstruction, but should also prioritize to restore the livelihood and infrastructure ecosystem.

- There is a provision of NPR Three Lakhs for the reconstruction of Houses and NPR Fifty thousand for temporary Shelters. However, how will these resources be fulfilled and by which tiers of government is still unclear. Hence, a collaborative approach is essential.

Bheri Municipality

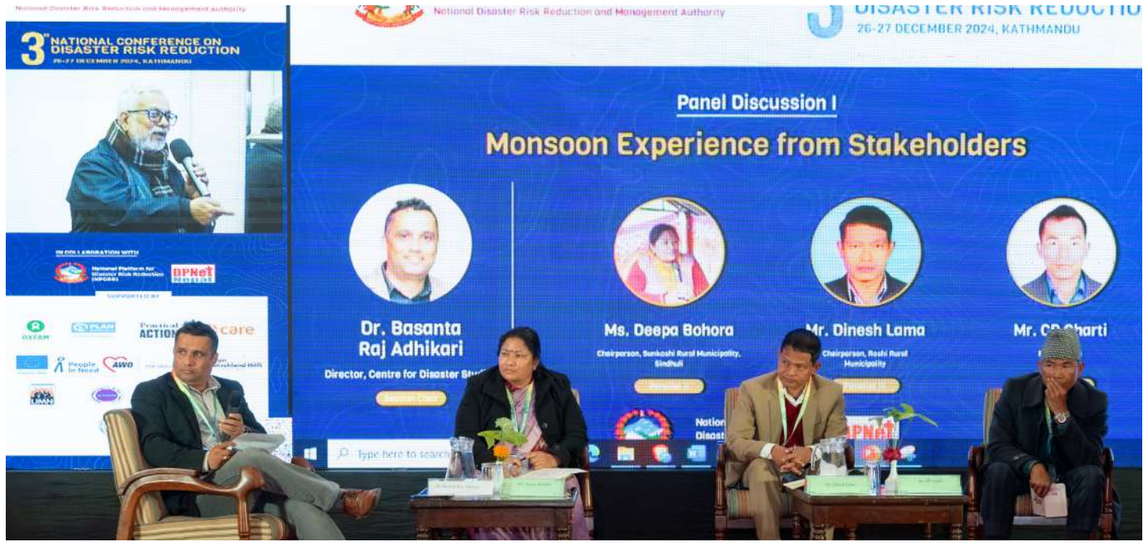
- Without assessing and configuring IEE, EIA and risk assessment, it is not advisable to implement any intervention. We are bound to face disasters unless these components are integrated with the development practices.

- Proactive Public Procurement Act, institutional enabling environment and Fast Track Processes are essential to meet up with the development needs and people's expectation.

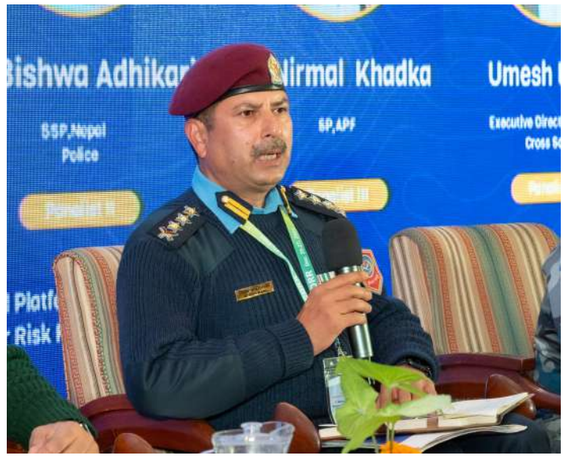
- Not just volunteers, but well managed volunteers are essential. Besides, Community are the first responders and hence community should be sensitized with basic skills and knowledge.

- Hazard Specific Training sessions should be made available according to the context.

- Information Dissemination is made through Radio/FM, Local Disaster Management Committees, official communication with Wards, Toles and different channels.



Panel Discussion II: Learning From Monsoon Response Experiences

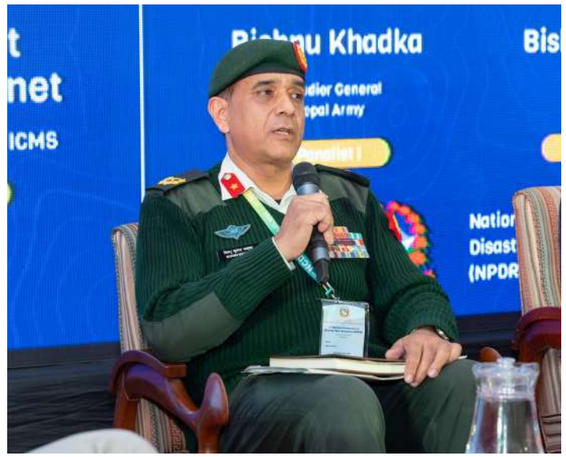


SSP Bishwa Adhikari, Nepal Police

SSP Bishwa Adhikari discussed the Nepal Police's critical role in disaster management and its strong connection with citizens. The police not only prevent and investigate crimes but also manage natural and man-made disasters, fostering public trust and safety. Unlike many countries where rescuers prioritize their own safety, Nepal Police personnel work tirelessly, often risking their lives, to protect others during disasters.

A significant challenge highlighted was the lack of disaster-specific training and resources. For example, during the recent monsoon, helicopters could not be deployed due to financial constraints. To address such limitations, there is a pressing need to provide life-saving equipment like drones and life jackets, expand the number of police stations, and enhance access to helicopters. SSP Adhikari emphasized the importance of individual and community-level safety awareness, which the police actively promote through training and evacuation drills.

SSP Adhikari also addressed the issue of integrating differently-abled individuals into disaster management systems. Early warning mechanisms must be made inclusive through national planning and targeted policies. He stressed that planning must ensure no one is left behind, particularly individuals with disabilities, who require tailored support during disasters. Furthermore, SSP Adhikari noted ongoing efforts to increase the representation of women in the Nepal Police to 20%, which is essential for addressing the specific needs of female victims in disaster scenarios.



Brigadier General Bishnu Khadka, Nepal Army

Brigadier General Bishnu Khadka emphasized the Nepal Army's nationwide presence and effective use of limited resources for disaster preparedness. While traditionally focused on rescue and relief, the army is increasingly involved in risk reduction through community awareness programs, educating students from grade eight and above on disaster risk.

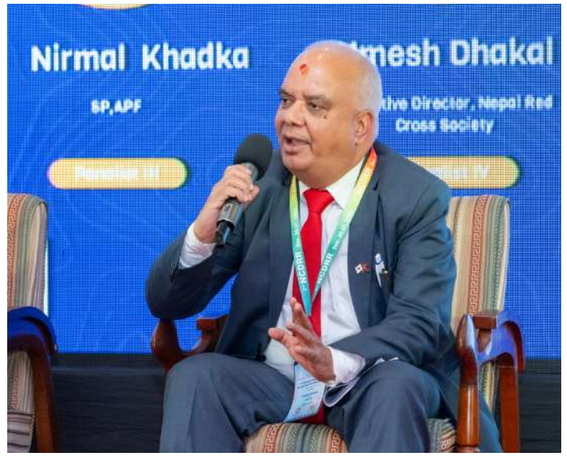
Beyond immediate relief, the army supports reconstruction. Specialized search and rescue units in Sindhuli and Chitwan also train personnel year-round. Khadka stressed the need to distinguish trained personnel from specialized experts, as not all soldiers are fully equipped for disaster management.

During monsoons, the army follows recommendations from specialized units to pre-position personnel and equipment, including helicopters, in strategic locations. Despite resource constraints, their preparedness helps minimize disaster impact. However, challenges remain in strengthening coordination and addressing misconceptions about their role in disaster management.

SP Nirmal Khadka, Armed Police Force (APF)

SP Nirmal Khadka provided insights into the Armed Police Force's pre-disaster training and resource management. He explained that extensive training programs are conducted ahead of each disaster season, such as fire-extinguishing training before the dry season and monsoon-specific preparedness for flood response. For Monsoon 2024, 2,700 trained personnel were deployed across various units.

Despite these efforts, resource limitations significantly hindered their response capacity. For instance, the Prahari Baal unit in Kathmandu had only three motorboats, which were inadequate for large-scale disaster responses. Although NDRRMA supported the efforts by deploying additional boats, challenges persisted in managing resources effectively. SP Khadka also highlighted the importance of hazard mapping and advanced planning, which, despite being conducted, did not fully align with the actual events of the monsoon.



Umesh Dhakal, Nepal Red Cross Society

Umesh Dhakal shared the Nepal Red Cross Society's extensive experience in disaster management. As a leading humanitarian organization, the Red Cross has evolved from focusing solely on relief to encompassing all stages of disaster management. With a network of 100,000 volunteers nationwide, the Red Cross conducts year-round awareness campaigns and collaborates closely with local governments to ensure effective pre-monsoon planning and preparedness.

Dhakal emphasized the importance of community-level awareness and preparedness, noting that resources alone cannot achieve significant impacts without individual and household engagement. He cited the 2015 earthquake in Bheri Nagarpalika as an example, where most organizations withdrew after initial relief efforts, leaving the Red Cross as one of the few active entities during the recovery phase. The organization's ability to mobilize international resources ensures continuity in disaster response, but sustained efforts at the local level remain crucial.

Inclusion was a recurring theme in Dhakal's remarks. He described efforts in Bardiya to assess and address the needs of differently-abled individuals during disasters. However, he stressed that local initiatives must be complemented by national-level policies and accountability to ensure comprehensive inclusivity.

QUESTIONS AND ANSWERS IN THE SESSION

Q: Can disabled individuals access existing early warning systems? Can security organizations do anything to improve this accessibility?

Chair
This issue should be approached from both an academic and policy perspective. It requires thorough research, as well as policy adjustments to ensure accessibility for individuals with disabilities.

Mr. Bishwa Adhikari
This is a critical and alarming issue that demands attention at the national level. Planning must be done to make early warning systems accessible for individuals with disabilities. While mass communication is typically done through various platforms, there is a need to explore how we can specifically incorporate people with disabilities into the early warning system. This should be addressed through national planning.

Mr. Umesh Dhakal
Inclusion is key. For example, in Bardiya, efforts have been made to assess risk and vulnerability for people with disabilities, which allows for pre-identification of their needs. Local-level efforts are important but not sufficient on their own. The national government must be held accountable for ensuring that early warning systems are fully inclusive and accessible to all.

Q. Women Integration In Security Force- How Is Women Involved In Rescue, Relief And Response?

Mr. Bishwa Adhikari, SSP, Nepal Police
Integrating women into security forces, especially in rescue and relief operations, is essential, but it is important to recognize the physical limitations that women may face in certain specialized roles. Some rescue positions require physical strength, and the demanding nature of these tasks may not always be suitable for everyone. However, it's crucial that women are not excluded from these efforts. The goal should be to ensure that rescuers are adequately prepared, regardless of gender, to perform their tasks effectively without putting themselves at risk of needing rescue. This will increase the likelihood of success and ensure a safer and more efficient response during disasters.

Mr. Bishwa Adhikari, SSP, Nepal Police
Currently, women make up 12% of the Nepal Police force, and efforts are underway to increase this representation to 20%.The presence of more female officers is essential, particularly in handling cases involving female victims, who are often more vulnerable in disaster situations. To effectively address these needs, there is a goal of increasing female representation in the police force.

Q. Why are Security organizations themselves at high risk?
Security organizations themselves face high risks, particularly in areas like Dodhara, where only one motor boat is available for disaster response. While disaster management efforts are supported by good training and resources, the lack of adequate equipment, such as boats, remains a significant challenge.Collaboration with multiple stakeholders is essential to address these issues and strengthen the overall response capabilities.

Q. Why did buses continue to travel on the Muglin Highway despite the highway being at risk of landslides due to excessive rainfall, which resulted in significant losses and damages?

On the first day, the buses were stopped, but despite the rainfall, they continued to travel, resulting in damage and loss.

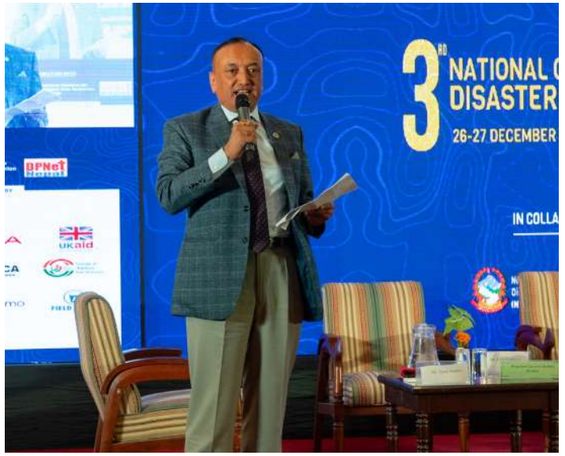
Suggestions for Improved Disaster Management

1. **National Response Framework Implementation:** The National Response Framework should be adhered to, as demonstrated during the 2014 earthquake. Strengthening coordination among security organizations is crucial to ensure the equitable distribution of resources. The lack of coordination often leads to some areas being better equipped than others. Understanding the disaster's impact in advance will help deploy the appropriate organizations to affected areas. Response efforts must align with the established framework, rather than being carried out arbitrarily.
2. **Pre-Deployment Briefing and Hazard Mapping:** A comprehensive briefing about the affected area must be conducted before deploying personnel, which includes hazard mapping to assess risks accurately. This preparation ensures that resources and manpower are allocated effectively and strategically for maximum impact.
3. **Resource Management Among Security Organizations:** The three primary security organizations should independently manage and organize their own budgets for disaster events, rather than relying on external funding requests. Pre-allocated, pre-managed budgets will streamline response efforts, minimizing delays during urgent situations.
4. **Accredited Training Programs (Khaka):** Implement accredited training programs with international recognition to ensure that personnel are well-prepared with the necessary skills for disaster response. These programs should follow standardized protocols and be regularly updated to meet evolving challenges and needs.

5. **Red Cross and Local Government Collaboration:** Fast-Track Implementation: The collaboration between the Red Cross and local government plays a key role in ensuring faster, more efficient disaster response. This partnership should be prioritized for smooth coordination and effective relief efforts during crises.

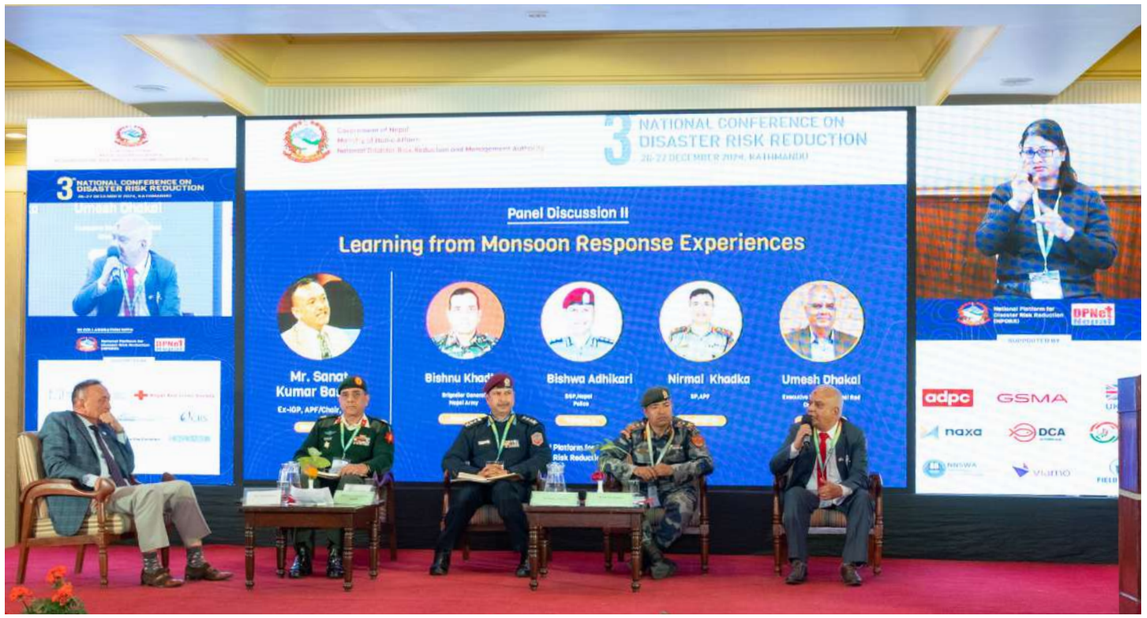
6. **Improved Forecasting and Impact Assessment:** While forecasts were made, the full extent of the impact was not immediately clear. It is crucial to enhance the accuracy of forecasting to better prepare for potential consequences and reduce the risks associated with disasters.

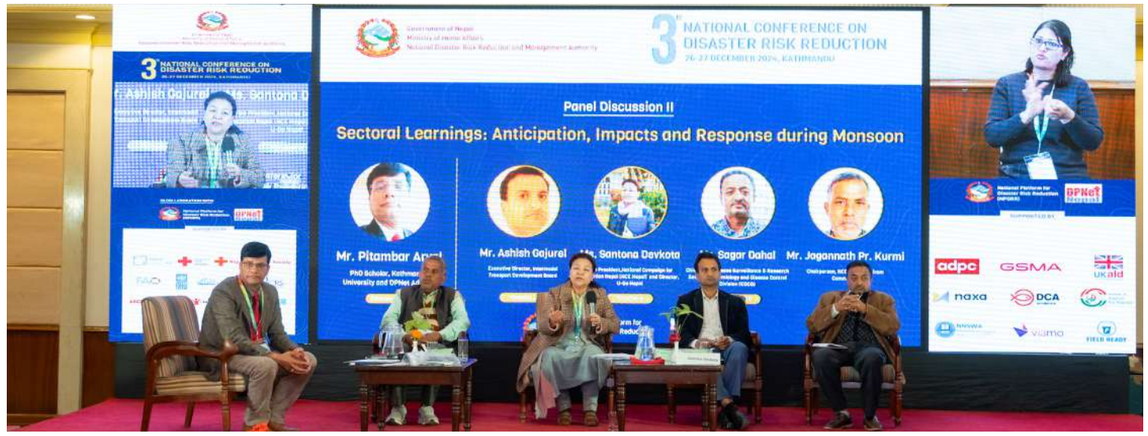
7. **Inclusive Disaster Management for Differently Abled Populations:** A committee should be developed to focus on inclusive disaster management, ensuring that early warning systems and timely actions are accessible to differently-abled populations. This would help ensure no one is left behind in disaster preparedness and response.



Chair-Ex-IGP Sanat Kumar Basnet, Chairperson, ICMS

Mr. Sanat Kumar Basnet reiterated that disasters are an ongoing process and cannot be entirely prevented, emphasizing the need to focus on preparedness and resilience to minimize damage. He highlighted the proactive role of security agencies in disaster management, ensuring constant readiness. Addressing concerns raised during the discussion, he acknowledged participants' questions and assured further study. He suggested forming a dedicated committee to integrate new strategies into disaster management frameworks while noting that some concerns might already be addressed in existing reports, encouraging a review of past findings.





Panel Discussion III: Sectoral Learnings: Anticipation, Impacts and Response during Monsoon

Mr. Sagar Dahal, Section Chief, Disease Surveillance & Research Section

Disease Surveillance During Monsoon

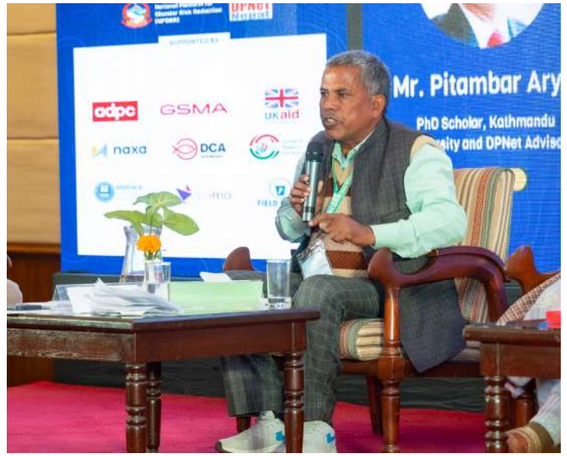
Mr. Sagar Dahal discussed the heightened risk of disease outbreaks during the monsoon season and the need for robust disease surveillance systems. He noted that diseases vary with seasons, and the heavy rainfall during the monsoon creates conditions conducive to outbreaks. To counter this, he advocated for syndromic surveillance, which involves monitoring disease symptoms in real-time to predict and prevent outbreaks.

He highlighted the importance of rapid information dissemination during emergencies, citing platforms like the 1155 call center and event-based surveillance through online posts and news. Provinces such as Gandaki and Sudurpashchim have successfully implemented collaborative surveillance systems, demonstrating the effectiveness of coordinated efforts.

Mr. Ashish Gajurel, Infastructure Expert

Road Infrastructure Conditions & Safety

Mr. Ashish Gajurel provided a detailed analysis of road safety in Nepal, emphasizing the alarming statistic of approximately 8,500 fatalities annually as reported by WHO. He noted that Nepal's road safety data only accounts for spot deaths, while the WHO includes injuries and deaths occurring later, highlighting a significant gap in data reporting and understanding. The risks associated with road accidents become even more pronounced during the monsoon season. Roads in Nepal are often not constructed with disaster resilience in mind, making them highly susceptible to hazards such as landslides, slippery surfaces, rising floodwaters, and decreased visibility. He cited examples like the Simal Taal accident, where a landslide caused two buses to plunge into the Trishuli River, leaving only three survivors, and the Jhyaple Khola incident, where warnings to avoid nighttime driving were ignored, leading to tragic outcomes. Mr. Gajurel stressed the urgent need for comprehensive measures to ensure road safety. These include the construction of disaster-resilient road infrastructure, stricter enforcement of road regulations, and regular inspections to remove unfit vehicles from operation. He also emphasized the importance of incorporating safety measures that accommodate persons with disabilities (PWDs) to ensure inclusivity.



Mr. Jagannath Pr. Kurmi, Chairperson of National Network of Community Disaster Management Committee (NCDMC)

Voices from Community

Mr. Jagannath Pr. Kurmi focused on the importance of learning from past disasters to develop more effective disaster risk reduction (DRR) strategies. He highlighted the need to prioritize Nepal-specific hazards and simplify the existing legal framework to ensure better implementation. While frameworks such as the Local Adaptation Plan of Action (LAPA) and the Local Disaster Risk Management Plan (LDRMP) were developed in 2068 BS, their implementation remains inconsistent.

He stressed the importance of empowering local communities, who are often the first to face hazards such as lightning, floods, and animal attacks. He pointed out that communities should be equipped with the knowledge and resources needed to respond effectively to disasters. Addressing questions about inclusivity, he called for stronger efforts to identify and address the specific needs of persons with disabilities (PWDs). By coordinating with municipalities and integrating PWDs into disaster preparedness plans, he argued, their safety and well-being could be ensured.

Mr. Kurmi also emphasized the need to focus on tangible results rather than bureaucratic procedures. He called for sharing and adopting good practices from both domestic and international contexts, including neighboring countries like India. He concluded by urging all stakeholders to act as a unified community, emphasizing that only a collaborative approach could address Nepal's unique disaster challenges effectively.

Ms. Santona Devkota, Vice President, National Campaign for Education Nepal (NCE Nepal)

Monsoon Challenges in Education

Ms. Santona Devkota highlighted the severe impact of monsoons on Nepal's education sector, particularly in rural and flood-prone areas. She noted that during emergencies, schools often become inaccessible due to flooding, while temporary displacement centers are rarely established, leaving students unable to continue their education. This disruption is compounded by the economic challenges faced by government school students, who lack access to virtual learning technologies during crises.

Her organization, active in 45 districts across all seven provinces, focuses on ensuring the safety and continuity of education during disasters. This involves collaborating with educational organizations and developing frameworks to address challenges in real-time. However, she highlighted the absence of emergency funds as a major obstacle to effective implementation.

In response to questions about preparing schools for disasters, Ms. Devkota advocated for the enforcement of "green school" policies. These policies emphasize creating disaster-resilient school environments and ensuring active collaboration between municipalities, local coordination committees, and relevant stakeholders. She emphasized that with proper planning and implementation, schools could better protect students and maintain educational continuity during emergencies.

Chair Mr. Pitambar Aryal, Advisor, DPNet

Highlighting the severe impact of monsoon-related disasters, Mr. Pitambar Aryal emphasized the significant loss of lives and property caused by such events. He referenced global statistics, noting that in developing countries, more than 70% to 90% of accident-related fatalities occur, despite these countries having less than 1% of the world's total vehicles.

Drawing attention to Nepal's specific context, he shared data from the Nepal Police Report, outlining the rising trend of disaster-related fatalities. He stated that in 2020–21, 2,883 individuals lost their lives, while in 2022–23, the number stood at 2,368. On average, previous analyses suggested that 2 to 3 people lose their lives daily due to disasters, but in 2022, this number increased to approximately 8 per day, and in 2023, around 7 per day.

Presenting these figures as a critical concern, he urged for a thorough review of risk reduction strategies, with an emphasis on enhancing preparedness, strengthening response mechanisms, and improving early warning systems to mitigate future casualties.

QUESTIONS AND ANSWERS IN THE SESSION

Cases of Disaster Management

Our National Public Health Laboratory has been tasked with identifying six cases. The municipality and the community must be aware of their surroundings and the incidents that occur there. Did we teach them how to manage this?

There are institutions and schools with teachers, so at the community level, we need to implement monitoring programs for diseases. This is essential.

Regarding Disability During Disasters

When analyzing disaster-prone areas, how do we address the risks faced by people with disabilities? Are they being considered by local or non-governmental organizations? Can you show how the community can connect with a person with disabilities?

Our goal should not just be good intentions but tangible results. How can we address the needs of individuals with disabilities in disaster response?

Answer: It is necessary to incorporate people with disabilities into networks at the federal, provincial, and local levels. We have been working for five years to address their needs.

By coordinating with municipalities, we can identify their specific requirements and provide them with necessary resources. We must work closely with individuals with disabilities to address their pain and needs effectively.

Transportation and Road Safety

When discussing transportation, especially during the monsoon season, most of our roads are unsafe. Roads built in hilly areas often have steep cliffs and rivers below, making them extremely hazardous. Collaboration between various institutions is necessary to address these risks. We currently lack a dedicated force trained to manage disasters effectively. For instance, when a vehicle falls into the Trishuli River, we had to call in experts from India to use magnets for recovery. We need to build our capacity for such situations.

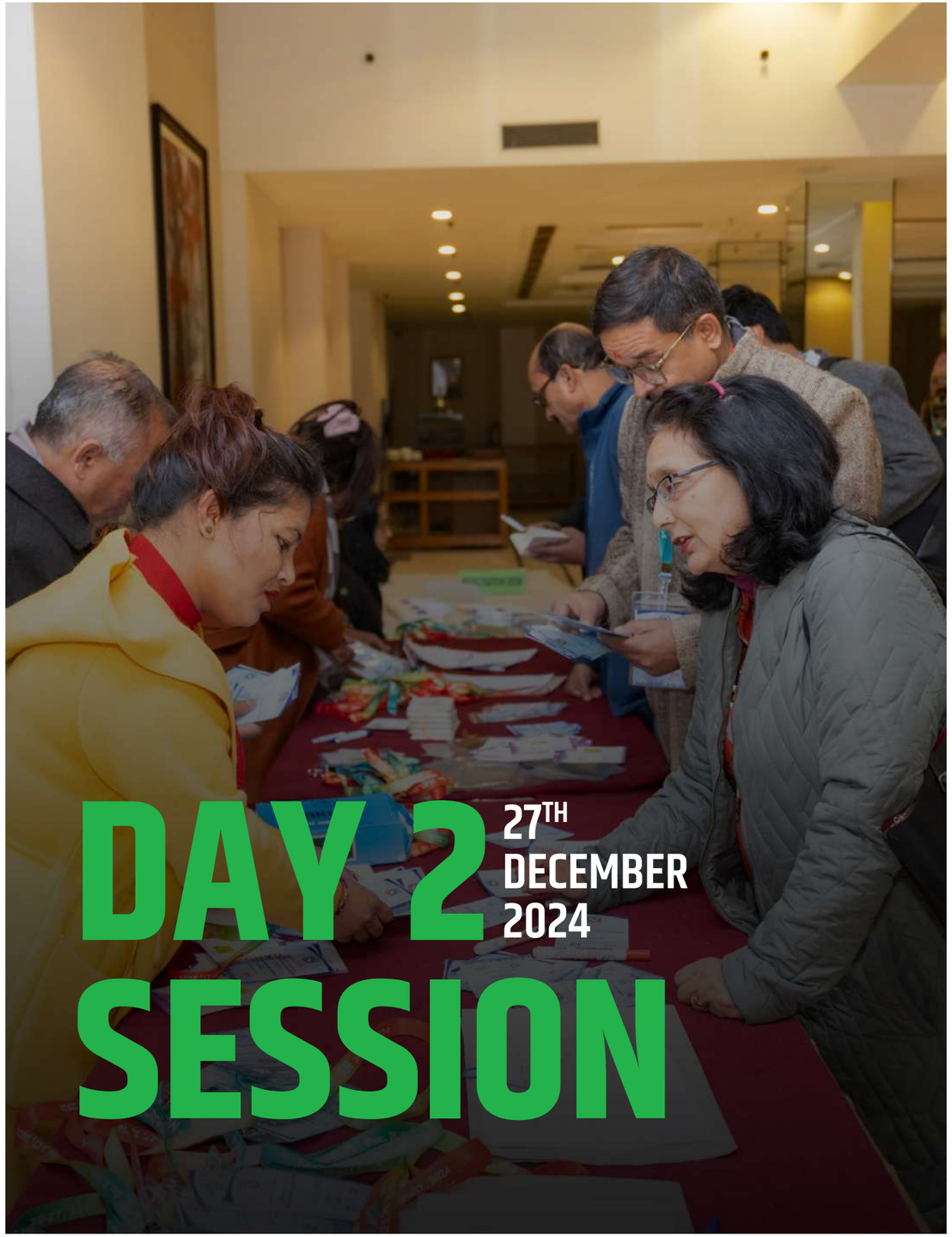
Visibility during dark, rainy conditions also contributes to accidents. Safety-focused collaboration between federal, provincial, and local governments is vital. In response to audience questions, he pointed out the lack of trained personnel and collaboration among government institutions as significant barriers to addressing road-related hazards. He called for coordinated efforts across federal, provincial, and local levels of government to create safer and more resilient road networks, particularly during the monsoon season.

Green Schools and Education

When focusing on education and security, green school documents should be implemented. If these documents are enforced, schools and municipalities can create contingency plans. We must utilize the best platforms and ensure the local coordination committee and other relevant bodies are actively involved.

Health

Addressing audience concerns, Mr. Dahal emphasized the need for timely preventive measures, as disease outbreaks typically take 2–3 weeks to materialize after heavy rainfall. He urged local health organizations to strengthen their monitoring capacities and called for international collaboration to fill capacity gaps. By leveraging event-based surveillance and rapid response systems, he argued, Nepal could significantly reduce the impact of monsoon-related health crises.



Spotlight Session II: Cloudburst Event 2024

Keynote Presentation

Cloudburst and Impact-Based Weather Forecast in Kanchanpur

Ms. Shanti Kandel, Senior Divisional Meteorologist, Department of Hydrology and Meteorology

Ms. Shanti highlighted that In October, an accurate forecast predicted severe weather associated with the HUD Cyclone, which triggered a devastating avalanche. Despite the warning, trekkers continued their journey, resulting in 43 fatalities. Upon investigation, it was revealed that the trekkers proceeded due to a lack of understanding of how the forecasted weather would impact their route and safety. These events underline the necessity of adopting Impact-Based Forecasting (IBF) to bridge the gap between weather predictions and public understanding, enabling individuals to take informed, proactive measures.

- The UK Met Office (UKMO) supported Nepal's Impact-Based Forecasting (IBF) under the ARRCC program, starting in 2021 with pilots in four areas. In 2024, Dodhara Chandani and five more Palikas joined with IHRR's support.
- The IBF system uses a color-coded risk matrix to guide responses, but forecasts are currently shared only with Palikas via WhatsApp and Viber. Out of 18 Bulletins issued in Dodhara Chandani/Bheemdatta in 2024, 13 were accurate, while 5 overestimated risks.

Implementing IBF in Nepal faces several challenges. Data reliability is a concern, as automated weather stations provide accurate measurements, but manual methods lack precision. Nepal's complex topography makes forecasting difficult, even for experts. Limited research and technological advancements hinder progress, with no dedicated research agency and studies mostly confined to universities. A shortage of skilled professionals further limits IBF development. Communicating forecast uncertainties remains a challenge, often leading to misinterpretation. Accurate IBF also requires detailed data on exposure and vulnerability, including population, infrastructure, and risks. Forecasts must focus on real-world impacts and actionable steps. Lastly, strong coordination among DHM, NDRRMA, local governments, and communities is essential for effective IBF implementation.

Mr. Binay Kalauni, IT Officer, Bheemdutta Municipality

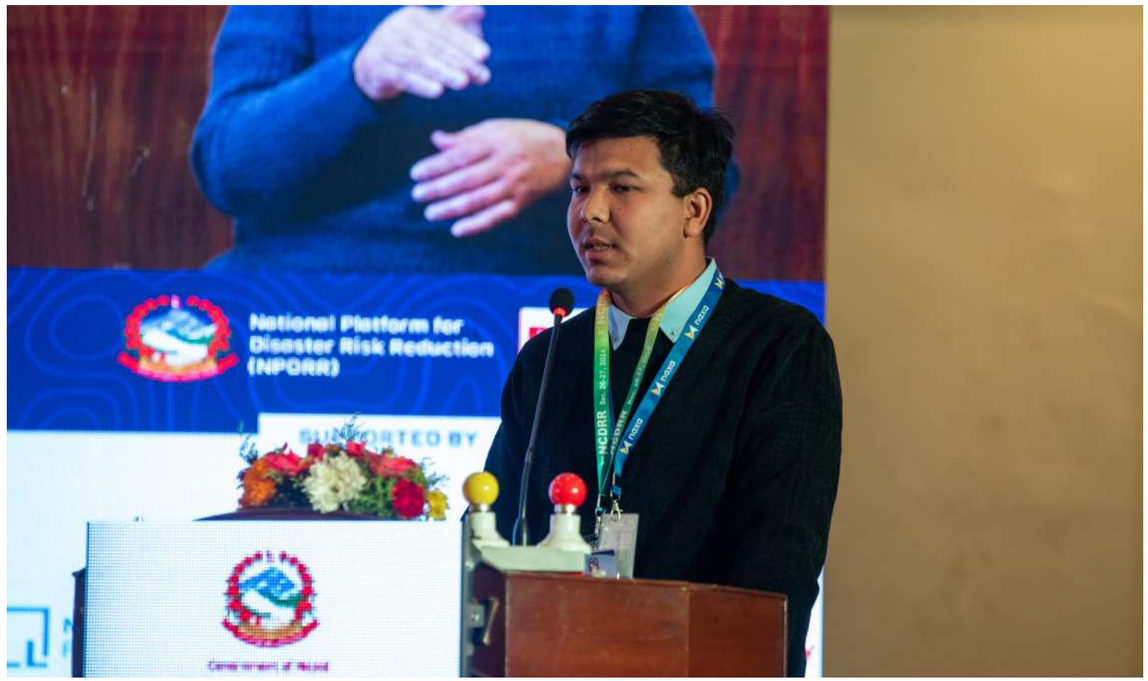
DHM provided weather forecasts and Impact-Based Forecasting (IBF) information, but the major task of localizing those information and information dissemination was important. The analysis was also limited due to data being available from only two stations—Parigaaun and the Mahakali 4-lane bridge. Key support came through the development of a coordination portal, along with household surveys and risk categorization, which improved response efforts. The DASTAA application was particularly valuable in reducing casualties by providing early warnings and critical risk information. Community Disaster Management Committees (CDMCs) and ward-level teams facilitated two-way communication with DHM by regularly sharing field updates, including photos. Partnerships with NAXA and NNSWA significantly enhanced preparedness and response capabilities. Additionally, municipalities were kept on 24-hour standby to ensure immediate emergency response when needed.

Mr. Amrit BK, DRR Focal Person, Dodhara Chandani Municipality

Despite heavy rainfall in Dodhara Chandani, no casualties were reported, thanks to early preparedness measures. Timely IBF bulletins from DHM were effectively disseminated to the community through dedicated messaging groups. The formation of CDMC working groups, search and rescue teams, and the mobilization of over 100 youth volunteers significantly enhanced the local response.

The DASTAA system was instrumental in identifying risks, mapping vulnerable areas, and guiding targeted response actions. Data collected through DASTAA and other platforms enabled better decision-making and helped prioritize high-risk zones for intervention. Besides, we also had the Interactive Voice Response (IVR) that were disseminated to the households about the preparedness. weather information, IBF bulletins and evacuation messages. DASTAA helped us to identify the vulnerable population (pregnant women, people with disability, children, senior citizens and so on) within the municipality and thus supported the effective early evacuation.

This experience underscored the value of early preparation, real-time data sharing, community engagement, and the use of technology in disaster risk reduction. It also highlighted the importance of continuous improvements in forecasting, public awareness, and multi-stakeholder collaboration.



Mr. Shudarshan Hamal, Program Associate, Naxa

NAXA, a Geo-ICT company, developed the DASTAA platform to enhance disaster preparedness and response. Following the release of Impact-Based Forecasts (IBF) from the Department of Hydrology and Meteorology, several key actions were implemented to mitigate risks. A flood hazard and inundation model was developed to assess potential threats in the region. Data-driven targeting was enabled through detailed vulnerability and risk profiling, along with an updated household database, ensuring precise and timely communication based on weather forecasts. Mass communication efforts reached approximately 30,000 people through SMS and IVR alerts, while early cash transfers were provided in coordination with CDMCs and DCA to support vulnerable households. Additionally, proactive interventions facilitated early evacuation support for over 10,000 households. The DASTAA system is actively utilized in both Nepal and Bangladesh, demonstrating its effectiveness in early warning dissemination and disaster preparedness.

KEY TAKEAWAY MESSAGES

Pre-Drafted Messages: Pre-drafting localized early warning messages ensures quick and precise communication during emergencies.

Multi-Channel Communication: Utilizing diverse channels (e.g., SMS, IVR) amplifies the reach of early warnings.

Community Involvement: Involving CDMCs strengthens local response mechanisms.

Strong Partnerships: Collaborations between stakeholders enhance the overall effectiveness of disaster preparedness and response.

Real-Time Accuracy: Equipping ground stations with adequate technology ensures accurate, real-time data for timely decision-making.

Spotlight Session II: Voices from Stakeholders, Community, Municipality, EOCs

Chair: Mr. Dinesh Gurung, Program Manager, DCA

Mr. Dinesh Gurung emphasized the critical importance of impact-based forecasting and anticipatory action in disaster risk reduction. He highlighted that impact-based forecasting is not just about predicting weather conditions but about assessing their potential effects on communities. By integrating early warning systems with preemptive measures, lives can be saved and disaster impacts significantly reduced. Stressing the need for proactive action, he underscored that anticipatory preparedness must be prioritized to ensure effective disaster response and mitigation.

Mr. Padam Bogati, Mayor, Bheemdatta Municipality

In Mahakali, frequent training sessions were conducted by CDMCs from three high-risk areas, successfully raising disaster awareness. On 22nd Ashad, as flooding began, timely information was relayed, and the Ward 11 chairperson was promptly alerted about rising water levels in the Mahakali River and the overflow of the Bhujela stream.

Mapping provided by DASTAA was helpful in guiding early actions efforts, and IVR systems were utilized for effective information dissemination.

Ms. Laxmi Bhatta, CDMC Member

Numerous training sessions have been conducted, which significantly contributed to minimizing disaster impacts. Over 100 youth volunteers have been mobilized through an active network. Communication has been facilitated via WhatsApp and Messenger groups, which include mayors from 10 wards and CDMC members. Information has been promptly shared through these platforms during disaster events.

Unexpected flooding was experienced in areas such as Kutiakabar and Pattrakhalla due to increased flood impacts. To raise public awareness, volunteers conducted house-to-house visits, urging residents to remain alert. Each ward has been supported by active youth volunteers, with timely updates provided by CDMCs.

Ms. Neelam Lekhak Joshi, Deputy Mayor, Bheemdatta Municipality

Despite being on medical leave, the Mayor remained actively engaged in field coordination. A dedicated response team was formed to manage emergencies, and rescue efforts were carried out based on meeting decisions. As a result of proactive measures, no loss of life was reported. Food assistance was organized the following day, with team members distributing both snacks and full meals to affected individuals, including the successful rescue of vulnerable populations.

Simulation and demo drills were conducted to strengthen preparedness, and message dissemination was effectively facilitated by the IT Officer. During the monsoon season, community members, including forest groups, were oriented on fire safety, and awareness was raised through demo drills conducted in Wards 19, 2, and 14.

Mr. Kishor Kumar Limbu, Mayor, Dodhara Chandani Municipality

Early Actions were successfully implemented in the potential flooding and inundation areas during an extreme rainfall event of 624 mm, with zero human casualties reported. This was possible due to the timely dissemination of anticipatory information to the community.
The information from the Impact-Based Forecasts (IBF) were delivered at the community level, with critical information effectively conveyed through IVR systems. Risk categorization via the DASTAA system enabled tailored messaging based on risk levels, enhancing public awareness and preparedness.

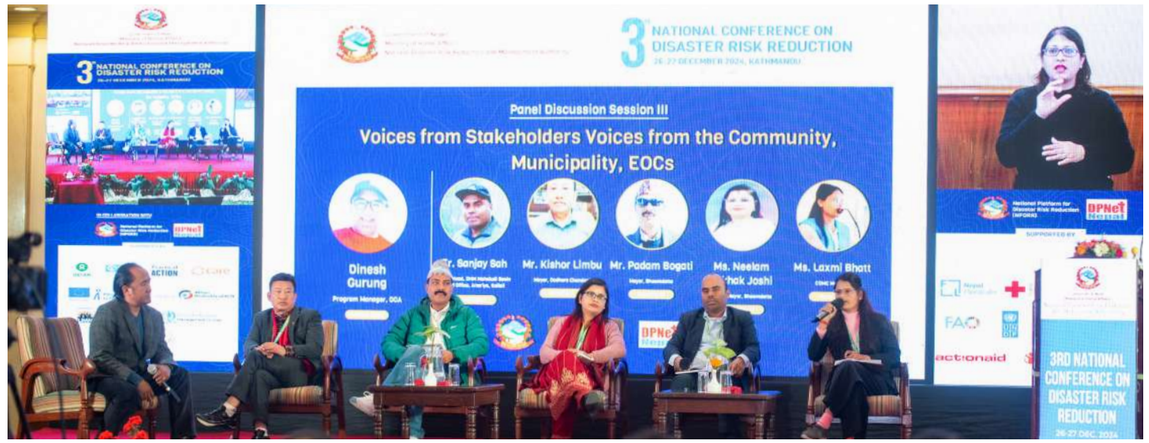
These efforts significantly reduced potential losses. Simulations and disaster preparedness training were conducted, covering evacuation procedures and self-protection measures. As a result, individuals were able to respond independently, reducing the need for extensive external intervention.

Er. Sanjay Shah, Office Head, DHM Mahakali Basin Field Office, Attariya, Kailali

Over the past 18 years, efforts have been made by DHM to reduce disaster impacts through early action and warning initiatives. Although toll-free numbers and bulletins have been introduced for early warning, their effectiveness has been limited without corresponding early actions. The floods in Kailali and Kanchanpur demonstrated the need for timely response alongside warnings.

On 22nd Ashad, an IBF bulletin was issued following forecasts of escalating rainfall, and direct communication with CDOs was undertaken to promote early preparedness. Improved municipal coordination contributed to the avoidance of casualties, with information disseminated via email, web, Facebook, and toll-free numbers. However, message reach remains inconsistent due to various factors.

The DASTAA system, using IVR, proved more effective, as calls were more likely to be answered than messages read. While a 15-day monsoon outlook was provided, it was observed that early warnings alone are insufficient without the active participation of local authorities, simulation drills, CVA distributions, and ongoing engagement at the local level.



QUESTIONS AND ANSWERS IN THE SESSION

1. After surveying the websites of nearly 20 wards, I observed how disaster management law and policy evolved, and what suggestions do you have for further improvement?
2. IBF-based information has shown positive effects. What are the challenges around its sustainability and cost? How can this system be scaled up effectively?
3. Considering the work done, how has the forecast information been applied? How was the cluster division mobilized? Has the forecast been integrated into the DPRP? Were messages delivered in a timely manner through platforms like Messenger groups, ensuring that they reached leadership in safe locations?
4. For CDMC groups, what medium should be used to share information? After receiving the information, how should it be disseminated, especially for persons with disabilities (PWD)? Have they been adequately included in the process?
5. Weather reports mention the possibility of rainfall in various parts of the country. However, these are often difficult to understand. Would it be more effective for an individual to provide detailed information instead of using charts, which may not be as helpful? Is it possible to use Unicode for Nepali-language information? Some readers may struggle with PDFs and Preeti fonts, which can be a challenge for visually impaired users.
6. How effective are mobile bulletins in reaching communities? What has DHM done in this regard? Since not everyone listens to FM radio, how can we ensure the information reaches the community? Are the bulletins available in Unicode? Blind individuals cannot read charts, and laptops may not support the Preeti font.
7. Regarding the early warning system, how involved are students in IBF-related activities? What research has been conducted to improve early warning systems and their effectiveness?

Answers

1. **Mr. Kishor Kumar Limbu:** Sixty safe houses have been established to accommodate over sixty families. Eight disaster management organizations, each comprising more than twenty staff members, have been formed. Upon receiving alerts, information is disseminated across the municipality through these organizations, with all efforts guided by the timely and accurate flow of information.
2. **Mr. Padam Bogati**: A Mayor's Forum was held to discuss disaster management strategies. Policies and regulations have been developed, though effective implementation has been hindered by limited resources.
3. **Ms. Neelam Lekhak:** Training has been provided to CDMCs in collaboration with various organizations, with each ward having its own trained committee. Recognition was awarded to Bhim Dutta for his leadership and active involvement in disaster management.
4. **Ms. Laxmi Bhatt:** Weather information is primarily received through the Facebook page and is subsequently shared via Messenger and disseminated within the community. In the event of rising water levels reaching residential areas, sirens are activated by CDMC members. Evacuation efforts prioritize vulnerable groups. Financial support from various organizations has enabled the provision of evacuation assistance and food supplies.
5. **Mr. Sanjay Shah:** The IBF system has proven effective; however, the inclusion of persons with disabilities remains essential. Information dissemination has been supported by Ncell/NTC through IVR and SMS, and the 1155 hotline remains operational year-round. A customized call tune has also been implemented to raise awareness.Permission to conduct discharge measurements on the Indian side has not yet been granted. Although the request has been forwarded, the necessary authority is currently lacking, preventing the acquisition of accurate discharge data.
6. **Ms. Shanti Kandel:** Localized IBF has been introduced, with color coding used to simplify risk communication. Mass communication and the implementation of the Common Alert Protocol are ongoing. Public awareness of weather forecasts is being emphasized, and research collaborations have been formalized through an MoU with international institutions.

Lightening Session

Risk Assessment and Visualizations ; Lessons Learnt from Nepal

Ms. Biddya Bhandari,
MEAL Officer, Naxa

In coordination with the Palika, a set of 300 survey questions was drafted and subsequently administered. Based on the survey data, risks were categorized into red, yellow, and green levels. Each household was provided with its respective risk profile, emergency contact details, and household disaster risk management plan (HDRMP). Risk visualization tools were utilized to support informed decision-making at the Palika level.

For risk communication, eight sets of easily comprehensible preparedness messages were developed prior to the monsoon season and approved by the relevant government authorities. In the event of a forecasted trigger, these messages were disseminated to households. In total, 41 sets of preparedness messages were delivered, including over 127,000 IVR calls and 41,495 SMS alerts. Each household also received an HDRMP as part of their preparedness toolkit.

In addition to disaster-related infographics, visual materials for developmental planning were also provided. A post-event damage assessment was carried out following the extreme monsoon. The primary users of this initiative have been government bodies and humanitarian organizations.

Risk Assessment and Visualizations ; Lessons Learnt from Bangladesh

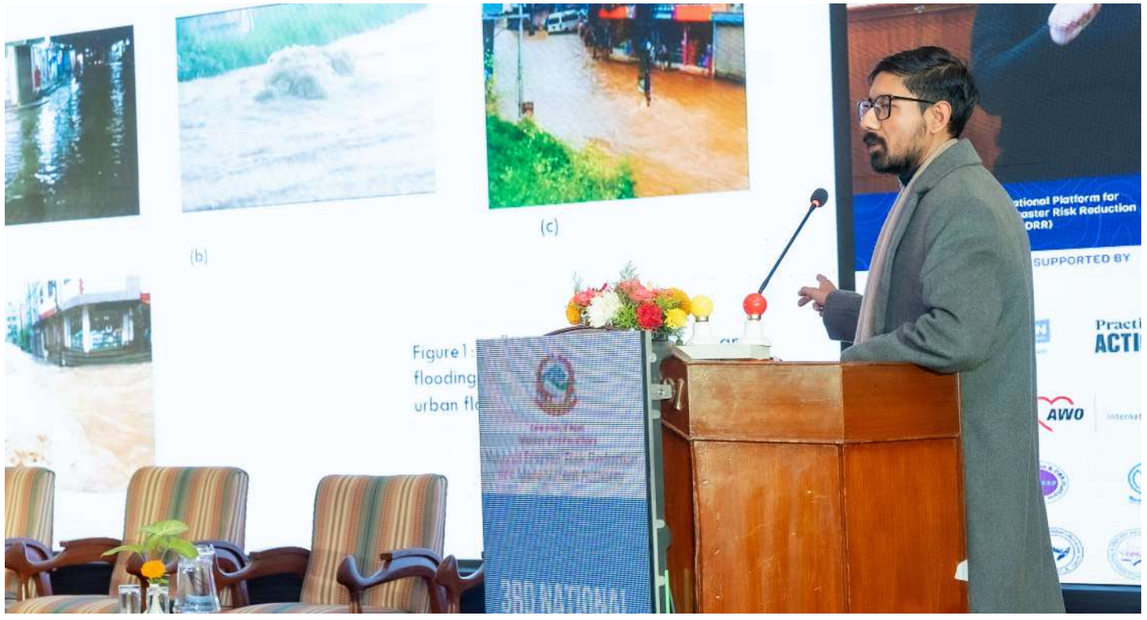
Dr. Abul Hasnat Muhammad & Mr. Anamul Arefin,
Field Ready Bangladesh

In the Tahirpur Union, the DASTAA system has been implemented, beginning with a kickoff meeting and enumerator training to collect household survey data in Dakshim Sreepur and Tahirpur Sadar. Findings indicated that over 23% of the population was vulnerable, and 80% lacked access to weather forecasts.

Through DASTAA, SMS and IVR messages, including Unicode SMS, are now delivered directly to households. HDRMPs have been recognized as one of the platform's key strengths. Unlike many organizations, DASTAA operates at a more localized level, though message dissemination still requires prior approval from national agencies such as DDM and BMD due to centralized decision-making structures.

Collaboration is maintained with five key stakeholders, including FFWC, which provides weather event data to DDM. Field Ready actively engages DDM to coordinate with union-level officials and facilitate message approvals. As a result, disaster preparedness has been enhanced, and data-driven decision-making has been strengthened.

Urban Flooding : Ichangu Narayan, Kathmandu Case Study



Er. Aparajit Koirala, Civil and Environment Engineering Expert

Mr. Koirala's assessment of the drainage system in Dhungedhara, Kathmandu, revealed that natural drains have been replaced with undersized pipelines, discharging into a flood-prone area. Flooding was confirmed through satellite analysis and field validation, particularly during storms in 2023 and 2024. The 2022 DPR identified major issues, including outdated rainfall data, lack of future climate and land use considerations, and insufficient geotechnical analysis.

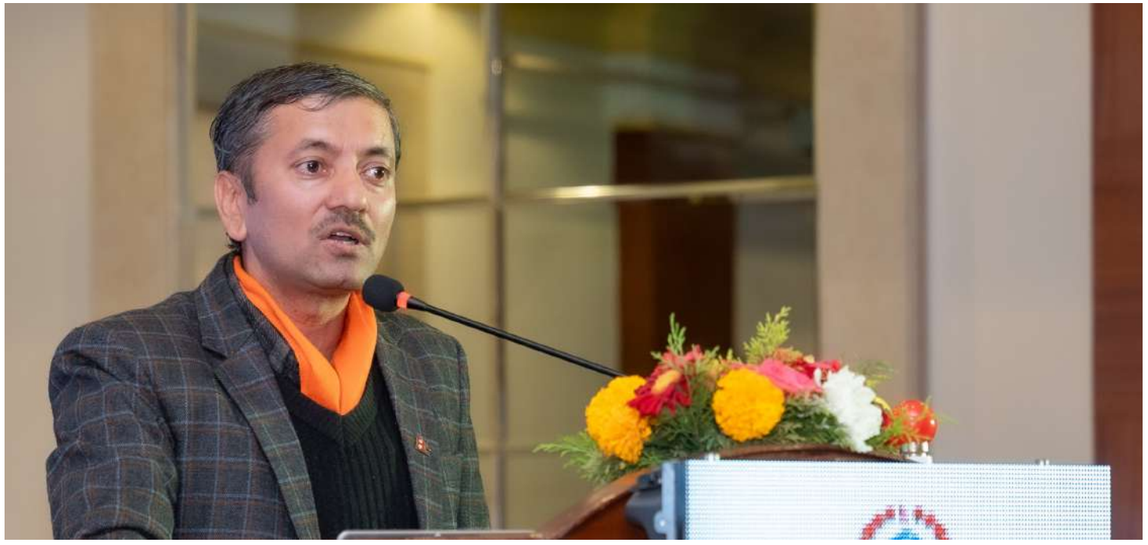
Challenges include continued use of combined sewer systems, limited technical capacity, outdated guidelines, and poor maintenance. Modeling with SWMM, calibrated using DHM rainfall data, showed increasing flood risks under future climate scenarios. To address this, updated design standards are needed—incorporating stormwater control measures like rain gardens, permeable pavements, and runoff-based planning.

Recommendations include adopting global best practices, transitioning to separate sewer systems, integrating nature-based solutions, and enhancing coordination among government bodies. Strengthening data-sharing partnerships and aligning efforts with Nepal's National Adaptation Plan (2021–2050) are key to improving urban flood resilience.

Technical session III: Accelerating actions for a sustainable future

Parallel session A : Chair Mr.Tirtha Raj Joshi

Ground Experiences, Early Warning System and Risk Transfer Mechanisms



Mr. Ram Krishna Bhandari, News Coordinator, Kantipur Television

During the 2024 monsoon, significant challenges in disaster reporting were observed, particularly following the severe flooding on Asoj 12 in Bagmati and Nakhu. A talk show was organized, featuring one DRR expert among thirteen guests, to discuss disaster management. Between 2070 and 2080, over 700 flood-related and 1,314 landslide-related fatalities were recorded.

Following the floods on Asar 11/12, delays in response were reported, with national representatives absent in severely affected areas like Lalitpur. Despite the availability of helicopters, timely evacuations were not conducted, and affected individuals were left waiting for hours without assistance. Concerns were raised regarding the national government's capacity to respond effectively, compounded by unclear forecasting of specific high-risk areas.

The importance of strengthening early warning, early action, and coordinated response systems has been emphasized. Greater media involvement has been deemed necessary to highlight the ground realities of disaster management. Although progress has been officially claimed, gaps in real-time response and the lived experiences of affected communities suggest that further improvements are urgently required.

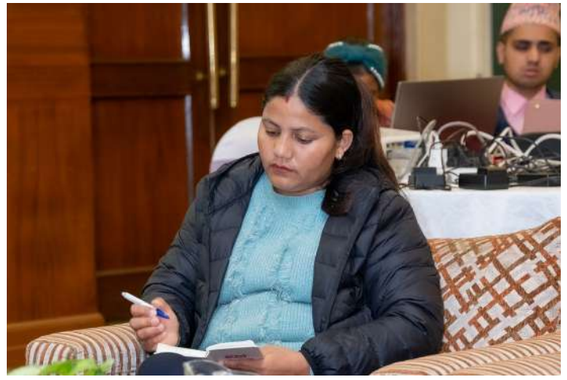
KEY TAKEAWAY MESSAGES

Media Inclusion: Media representatives should be included in field visits and disaster-related activities to accurately capture and convey ground realities.

Truthful Reporting: Media should prioritize honest and transparent reporting to ensure the public receives unfiltered and factual information during disasters.

Collaborative Approach: Strong partnerships between media outlets and disaster management organizations should be fostered to enhance risk communication and public awareness.

Capacity Building: Targeted training programs should be provided to media personnel to improve their understanding of disaster management and strengthen their reporting capabilities.

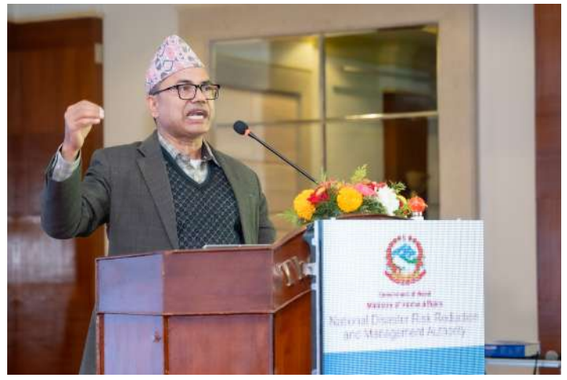


Ms. Kamala Yogi, Administrative officer, Ministry of Internal Affairs and Law, Karnali Province

Karnali Pradesh, despite having the largest area among provinces, experiences the highest disaster impacts and maintains the lowest population. An annual allocation of NPR 1 crore has been made by the government for disaster insurance coverage, with each individual insured up to NPR 2 lakh. Claims must be reported within 35 days, and payouts are to be issued within 15 days upon submission of required documents. From Baisakh to Mangsir 2081, 25 individuals have received insurance payouts.

A provincial budget of NPR 4.5 crore has been proposed to ensure insurance coverage for every household, with local-level property valuation to determine needs. Coverage includes disasters such as earthquakes and fires, with a premium of NPR 10 lakh provided for one home per household annually. Awareness-raising activities are planned to promote participation and understanding of house insurance.

Initially, the program will be managed by the government, with a transition to individual responsibility expected within 2–3 years. A pilot project will be launched in one municipality per district across 10 districts, with potential scale-up based on evaluation. It has been acknowledged that earlier implementation of insurance would have eased the burden on government during disaster recovery efforts.

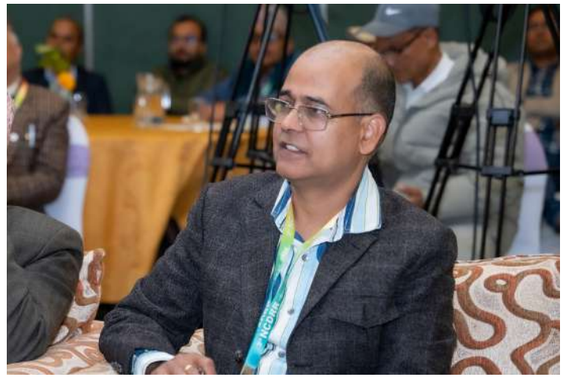


Dr. Dharam Raj Upreti, Program Lead– Practical Action

Practical Action has been engaged in integrating early warning systems (EWS) with climate and disaster risk finance in Western Nepal, particularly through index-based insurance. In five municipalities of Lower Karnali, risk transfer mechanisms have been implemented, with efforts underway to replicate them in the Babai River area. Despite these advances, limited awareness of life insurance and its benefits remains prevalent among the population.

Insurance models, including sector-specific products such as paddy insurance and parameter-based policies for extreme weather events, are being explored. An insurance system has been developed to trigger payouts when the Karnali River exceeds the 10.8-meter threshold, combining scientific data with community feedback. Hazard-specific benchmarking has been emphasized as crucial due to the increasing frequency of extreme weather events.

Globally, $300 billion has been allocated for climate and disaster risk management in developing countries, while losses in 2023 alone amounted to $280 billion. Concerns have been raised about the financial capacity of local governments to support vulnerable populations, and although public willingness to adopt insurance exists, the absence of subsidies has been identified as a major barrier to affordability and uptake.



Chair - Mr. Tirtha Raj Joshi, Technical Advisor, DPNet Nepal

Highlighting the significance of disaster preparedness, Mr. Tirtha Raj Joshi emphasized the need for effective risk mitigation strategies, particularly during the monsoon season. He pointed out that disaster insurance, especially for agricultural losses, plays a crucial role in providing financial relief to affected communities. Reflecting on past payouts, he noted that a substantial amount had been disbursed in the previous year, demonstrating the system's effectiveness.

Mr. Joshi stressed the importance of consistent disaster reporting and monitoring. He proposed establishing a dedicated platform to track disaster events throughout the monsoon period, ensuring timely updates and visibility. Additionally, he advocated for prioritizing disaster-related news, suggesting that frontline reporting should focus on real-time incidents to enhance public awareness and response mechanisms.

QUESTIONS AND ANSWERS IN THE SESSION

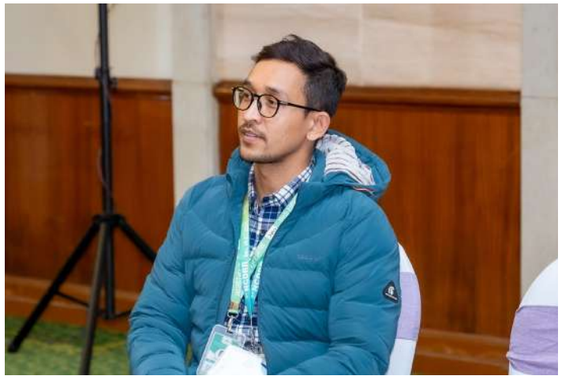
1. What are the responsibilities of the three levels of government in disaster management?
2. Is there transparency in the process of providing insurance?
3. It should be easier for farmers to access insurance. Why do farmers face difficulties in receiving payouts due to unreliability during the settlement process?
4. Risk transfer should be inclusive. What about insurance for wheelchair users?
5. Has there been any change in loss and damage after implementing risk transfer mechanisms?
6. How can other insurance companies increase their interest in this sector?

Answers

- A lack of awareness about agricultural and livestock insurance has been observed, and the claim process remains complex. While not under the Ministry's direct jurisdiction, proactive measures by relevant ministries are necessary. Clear explanations of payment processes during agreements with insurance companies could improve the system.
- The Ministry has simplified the group accident insurance claim process through coordination with the District Administration Office and local levels. Missing documents are requested via email or WhatsApp, ensuring timely submission and efficient claim payments. No major issues have been encountered.
- Efforts are underway to address challenges faced by people with disabilities. While NPR 2 lakh is currently provided for death compensation, discussions are ongoing to include medical treatment and rehabilitation.
- Government compensation is limited, offering only immediate relief. Strategic interventions and increased investment are needed to bridge this gap.
- Parametric insurance, triggered by specific events, ensures faster settlements, with payments reaching farmers within 20 days without additional documentation.
- Successful models, like those by Sagarmatha Insurance, could be expanded to other regions. Collaboration with global insurance companies is being explored to enhance Nepal's insurance system.
- Efforts continue to make insurance more inclusive, efficient, and accessible for farmers, livestock owners, and vulnerable populations.

Parallel session B : Chair Er. Laxmi Narayan Parajuli

Anticipatory Action, Media Insights, and Governance Solutions



Mr. Gopal Krishna Basnet, Program Coordinator, Community Self Reliance Centre (CSRC)

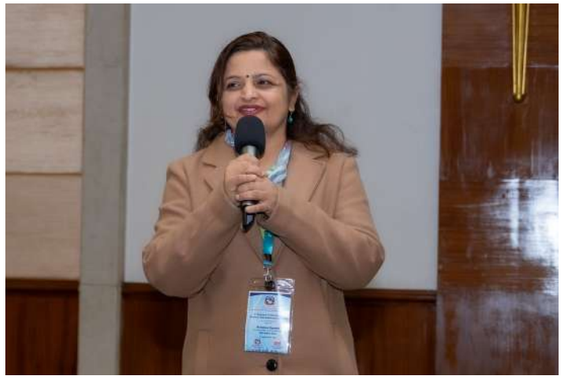
Anticipatory Action to Landslides

Early action for landslides and flash floods was implemented in Barabise and Bhotekoshi, high-risk municipalities. Barabise recorded 11 landslides, one flash flood, and damage to 69 hospitals, while Bhotekoshi reported 13 landslides and four flash floods. Three major bridges were also washed away, increasing risks.

Risk communication followed the CBDRR model, using Viber groups, community radio, CDMCs, and bulk SMS alerts. Individuals assisting persons with disabilities played a key role, and Viber was preferred for incident verification.

A Geo-hazard assessment carried out in September identified 276 at-risk households, which received emergency materials. A DHM three-day forecast triggered evacuations, with 119 households (74 in Barabise, 31 in Bhotekoshi, and 14 in Uttargaya) seeking shelter while some returned home during the day. Despite four washed-away highway bridges, alternative routes ensured safe evacuation.

Key takeaways highlighted the importance of accessible communication, with IBF, social media, and radio proving effective. Plans are underway to replicate this model in Bajhang, Pyuthan, and Jajarkot to enhance disaster preparedness.



Krishna Poudel, Senior journalist, and founder/editor, News Agency Nepal (NAN),

Monsoon Recovery from Media Lens

Ms. Poudel highlighted how Early Warning Messages play a vital role in awareness about the disaster response and recovery and dealing with such crises along with its management. Ms. Poudel presented a case study focused on Kathmandu District, emphasizing risk communication during monsoon forecasting and institutional inefficiencies following Department of Hydrology and Meteorology (DHM) alerts. The challenges highlighted included the lack of immediate institutional response to red alerts and poor inter-ministerial coordination, with key officials often absent when urgent disaster meetings were called. Emergency meetings were delayed, such as during the Ashoj 12 disaster, and the slow updates on the National Disaster Risk Reduction and Management Authority (NDRRMA) website further hindered timely responses—evident in cases like the Surkhet flood response, which commenced before NRDA posted notices.

The key learnings emphasized the importance of bypassing rigid protocols to accelerate responses, improving political accountability, and enhancing coordination among ministries. Effective early warning systems (EWS) were found to be beneficial, but their success relies heavily on strong institutional frameworks. To address these challenges, it is recommended to establish frameworks for immediate institutional responses to disaster alerts and improve inter-ministerial coordination to ensure timely action during emergencies. Strengthening disaster risk communication through media partnerships and educating communities on evacuation protocols and predefined safe zones were identified as essential measures to enhance public awareness and preparedness.

Strengthening Recovery Systems: Lessons from Floods, Landslides, and Shelter Challenges

Rijan Gajurel, National Technical Coordinator, National Housing and Settlement Resilience Platform (NHSRP)

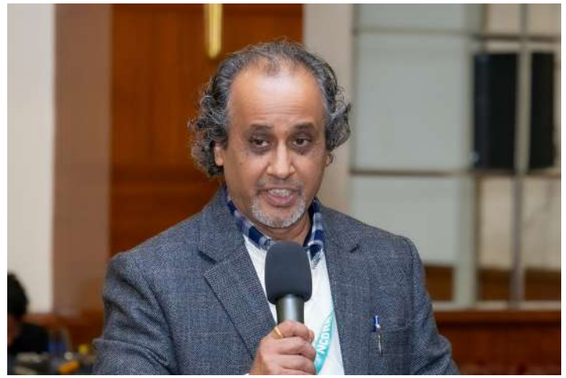
Strengthening Private Housing Recovery and Reconstruction Governance: Lessons from Floods, Landslides, and Earthquakes recovery

Er. Rijan Gajurel highlighted lessons from the 2015 Gorkha Earthquake, emphasizing the Build Back Better approach in reconstruction strategies. While many provinces have improved safety through rebuilding, Karnali and Sudurpaschim still have 80% of houses made from mud and rocks, making them highly vulnerable. Since 2015, five major earthquakes have affected Khotang, Lamjung, Jajarkot, Dotiya, and Bajhang, damaging nearly 100,000 houses.

Reconstruction efforts remain slow despite NPR 66 billion allocated. The Zerab Project has started in Jajarkot and Rukum West to accelerate rebuilding. The October floods caused NPR 45 billion in damages, impacting 71 municipalities, and were attributed to climate change by World Weather Attribution. While early response efforts are well-coordinated, long-term reconstruction is largely left to local governments and the public, as seen in Jajarkot.

Since 2077 BS, NDRRMA policies have supported 20,000 disaster-affected households nationwide, but relocation of vulnerable settlements remains a gap. Despite geohazard assessments, relocation efforts are still lacking. Activating District Coordination Committees (DCCs), involving political representatives, and clarifying government responsibilities could improve reconstruction.

Efforts must be GEDSI- and PWD-friendly, utilize local materials, and ensure scientific justification for Loss and Damage Fund allocation. Western Nepal urgently needs reconstruction, temporary shelters, and relocation planning for long-term resilience.



Er. Laxmi Narayan Parajuli, Technical Advisor, DPNet Nepal

Mr. Parajuli summarized the session by emphasizing the need for proactive disaster preparedness, efficient response, and resilient recovery. Early warnings and community-based risk communication have proven effective in high-risk areas, but institutional delays and poor coordination hinder crisis management. Strengthening early warning systems, streamlining decision-making, and improving governance are essential. Despite substantial funding, slow reconstruction highlights the need for inclusive, scientifically backed rebuilding and relocation planning. With climate change worsening disaster impacts, integrating GEDSI- and PWD-friendly approaches and activating local governance structures are crucial for long-term resilience.

Parallel session C: Chair Ms. Shakti Gurung

Governance Insights, Community Involvement, and International Standards

Dr. Dijan Bhattarai, Under Secretary/Spokesperson and Information Officer NDRRMA

Findings and Insights from Local Government EP&R Reports

The assessment is conducted using the Ready to Respond (R2R) Emergency Preparedness & Response (EP&R) Framework, which is structured around five key components: Legal and Institutional Framework, Information Management, Facilities, Equipment, and Employees. A quality-based scoring system is applied, incorporating 18 criteria, 72 indicators, and 360 attributes, with scores assigned based on points obtained out of a total of 5. The scoring framework is designed with five components, each consisting of four criteria, resulting in a total of 20 criteria and 100 indicators. A weight of 20 is assigned to each component, with 4 points allocated per criterion, making the total EP&R score 100. EP&R Framework Assessment has been carried out in 28 local municipalities of Doti, Bajhang, Bajura, Rukum West, Jajarkot districts.

KEY TAKEAWAY MESSAGES

- **Legal & Institutional Component:** Establishing Disaster Management Subsections in municipalities and rural municipalities is essential, along with clear legal protocols and national-level guidance for EP&R. Needs-based disaster risk management awareness programs should be implemented for local and community committees. Inter-provincial coordination and private sector engagement are crucial for effective response efforts. Clear budget management guidelines are needed to prevent resource misuse, and a fast-track procurement system should be introduced for timely emergency response. Lastly, risk transfer mechanisms must be prioritized by all local governments.
- **Infrastructure & Facilities:** Municipalities should invest in local emergency operation centers, supported by national guidelines, and establish dedicated training spaces for disaster management. Disaster warehouses and temporary shelters are essential to accommodate at least 10% of the population during emergencies. Helipads should be built near municipal offices, with national support. Fire brigades should be set up at the local level, with shared operations between nearby municipalities, and portable fire pumps should be available for fire control. Additionally, enhancing mass casualty treatment, mobile medical teams, and pre-hospital services is vital for effective disaster response.
- **Information Management:** An emergency hotline should be established and operated 24/7 at local emergency centers. Social media platforms like Facebook, TikTok, Twitter, WhatsApp, and Viber are crucial for community communication. Involving communities in disaster monitoring and early warning systems can reduce damage. Municipalities must invest in technical systems for monitoring and warnings, though sustainability remains a challenge. Strengthening local governments to effectively use disaster portals, warehouse software, and volunteer management systems is essential.
- **Equipment:** Investment is needed in Collapsed Structure Search and Rescue (CSSR) equipment, firefighting tools, emergency communication systems, and temporary shelter supplies. Local governments should focus on training for the storage and maintenance of these resources. Additionally, virtual communication systems (VTC), NFRI kits, and tools for debris management, sanitation, and water purification are essential for effective emergency response.
- **Personnel:** To effectively manage disaster response, sufficient staff and trained municipal police are essential. Community CADRE training, volunteer readiness, and integration of Red Cross volunteers are priorities. Mobile Medical Teams should be prepared, and the E-Learning platform requires a clear strategy for local use to enhance capacity building.

Bijay Krishna Upadhyay, CBDRM Expert

Community Volunteers for Building Code Compliance

The implementation of the National Building Code (NBC) is more prevalent in urban municipalities, including metropolitan and sub-metropolitan cities, with NBC regulations being adopted by a total of 276 municipalities. However, significant challenges are faced in rural municipalities regarding NBC implementation, as standardized building codes have not yet been adopted or enforced in many areas. A key issue is that RCC (Reinforced Cement Concrete) structures are predominantly approved by municipalities, while other building types are neglected. In rural areas, non-RCC building plans are often overlooked, leading to inconsistent enforcement of NBC regulations. Additionally, insufficient engagement with local communities has been made to ensure the understanding and compliance with building standards, and limited awareness exists among homeowners and builders regarding the importance of adhering to NBC guidelines.

KEY TAKEAWAY MESSAGES

- Recruit and train Community Volunteers (CVs) at the ward level to ensure NBC compliance, with facilitation from DRMCs.
- Organize regular training sessions for community volunteers and technical staff.
- Allocate a percentage of building permit revenue to ward DRMCs for refresher training and volunteer mobilization.
- Standardize building approval processes to include all building types, ensuring they meet safety standards.
- Conduct widespread awareness campaigns to educate communities on the importance of NBC compliance for disaster risk reduction.

Mr. Ram Kumar Gurung, Technical Advisor, DPNet Nepal

Application of Sphere Standards in Disaster Management

Challenges in response are caused by several factors. Standardization issues arise as local disaster response efforts struggle to align with global frameworks, such as Sphere and CHS standards. Resource constraints hinder effective disaster response and recovery, while extreme topography and inaccessibility delay responses to affected areas. Role clarity is often lacking, with unclear definitions of roles within the government and overlapping responsibilities leading to inefficiencies. The one-door policy further exacerbates delays in distribution, as relief items are stored in centralized collection centers. Awareness and training are also limited, with responders having limited knowledge of humanitarian standards, and local and district disaster management committees (DDMCs) being inexperienced and unfamiliar with Sphere and CHS standards. Some authorities justify substandard relief efforts, citing them as "better than nothing." Furthermore, inconsistent guidelines for relief distribution and cash/voucher approaches are implemented without formal policy approval. Lastly, weak cluster coordination results in fragmented response efforts.

KEY TAKEAWAY MESSAGES

- **Recruit and train Community Volunteers (CVs) at the ward level Develop National Guidelines:** Creating a standardized relief guidelines aligned with Sphere and CHS standards including a comprehensive list of necessary relief items for humanitarian responses.
- **Centralized Database:** Establish a central database to consolidate and manage all disaster response data.
- **Capacity Building:** Increase awareness and training on Sphere and CHS standards for local government officials, DDMCs, and responders.
- **Community Involvement:** Actively engage local communities in disaster preparedness, response, and recovery planning.
- **Policy and Coordination:** Ensure all relief distribution approaches, including cash and vouchers, receive formal policy approval. And also Strengthen cluster coordination mechanisms to avoid gaps and overlaps.

QUESTIONS AND ANSWERS IN THE SESSION

Q1: How can we ensure the safety of our rescuers during emergency responses, especially in situations where resources are inadequate?
A1: Safety must always be the top priority. Even with limited resources, it is essential to implement protective measures, provide necessary training, and ensure access to proper equipment for rescuers.

Q2: Despite women being capable and skilled, why are they still not given equal opportunities in disaster response and management? How can we address the gap in political will to bring women into leadership roles?
A2: It is crucial to incorporate women into all levels of disaster management, ensuring their voices and leadership are valued. Addressing the gap in political will involves advocating for gender-inclusive policies, promoting women's leadership, and creating opportunities for women to participate in decision-making processes.

Q3: Following the earthquake, a blanket approach was adopted for housing reconstruction. However, it is now suggested that housing designs should be made inclusive, ensuring they accommodate the diverse needs of all community members, including vulnerable groups.
A3: Only 22% of houses are constructed using RCC (Reinforced Cement Concrete), while the remaining houses are built with various other materials. However, the strength and resilience of a house depend not only on the materials used but also on proper planning, design.

Chair: Shakti Gurung, Deputy Chair, DPNet Nepal

The session underscored the importance of strengthening emergency preparedness, disaster response, and recovery through structured frameworks and standardized guidelines. The assessment of local municipalities highlighted gaps in legal frameworks, infrastructure, information management, equipment, and personnel, emphasizing the need for dedicated emergency operation centers, improved communication systems, and trained responders. The implementation of the National Building Code (NBC) remains inconsistent, particularly in rural areas, requiring better enforcement, standardized approval processes, and community awareness. Challenges in disaster response persist due to unclear roles, inadequate resources, poor coordination, and lack of adherence to global humanitarian standards. Addressing these issues requires developing national relief guidelines, establishing a centralized disaster database, enhancing capacity-building initiatives, and ensuring formal policy approval for relief distribution to improve overall disaster resilience.

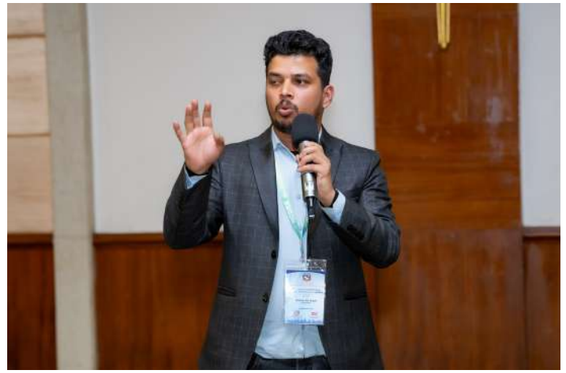
Technology, Innovation and Science in DRR

Program Focus: Monsoon 2024: Citizen Science, Community Resilience, and Blockchain Innovation in DRR

Er. Suresh Raut, Chief of Infrastructure Development and Environment Management Section and DRR Focal Person, Bhimeshwor Municipality / Suraj Gautam, Executive Director, IHRR

Citizen Science Approaches and Initiatives

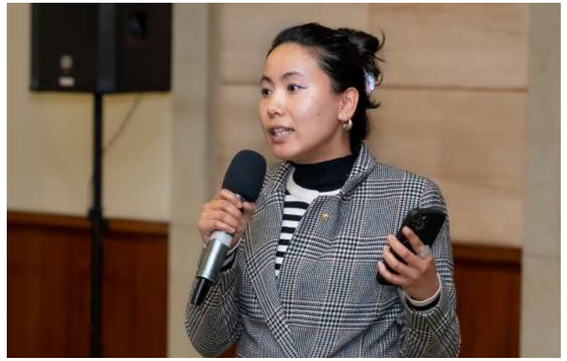
Suresh Raut and Suraj Gautam presented a case study focused on landslide and flooding-prone regions, highlighting the challenges of using expensive technologies and the lack of GPS-enabled solutions. In response to these challenges, innovative low-cost hardware solutions were introduced, such as recycled soda bottles for rainfall measurement, which demonstrated over 95% accuracy in a five-year Kathmandu study, painted bamboo for water level measurement, and float balls for velocity assessment. Smartphones were also leveraged for efficient data collection and uploads. The impacts of these innovations were significant, as citizen scientists were able to collect localized data that revealed variations in rainfall intensities within small areas, such as a 5 km radius in Bhimeshwor municipality. Additionally, their efforts also contributed in the validation of Department of Hydrology and Meteorology (DHM) forecasts through daily comparisons, enhancing decision-making for monsoon preparedness, crop cultivation, transportation, and school closures. Scaling efforts included the implementation of Impact-Based Forecasting (IBF), integration with the Municipal Emergency Operations Center (MEOC), deployment of FM radio stations, and outreach programs in schools. To enhance citizen science and community resilience, recommendations include expanding the use of low-cost solutions to additional high-risk areas, improving training programs for citizen scientists with a focus on smartphone-based data collection, and broadening outreach efforts to include more local languages and radio channels for effective dissemination of disaster information.



Nishan Kr Aryal, National IMO, NHSRP/CRS

Strengthening Community Resilience Through Community-Led Participatory Techniques

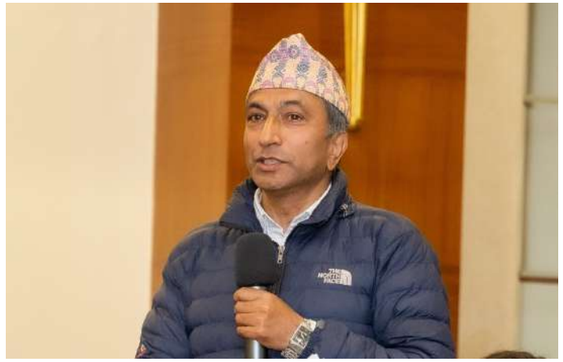
Nishan Kr Aryal emphasized the importance of strengthening community resilience through participatory mapping and local engagement strategies. The core pillars of resilient communities were identified as inclusivity, preparedness, sustainability, collaboration, adaptability, and cultural relevance. Engaging all community members ensures that risks and response strategies are well understood, while leveraging local resources enhances sustainability. Critical resource mapping efforts focused on identifying essential resources such as water sources, open spaces, health centers, and hazard evacuation points, with tools including remote mapping through satellite imagery and field mapping via aerial and drone surveys. The key outputs of these efforts included risk information dissemination, integration with Management Information Systems (MIS), and effective community utilization of gathered data. The recommendations for improving resilience efforts include enhancing resource management, fostering partnerships for more collaborative decision-making, and ensuring community members are well-educated on risks and response strategies. Strengthening disaster risk communication through media partnerships and educating communities on evacuation protocols were also emphasized to bridge community knowledge with technology effectively.



Alina Karki, Program Coordinator, Climate Action and Innovation, Danish Red Cross

Use of Blockchain Technology to Fast-Track Early Action Activation

Alina Karki presented the application of blockchain technology in disaster risk reduction, focusing on its potential to fast-track early action activation. The challenges addressed included short lead times for early actions, the need for efficient data management, and effective communication of early warnings. The RAHAT app was introduced as an innovative solution with multiple modules such as the Household Data Management Module, Multi-Signatory Trigger Activation Module, Early Action Tracking and Reporting Module, and a Communication Module. Blockchain technology was employed as a transparent and decentralized digital ledger, with smart contracts facilitating automated risk communications. However, implementation challenges such as the requirement for consistent internet access and the limited active use of dashboards outside activation phases were identified. The use of blockchain also enabled unique recipient identity generation, multi-signatory processes for accountability, and zero-knowledge proofs for secure data sharing. To enhance the effectiveness of blockchain solutions, recommendations included developing offline capabilities to mitigate reliance on internet connectivity, embedding blockchain solutions within existing organizational systems for seamless integration, and scaling blockchain usage for multi-layered decision-making processes to ensure transparent and efficient early actions. Additionally, flexibility in disaster response protocols and timely updates to national and local disaster management platforms were suggested to optimize the effectiveness of blockchain applications in disaster management.



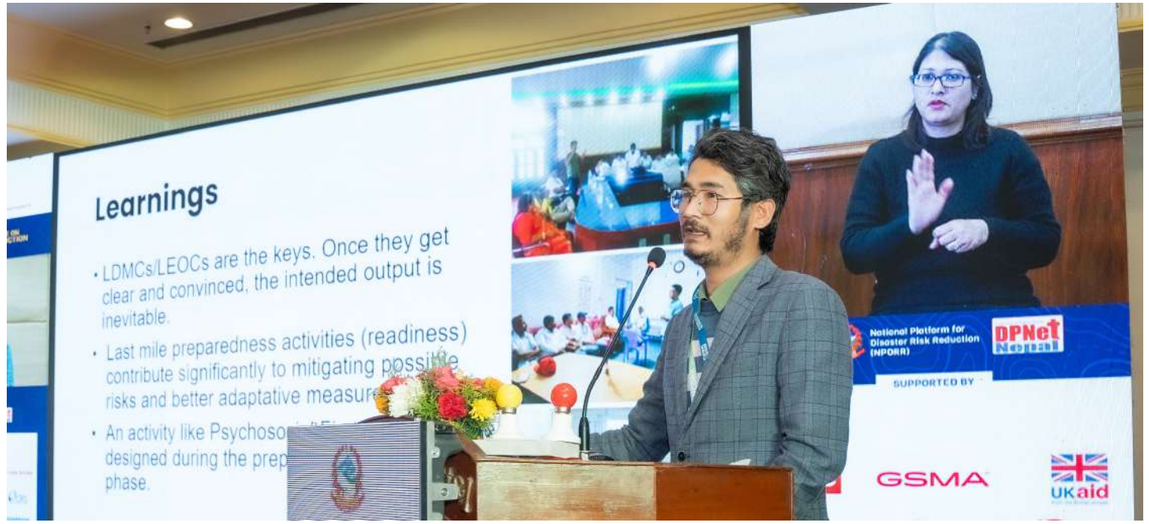
Chair: Dinanath Bhandari, Technical Advisor, DPNet Nepal

The presentations highlighted innovative approaches to disaster risk reduction, focusing on citizen science, community-led resilience strategies, and blockchain technology. Citizen science initiatives showcased cost-effective tools such as recycled soda bottles for rainfall measurement, painted bamboo for water level monitoring, and smartphone-based data collection, enabling communities to generate localized disaster data. These grassroots efforts helped validate meteorological forecasts and improve decision-making for monsoon preparedness, agriculture, and emergency planning. Scaling strategies included the implementation of Impact-Based Forecasting (IBF), integration with monitoring systems, and outreach through FM radio stations and schools. Expanding citizen science efforts, strengthening training programs, and enhancing disaster information dissemination in local languages were recommended to further improve resilience.

Community resilience strategies emphasized participatory mapping and local engagement as key tools for disaster preparedness. By mapping essential resources like water sources, evacuation points, and health centers, communities could better integrate risk data into decision-making systems. Strengthening disaster risk communication through media partnerships and educational programs was highlighted as crucial. Additionally, the use of blockchain technology for early action activation was explored. Challenges such as internet dependency and limited dashboard usage outside activation phases were acknowledged, with recommendations to develop offline capabilities and integrate blockchain solutions into existing disaster management platforms. Across all approaches, the importance of accessibility, collaboration, and technology integration was emphasized to enhance disaster preparedness and response.

Lightening Session II: Collaborative Strategies for Resilient Governance and Private Sector Engagement in Monsoon Disaster Management 2024

The lightning session was introduced by the Mr. Suraj Gautam, who stated that various exercises related to monsoons had been discussed. A total of four topics were presented, each focusing on critical aspects requiring attention.



Mr. Phurba S. Moktan, Act. STA-DRM & CCA (TA-WASH) &
Mr. Vijay Raj Pant, Humanitarian Response Manager,
Plan International

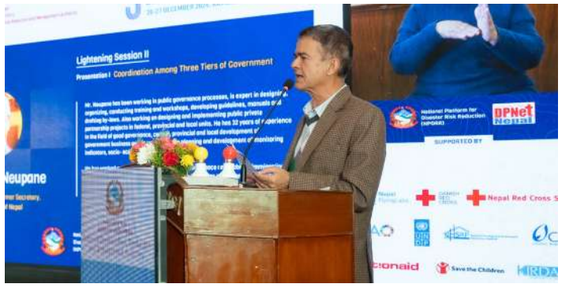
AA in Monsoon Flood 2024: Reflection and learning

A short 45-day anticipatory action project in Banke and Bardiya, supported by Start Fund, reached 1,750 households directly and impacted 8,000 people. Readiness actions, safeguarding, and psychosocial first aid were emphasized, ensuring inclusivity. Collaboration with six Palikas enabled implementation.

Key findings highlighted the crucial role of LDMCs and LEOCs, with effectiveness depending on clear forecasts. Last-minute preparations mitigated risks, and psychosocial preparedness was essential. However, forecast inaccuracies created challenges, leading to uncertainty in decision-making. Despite DHM issuing a red alert, activation hesitancy persisted due to ambiguity.

KEY TAKEAWAY MESSAGES

- **Reliable Forecasting:** Accurate forecasts are essential for effective anticipatory action.
- **Clear Activation Guidelines:** A government-mandated system is needed to standardize response activation.
- **Leadership Strengthening:** Strong local leadership is crucial for successful implementation.
- **Readiness Actions Save Lives:** Last-mile preparedness minimizes disaster impact.
- **Inclusive Approach:** Special focus on women, girls, and marginalized groups enhances resilience.
- **Institutional Integration:** Disaster preparedness should be incorporated into college DPRPs.



Mr. Kedar Neupane, DPNet Advisor and Former Secretary of the Government of Nepal

Coordination Among Three Tiers of Government

The constitution grants all three levels of government authority over disaster risk management (DRM), but coordination among them remains weak. The federal government is well-represented in discussions, while local and provincial governments are underrepresented, highlighting inefficiencies at the provincial level. DRM efforts focus primarily on post-disaster relief rather than proactive measures, with risk transfer mechanisms and insurance policies lacking implementation.

Despite advancements in early warning systems, climate change has intensified disaster impacts. A shortage of evacuation centers disrupts education, as schools and offices serve as temporary shelters. Man-made disasters now exceed natural ones due to unsafe development practices, and crucial preparedness messages fail to reach grassroots communities. Strengthening intergovernmental coordination and ensuring the 24/7 availability of the NDRF have been recommended.

KEY TAKEAWAY MESSAGES

- **Strengthen Intergovernmental Coordination:** Improve collaboration across all three government levels.
- **Shift Focus to Proactive DRM:** Emphasize preparedness over post-disaster relief.
- **Enhance Risk Transfer Mechanisms:** Ensure sustainable Palika-level insurance policies.
- **Upgrade Early Warning Systems:** Increase sophistication for better disaster response.
- **Establish Permanent Evacuation Centers:** Reduce disruptions to education.
- **Address Man-Made Disaster Risks:** Promote safer development practices.
- **Improve Grassroots Awareness:** Ensure disaster preparedness messages reach vulnerable communities.
- **Ensure 24/7 NDRF Availability:** Strengthen disaster response efficiency.

Mr. Kishor Neupane, Faculty member, ICMS

Connection between disasters and Mental Health

Disasters cause both direct and indirect psychological trauma, leading to anxiety, fear, and depression if left unaddressed. Psychological first aid is crucial in mitigating long-term mental health issues. Trained individuals, even without psychiatric expertise, can provide effective psychological support through a structured one-hour intervention based on the 3L principle (Look, Listen, Link).

KEY TAKEAWAY MESSAGES

- Disasters trigger significant mental health impacts that require attention.
- Psychological first aid is essential and can be delivered by trained individuals.
- The 3L Principle (Look, Listen, Link) effectively addresses distress in disaster settings.
- The RAPID (Reflective Listening, Assessment, Planning, Intervention, Disposition) process promotes long-term resilience by preparing individuals for future challenges.
- Integrating mental health into DRM enhances overall disaster response effectiveness.

Mr. Pramod Adhikari, Nepal Red Cross Society

Anticipation and Early Responses during Monsoon 2024: Activation of Monsoon 2024

He focused on anticipatory action, highlighting that activation had been primarily led by Palikas, with support from the Nepal Red Cross Society. The early action protocol had been implemented in two stages. The first activation had taken place on September 3, based on DHM's forecast for the Babai River. The predefined trigger statement by Palikas had been used to initiate activation. The second stage occurred on September 26, when DHM had issued a special bulletin forecasting floods. To validate the forecast, another bulletin had been released on September 27, highlighting affected areas in Banke and Bardiya. Following this, activation had been officially executed on September 26.

KEY TAKEAWAY MESSAGES

- Early warning systems are essential but require accurate forecasting to maintain credibility.
- Recurring False Alarms reduces the credibility of forecasts, potentially leading to a loss of community trust and cooperation
- Trigger thresholds should be periodically updated to reflect changing impact levels.
- Anticipatory action remains a no-regret approach, prioritizing early evacuation for safety.
- Strengthening community resilience is key to ensuring effective disaster preparedness.

CLOSING CEREMONY

Mr. Shankar Prasad Koirala, Former Secretary of GoN, & Advisor, DPNet-Nepal

Mr. Shankar Prasad Koirala, delivered his remarks with heartfelt gratitude towards DPNet-Nepal for organizing this significant conference. He emphasized that over the two days, participants delved deeply into various aspects of disaster management and risk reduction, with valuable presentations providing insights and future directions. He extended his appreciation to all presenters for their successful contributions, which he believes will guide and encourage stakeholders in the days to come.

- **Institutional Reform:** Restructure NDRRMA, enforce stricter policies, and update strategies based on emerging disaster trends.
- **Resource Coordination:** Address uneven resource distribution among palikas through mutual aid and resource pooling.
- **Risk Transfer Insurance:** Implement a structured disaster insurance system for better financial preparedness.
- **Capacity Building:** Establish standardized training programs with accredited guidelines.
- **One-Door Policy:** Improve implementation for better disaster response coordination.
- **Relief Coordination:** Streamline efforts to prevent resource shortages and overlapping interventions.
- **Research & Data:** Shift focus from secondary data to primary research for real-time disaster insights.
- **Human Capital:** Strengthen disaster response through dedicated and motivated personnel.

Concluding remarks from Dr. Bhisma Kr. Bhusal

Dr. Bhusal, in his concluding remarks, reflected on the evolving journey of Nepal's disaster management efforts. He acknowledged that the NDRRMA is still in its formative years, having been established just five years ago. However, he emphasized that the existing challenges should not be seen as failures but rather as an opportunity to refine the system. The main problem isn't just a lack of resources or policies but the limited coordination among stakeholders, making it hard to work together and implement disaster management strategies effectively.

Considering the impacts of monsoon triggered disasters and Earthquakes in Nepal, it is very important to prioritize the reconstruction and recovery efforts. While disaster preparedness and response mechanisms have been prioritized, the long term process of rebuilding communities and infrastructure has not received the same level of focus. Dr. Bhusal stressed that Nepal must move beyond short-term responses and integrate comprehensive recovery planning into its disaster governance framework. He highlighted the need for stronger coordination, legal mandates, and institutional support to ensure that recovery is not treated as an afterthought but as an integral part of disaster management. Additionally, he pointed out the challenges in human resource capacity, urging for more trained professionals dedicated to this sector.

Despite the challenges, Dr. Bhusal stayed hopeful about the future and called for a team effort to improve Nepal's disaster management. He stressed that no single entity can handle disaster management alone; it needs cooperation from the government, development partners, and local communities. He urged everyone to work together in a unified way to help Nepal become more resilient and prepared. His final message was a call to act—overcome institutional weaknesses, build trust, and create a system that focuses on preparedness, early action, quick response and effective long-term recovery, making Nepal more disaster-resilient.

Formal Closing speech by Dr. Raju Thapa

In his formal closing speech, Dr. Raju Thapa emphasized that the main objective of the conference was to share learnings and review the impacts of the monsoon, especially since this year's rainfall was higher than in previous years. He highlighted that such situations could recur in the future, making it essential to have a platform for collaboration. Dr. Thapa assured that a proceeding would be developed from the valuable insight gathered during the conference, which would be compiled into a formal document. He further stressed the collective responsibility in DRR, urging everyone to work towards a common goal.

Dr. Thapa proposed the creation of a Position Paper and official statement from the crux of 3rd NCDRR that would be accepted to all stakeholders, which could then be presented to the Global Platform for Disaster Risk Reduction. He concluded by thanking the team for their tireless efforts in organizing the event and thanking participants and all stakeholders who directly and indirectly contributed to make the event grant success and officially declared the conference closed, promising that all would come together again for the 4th NCDRR next year.

RECOMENDATIONS

- Strengthen existing DRRM Act by clarifying roles and responsibilities, ensuring that all levels of government and stakeholders can coordinate effectively.
- Establish specialized units within the disaster authority to handle loss and damage assessment, recovery, and reconstruction, including a dedicated research division.
- Adopt inclusive measures so that women, people with disabilities, and marginalized groups actively shape disaster risk policies, preparedness, and response.
- Align climate change adaptation and disaster risk management priorities by promoting joint initiatives, shared data, and integrated funding mechanisms.
- Improve forecasting accuracy through enhanced meteorological stations, expanded citizen science initiatives, and collaboration with academic institutions on localized risk assessments.
- Institutionalize regular simulation exercises and training programs, from community to federal levels, focusing on specialized search-and-rescue capabilities and preparedness.
- Enforce safe construction practices by updating building codes, engaging local governments for inspection, and offering incentives for resilient infrastructure.
- Invest in advanced technologies like drones, satellite imagery, and real-time data platforms for early warning systems, coordinated through provincial and local disaster hubs.
- Expand risk transfer initiatives, including parametric insurance for high-risk areas, to reduce the economic burden on disaster-affected communities.
- Mobilize and pre-position essential relief supplies in provincial warehouses with streamlined procurement policies to expedite response during emergencies.
- Foster reliable public communication through clear, multilingual alerts and accessible forecasting platforms that accommodate diverse user needs.
- Promote closer collaboration between government agencies, civil society, and private entities, supported by agreed-upon standards and protocols to avoid duplication of efforts.
- Integrate mental health support into disaster response through trained personnel, safe spaces, and consistent follow-up care for survivors and rescuers.
- Strengthen post-disaster recovery governance by empowering district coordination committees to supervise local reconstruction and relocation programs.
- Expand investment in long-term resilience measures, focusing on sustainable agricultural practices, urban flood control, and community-driven adaptation planning.

EXIHIBITION DETAILS

Third National Conference on Disaster Risk Reduction, Day 1

Time	Session Title	Organization	Speakers
9:30 - 10:00	Registration		
Opening Ceremony			
10:00 - 10:10	Welcome Remarks		
10:10 - 10:20	Context Setting, Objective, About NCDRR		
10:20 - 10:35	Monsoon 2024 in Nutshell	Technical Advisor, DPNet Nepal	Mr. Ram Pd Bhandari
10:35 - 10:50	Strengthening NDRRMA Institutional Capacity	Executive Chief, NDRRMA	Dr. Bhisma Kr. Bhusal
10:50 - 11:05	Remarks from Chief Guest	Hon'ble Home Minister, Ministry of Home Affairs	Hon'ble Home Minister, Ramesh Lekhak
11:05 - 11:10	Closing Remarks of Opening Session		
11:10 - 11:15	Technical Session I: Understanding Risk: Monsoon 2024 in Glance		
11:15-11:25	Chair: Prof. Dr. Bishal Nath Upreti		
11:25 - 11:45	Key Note Presentation: HydroMeteorological Disasters in Monsoon 2024	Senior Divisional Meteorologist, Department of Hydrology and Meteorology DHM	Ms. Shanti Kandel
		Hydrologist, Department of Hydrology and Meteorology DHM	Er. Sagar Mishra
11:45 - 11:55	Presentation I: Geo-Hazards during Monsoon 2024	Senior Divisional Geologist, Department of Mines and Geology	Mr Shiva Baskota
11:55 - 12:05	Presentation II: Lightning Impacts	Chairperson, South Asian Lightning Network (SALNet)	Dr. Shriram Sharma
12:05 - 12:20	Spotlight Session I		
13:20 - 13:25	Chair: Dr. Meen Bahadur Poudyal Chhetri		
13:25 - 13:35	Inclusive Approach in Climate Change & DRR	GESI officer CDMS / WHDRRP	Ms. Bandana Rana Magar
13:35 - 13:50	Analyzing the Impact of Monsoon Disasters on Nepalese Agriculture	Emergency Specialist UN FAO	Dr. Hari Vajja Emergency Specialist UN FAO
13:50 - 14:00	Five lessons to be learnt from the monsoon 2024 disasters	Senior Researcher, Urban & Disaster lead, Southasia Institute of Advanced Studies (SIAS)	Dr. Dilli P. Poudel

Time	Session Title	Organization	Speakers
Panel Discussion I: Monsoon Experience from Local Government			
14:00 - 14:05	Chair: Dr. Basanta Raj Adhikari		
14:05 - 14:35	Panelist I:	Chairperson, Sunkoshi Rural Municipality, Sindhuli	Ms. Deepa Bohora
	Panelist II:	Chairperson Roshi Rural Municipality	Mr. Dinesh Lama
	Panelist III:	Mayor, Bheri Municipality	Mr. CP Gharti
14:35 - 14:50	Q&A		
Panel Discussion II: Learning from Monsoon Response Experiences			
15:00 - 15:05	Chair: Ex-IGP ICMS Sanat Basnet, Ex-IGP, APF/Chair, ICMS		
15:05 - 15:45	Panelist I	Brigadier General, Nepal Army	Mr. Bishnu Khadka
	Panelist II	SSP, Nepal Police	Mr. Bishwa Adhikari
	Panelist III	SP, APF	SP Nirmal Khadka
	Panelist IV	Executive Director, Nepal Red Cross Society	Mr. Umesh Dhakal
15:45 - 16:00	Q&A		
Panel Discussion III: Sectoral Learnings: Anticipation, Impacts and Response during Monsoon			
16:00 - 17:00	Chair: Mr. Pitambar Aryal, PhD Scholar, Kathmandu University and DPNet Advisor		
	Panelist I: Road Safety & Infrastructure	Transport / Infrastructure Expert	Mr. Ashish Gajurel
	Panelist II: Education	Vice President, National Campaign for Education Nepal (NCE Nepal)	Ms. Santona Devkota
	Panelist III: Health	Section Chief, Disease Surveillance & Research Section, EDCD	Mr. Sagar Dahal
	Panelist IV: Voices from Community	Chairperson, NCDMC	Mr. Jagannath Kurmi
	Q&A		
Third National Conference on Disaster Risk Reduction | Day 2			

Time	Session Title	Organization	Speakers
9:30 - 10:00	Registration		
10:00 - 10:10	Brief of Day 01		
Spotlight Session II: Cloudburst Event 2024			
10:10 - 10:15	Technical Session II: Learnings from cloudburst Event 2024 Session		
10:15 - 10:20	Video		
10:20 - 10:35	Key Note Presentation on IBF and Cloudburst Event	Department of Hydrology & Meteorology	Ms. Shanti Kandel
10:35 - 10:45	Presentation I: Experiences from DRR / IT Focal Persons	Dodhara Chandani Municipality Bheemdatta Municipality	Mr. Amrit B.K. Mr. Binay Kalauni
10:45 - 10:55	Presentation II: AA Activation, Cloudburst Event and Lesson learnt	NAXA / IHRR / DCA / NNSWA / Viamo	Ms. Anusha Pandey Mr. Shudarshan Hamal
	Video Presentation		
Panel Discussion Session IV: Voices from Stakeholders Voices from the Community, Municipality, EOCs			
10:55 - 11:00	Chair: Mr. Dinesh Gurung		
11:00 - 11:40	Panelist I: DHM Mahakali Basin office		Mr. Sanjay Sah
	Panelist II: Mayor, Dodhara Chandani		Mr. Kishor Limbu
	Panelist III: Mayor, Bheemdatta		Mr. Padam Bogati
	Panelist IV: Deputy Mayor, Bheemdatt		Ms. Neelam Lekhak Joshi
	Panelist V: CDMC Member		Ms. Laxmi Bhatt
11:40 - 11:55	Q & A		
Lightening Session I			

Time	Session Title	Organization	Speakers
12:00 - 12:20	Presentation I: Risk Assessment and Visualization: Lessons from Nepal	NAXA	Ms. Biddya Bhandari
	Presentation II: Risk Assessment and Visualization: Lessons from Bangladesh	Field Ready Bangladesh / NAXA	Prof. Dr. Abul Hasnat Muhammad Solaiman, S M Anamul Arefin
	Presentation III: Urban Flooding	Researcher	Mr. Aparajit Koirala
Lightening Session II: Collaborative Strategies for Resilient Governance and Private Sector Engagement in Monsoon Disaster Management 2024			
13:20 - 13:50	Chair: Mr. Surya Bdr Thapa, Immediate Chair, DPNet Nepal		
	Presentation I: Coordination Among Three Tiers of Government	DPNet Advisor & Former Secretary. Government of Nepal	Mr. Kedar Neupane
	Presentation II: Exploring the Link Between Disasters and Mental Health	Campus Chief ,The Institute of Crisis Management Studies	Dr. Kishor Adhikari
	Presentation III: Anticipation and Early Responses during Monsoon 2024: Activation of Monsoon 2024	AA Coordinator Nepal Redcross Society (NRCS)	Mr. Pramod Adhikari
	Presentation IV: AA in Monsoon Flood 2024: Reflection and learning	Act. STA-DRM & CCA (TA-WASH), Plan International	Mr. Phurba Sange Moktan
		Humanitarian Response Manager Plan International	Mr. Vijay Raj Pant
Technical Session III: Accelerating actions for a sustainable future			
Parallel Session A: Ground Experiences, Early Warning System and Risk Transfer Mechanisms			
14:00 - 14:05	Chair: Tirtha Raj Joshi	Former Chief of Party, USAID Disaster Risk Management Project	
14:05 - 14:15	Presentation I: Ground Level experiences and lessons learned regarding DRR and this year's floods and landslides	News Coordinator, Kantipur Television	Mr. Ram Krishna Bhandari
14:15 - 14:25	Presentation II: Risk Transfer Mechanism in Karnali Province	Administrative Officer of the DRR section, Ministry of Internal Affairs and Law (MoIAL), Karnali province	Ms. Kamala Yogi

Time	Session Title	Organization	Speakers
14:25 - 14:35	Presentation III: Leveraging EWS and CDRI	Thematic Lead- Climate and Resilience. Practical Action	Dr. Dharam Raj Upreti
14:35 - 14:45	Q & A		
Parallel Session B: Anticipatory Action, Media Insights, and Governance Solutions			
14:00 - 14:05	Chair: Mr. Laxmi Narayan Parajuli		
14:05 - 14:15	Presentation I: Anticipatory Action to Landslides	Program Coordinator & DRM Focal Person Community Self Reliance Centre (CSRC)	Mr. Gopal Krishna Basnet
14:15 - 14:25	Presentation III: Monsoon & Earthquake Recovery from Media Lens	Senior Journalist, and Founder/Editor, News Agency Nepal (NAN)	Ms. Krishna Poudel
14:25 - 14:35	Presentation III: Strengthening Private Housing Recovery and Reconstruction Governance: Lessons from Floods, Landslides, and Earthquakes recovery challenges	National Technical coordinator, National Housing and settlements Resilience Platform (NHSRP)	Mr. Rijan Gajurel
14:35 - 14:45	Q & A		
Parallel Session C: Governance Insights, Community Involvement, and International Standards			
15:00 - 15:05	Chair: Ms. Shakti Gurung, Deputy Chair, DPNet		
15:05 - 15:15	Presentation I: Findings and Insights from Local Government EPR Reports	Under Secretary/Spokesperson and Information Officer, NDRRMA	Dr. Dijan Bhattarai
15:15 - 15:25	Presentation II: Community Volunteers for Building Code Compliance	CBDRM Expert	Mr. Bijay Krishna Upadhyay
15:25 - 15:35	Presentation III: Application of Sphere Standards in Disaster Management	Technical Advisor, DPNet Nepal	Mr. Ram Kr. Gurung
15:35 - 15:45	Q & A		

Time	Session Title	Organization	Speakers
Parallel Session D: Technology, Innovation and Science in DRR			
15:00 - 15:05	Chair: Mr. Dinanath Bhandari		
15:05 - 15:15	Presentation I: Citizen Science Approaches and Initiatives during Monsoon 2024	Chief of Infrastructure Development and Environment Management Section and DRR Focal Person, Bhimeshwor Municipality, Executive Director, IHRR	Mr. Suresh Raut / Mr. Suraj Gautam
15:15 - 15:25	Presentation II: Strengthening Community Resilience Through Community-Led Participatory Mapping Techniques	National IMO, NHSRP/CRS	Mr. Nishan Kr Aryal
15:25 - 15:35	Presentation III: Use of block chain technology to fast track early action activation	Program Coordinator - Climate Action and Innovation · Danish Red Cross	Ms. Alina Karki
15:35 - 15:45	Q & A		
15:45 - 16:00	Reflections from Parallel Session		
16:00 - 16:30	Closing Ceremony		Mr Shankar Prasad Koirala Dr Bhisma Kr Bhusal Dr Raju Thapa

SUPPORTED BY