brac

ISCG INTER SECTOR COORDINATION GROUP | Rohingya Refugee Response Bangladesh

Compendium on Disaster Risk Management Best Practices

Multi-Stakeholder Approaches from Cox's Bazar: Rohingya Camps & Host Communities

BRAC HUMANITARIAN CRISIS MANAGEMENT PROGRAMME

Cox's Bazar

COMPENDIUM ON DISASTER RISK MANAGEMENT BEST PRACTICES

Multi-Stakeholder Approaches from Cox's Bazar: Rohingya Camps & Host Communities

Prepared by

Humanitarian Crisis Management Programme (HCMP), BRAC,
In Collaboration With ISCG

Concept and Contributors Team

Tanoy Dewan
Md Khairul Bashar
Mohammed Abdul Halim Farazi
Tania Akter
Sharmin Sultana Sohani
AKM Najmul Hoque
BRAC HCMP
Dr. Md. Mostafizur Rahman
Md. Abdul Hamid
Mohammad Mizanur Rahman
Md. Musfikur Rahman
H.M. Masudur Rahman
GRM Consulting Services Ltd.

Overall Coordination

Md. Tanjimul Alam Arif
Emergency Preparedness and Response Coordinator
Inter-Sector Coordination Group (ISCG)

Overall supervision and Guidance

Rezaul Karim
Associate Director & Office in Charge
BRAC Humanitarian Crisis Management Programme

Funded by

Australian Aid

Disclaimer

The information, analysis, and recommendations presented in this compendium are based on data collected through field visits, key informant interviews, focus group discussions, stakeholder consultations, and a review of secondary documents from government agencies, UN bodies, ISCG, INGOs, NGOs, humanitarian organisations, Red Cross and Red Crescent Movement, and community structures. While every effort has been made to ensure accuracy and reliability, the findings and interpretations are subject to the limitations of available data and contextual constraints.

The views expressed in this publication do not necessarily reflect the official policies or positions of all participating agencies, institutions, or stakeholders engaged in the Disaster Risk Management (DRM) ecosystem in Cox's Bazar. BRAC and DFAT assume no responsibility for any unintended consequences arising from the use or interpretation of this material. Any errors or omissions are unintentional and remain the sole responsibility of the authors.

Note: The practices were included this document shared by stakeholders and are attributed to specific locations to indicate areas of implementation. However, similar practices may also be implemented in other camps or locations by the same or different agencies. The geographical references are therefore indicative and do not limit the applicability of the practices to those areas alone. Moreover, Few practices are initiated and implemented jointly.

Acknowledgements

BRAC Humanitarian Crisis Management Programme (HCMP) extends its sincere appreciation to the wide range of partners and stakeholders who contributed to the development of this compendium. We are grateful to the Office of the Refugee Relief and Repatriation Commissioner (RRRC), the Ministry of Disaster Management and Relief (MoDMR), Department of Disaster Management (DDM), District/Upazila/Union and Ward Disaster Management Committees (DMC), and the Cyclone Preparedness Programme (CPP) for their guidance, insights, and field-level perspectives.

We also acknowledge the valuable contributions of the sectors under Inter-Sector Coordination Group (ISCG), EPR WG and humanitarian agencies including UN, Red Cross and Red Crescent Movement, INGOs, NGOs, other stakeholders and community-based organisations working across Cox's Bazar. Their continued collaboration has been essential in identifying and validating the best practices documented here.

Our deepest appreciation goes to the Rohingya volunteers, women-led groups, community disaster committees, Site Management Support teams, and members of the host communities whose lived experiences, knowledge, and engagement form the foundation of this compendium.

BRAC gratefully recognises the technical support provided by GRM Consulting Services Ltd., whose team assisted in data collection, analysis, and documentation throughout the compendium development process.

Finally, we acknowledge the dedication of the BRAC HCMP DRR team for their leadership, coordination, and commitment to strengthening inclusive, community-driven disaster risk management in Cox's Bazar.

TABLE OF CONTENTS

ACRONYMS AND ABBREVIATIONS

BDRCS	Bangladesh Red Crescent Society
CBCP	Community-Based Child Protection
CBPC	Community-Based Protection Committees
CBCPC	Community-Based Child Protection Committees
CBO	Community-Based Organisation
CCCM	Camp Coordination and Camp Management
CDD	Centre for Disability in Development
CDMU	Camp Disaster Management Unit
CFW	Cash for Work
CHW	Community Health Workers
CICs	Camp-in-Charges
CPP	Cyclone Preparedness Programme
DC	Deputy Commissioner
DDMC	District Disaster Management Committee
DEM	Digital Elevation Models
DMC	Disaster Management Committee
DRC	Danish Refugee Council
DRM	Disaster Risk Management
DRR	Disaster Risk Reduction
DRU	Dispatch & Referral Unit
DSK	Dushtha Shasthya Kendra
DTWs	Deep Tube Wells
EPR WG	Emergency Preparedness & Response Working Group
EPR TC	Emergency Preparedness & Response Technical Committee
ERT	Emergency Response Team
ESS	Environmental and Social Screening
EWS	Early Warning System
FAO	Food and Agriculture Organisation
FDMN	Forcibly Displaced Myanmar Nationals
FGD	Focus Group Discussion
FSCD	Fire Service and Civil Defence
FSPs	Financial Service Providers
GESI	Gender equality and social inclusion
GIS	Geographic Information System
GoB	Government of Bangladesh
HAP	Humanitarian Assistance Programme
HCMP	Humanitarian Crisis Management Programme
HEOC	Health Emergency Operations Centre
HVN	Humanitarian Volunteer Network
ISCG	Inter-Sector Coordination Group
ICS	Incident Command System
IFRC	International Federation of Red Cross and Red Crescent Societies
INGO	International Non-Governmental Organisation
IOM	International Organisation for Migration
IRC	International Rescue Committee
ISCG	Inter-Sector Coordination Group
JNA	Joint Needs Assessment
KII	Key Informant Interview
LEWS	Landslide Early Warning System
MCI	Mass Casualty Incident
MFFU	Mobile Fire Fighting Unit
MHPSS	Mental Health and Psychosocial Support
MoDMR	Ministry of Disaster Management and Relief
MMT	Mobile Medical Team
NbS	Nature-based solutions
NGO	National Non-Governmental Organisation
NPM	Needs and Population Monitoring
PERU	Protection Emergency Response Unit
PFA	Psychological First Aid
PHC	Primary Health Centre
PSN	Persons with Specific Needs
RCRC	Red Cross and Red Crescent Movement
RRRC	Refugee Relief and Repatriation Commissioner
SCCCM	Site Coordination & Camp Coordination Mechanism
SMS	Site Management Support
SRH	Sexual and Reproductive Health
ToR UN	Terms of Reference
TSS	Temporary Safer Shelter
UAVs	Unmanned Aerial Vehicles
UNHCR	United Nations High Commissioner for Refugees
UNICEF	United Nations Children's Fund
UNO	Upazila Nirbahi Officers
WASH	Water, Sanitation and Hygiene
WFP	World Food Programme
WFS	Women-Friendly Spaces
WG	Working Group
WHO	World Health Organisation
WRA	Women of Reproductive Age
WPE	Women Protection Entities (WPE)

INTRODUCTION

Cox's Bazar, located in southeastern Bangladesh, remains one of the most disaster-prone regions globally, facing frequent and overlapping crises such as cyclones, floods, landslides, fires, and disease outbreaks. These hazards, compounded by the presence of over 1.17[1] million Rohingya refugees, place immense pressure on both the refugee population and host communities. The vulnerability of these communities to such disasters is heightened due to factors like overcrowded settlements, weak infrastructure, and limited access to essential resources and services. As a result, effective Disaster Risk Management (DRM) is vital for ensuring the safety, resilience, and well-being of both refugees and host Populations.

In response to these ongoing challenges, a collaborative approach involving government agencies, humanitarian organisations, and community actors has been developed to mitigate disaster risks and improve preparedness. This Best Practices of DRM Compendium captures and documents the successful DRM practices implemented across various sectors and agencies in Cox's Bazar. It emphasises the integration of disaster preparedness, environmental sustainability, community engagement, and coordination mechanisms that have proven to enhance resilience, particularly in high-risk zones.

This compendium draws upon a diverse range of approaches, from slope stabilisation to fire preparedness drills, waste management initiatives, and community-led relocation programs. These initiatives have been carefully selected for their relevance, impact, and scalability, providing a valuable resource for stakeholders involved in disaster risk reduction and management. Through detailed case studies, this document highlights practical methodologies, lessons learned, and outcomes that have successfully contributed to improving disaster resilience in the region.

The compendium also underscores the importance of multi-stakeholder collaboration, community involvement, and inclusive practices, ensuring that the most vulnerable populations—such as women, children, the elderly, and persons with disabilities - are effectively included in DRM strategies. By documenting these best practices, the compendium serves as a strategic knowledge product for strengthening DRM efforts in Cox's Bazar and offers adaptable models for replication in other disaster-prone regions.

This document aims to provide actionable insights and foster cross-sectoral learning, helping policymakers, humanitarian practitioners, and community leaders to adopt effective, evidence-based DRM approaches. The goal is to continue building resilient communities capable of withstanding the challenges posed by recurrent and increasingly frequent natural hazards.

1. https://data.unhcr.org/en/country/bgd , 30 Nov 2025

OBJECTIVES

The overarching objective of this assignment is to develop a comprehensive, evidence-driven compendium of best practices in Disaster Risk Management (DRM), capturing the multi-stakeholder approaches applied in Cox's Bazar. The compendium will place particular emphasis on both the Rohingya refugee and Host community contexts. It will serve as a strategic knowledge product to guide planning, coordination, and capacity development among humanitarian, governmental and community actors working in disaster-prone and displacement-affected areas.

Specific Objectives

1. To document context-specific DRM best practices implemented by government agencies, humanitarian organisations and community structures across key thematic areas. These include preparedness, early warning systems, anticipatory actions, evacuation planning, shelter management, water, sanitation and hygiene (WASH), infrastructures for public purposes such as health, education and cyclone/emergency relocation shelters infrastructures, and facilities and risk communication.

2. To understand and analyse the current capacities of stakeholders involved in DRM in Cox's Bazar. This includes institutions from the government, United Nations agencies, international and national non-governmental organisations, and community-based groups, with a focus on their roles in collaborative disaster risk governance.

3. To identify existing gaps and emerging opportunities in the DRM framework. Special attention will be paid to issues related to protection mainstreaming, social inclusion, addressing diversity and inclusion aspects in DRM, such as gender, age, and disability, as well as to data management, inter-agency coordination and the potential for scaling successful practices.

4. To develop a compilation of DRM approaches that are adaptable and replicable in other disaster-prone and displacement-affected settings. The compiled version will include practical models, methodologies, and tools relevant to humanitarian response and development planning.

Methodology

Evacuation and Safe Shelter Planning The development of the DRM (Disaster Risk Management) Compendium followed a comprehensive, participatory, and evidence-driven methodology designed to capture best practices across the Cox's Bazar district. This methodology aligned with the ToR, the Inception Report, and the final template for DRM Best Practices shared via KoBo Toolbox. The process aimed to document effective DRM practices while engaging with multi-stakeholder actors involved in disaster preparedness and response in both Rohingya refugee camps and the host communities.

1. **Desk Review and Secondary Data Collection**
   The methodology began with a thorough desk review to gather existing assessments, guidelines, reports, and case studies related to DRM. These included documents from various stakeholders such as the RRRC, ISCG, UN agencies, and other humanitarian organisations. The review also incorporated national and regional DRM frameworks, contingency plans, and reports that highlighted risks and mitigation strategies in Cox's Bazar. This stage helped establish the contextual and institutional background for the identification of best practices.

2. **Stakeholder Mapping and Capacity Assessment**
   An essential part of the methodology was mapping the roles, capacities, and gaps of stakeholders involved in DRM. This included government agencies, UN agencies, Red Cross and Red Crescent Movement, INGOs, NGOs, and community-level actors such as Camp Disaster Management Units (CDMUs) and women-led disaster committees. This mapping identified strengths, limitations, and areas for improvement in DRM systems across various sectors.

3. **Primary Data Collection**
   Primary data was collected through a combination of qualitative research methods including KIIs, FGDs, and field visits to high-risk areas. These methods were designed to capture insights from a wide range of stakeholders:

   • 33 KIIs were conducted with sector leads, government representatives, and key personnel from the UN, Red Cross and Red Crescent Movement, INGOs, NGOs, and community organizations. These interviews helped identify effective DRM practices, coordination mechanisms, and capacity gaps.

   • 10 FGDs were held with community members, including vulnerable groups such as women, elderly persons, and youth. These discussions provided insights into community-level DRM practices, coping mechanisms, and local innovations.

4. **Documentation of Best Practices**
   22 DRM best practices were documented, focusing on the following thematic areas:

   • Early Warning Systems, Anticipatory Action and Risk Communication

   • Evacuation and Safe Shelter Planning

   • Site Risk Mitigation Through Nature-Based Solutions

   • Capacity Strengthening Community Preparedness and Awareness

   • Inclusive Disaster Risk Management

   • Coordination Models in preparatory and response times

   Each best practice was accompanied by a detailed description of the context, implementation process, outcomes, challenges, and lessons learned. The documentation was based on the data collected through desk reviews, KIIs, FGDs, and field visits, ensuring that the practices reflected both the technical and community-level realities of DRM in Cox's Bazar.

5. **Data Analysis and Synthesis**
   Once data was collected, thematic analysis was conducted to identify patterns, successes, and areas for improvement across the documented practices. The analysis focused on the effectiveness, scalability, and sustainability of the practices. Each practice was evaluated on the following criteria:

   • Relevance to the local context

   • Impact on disaster risk reduction

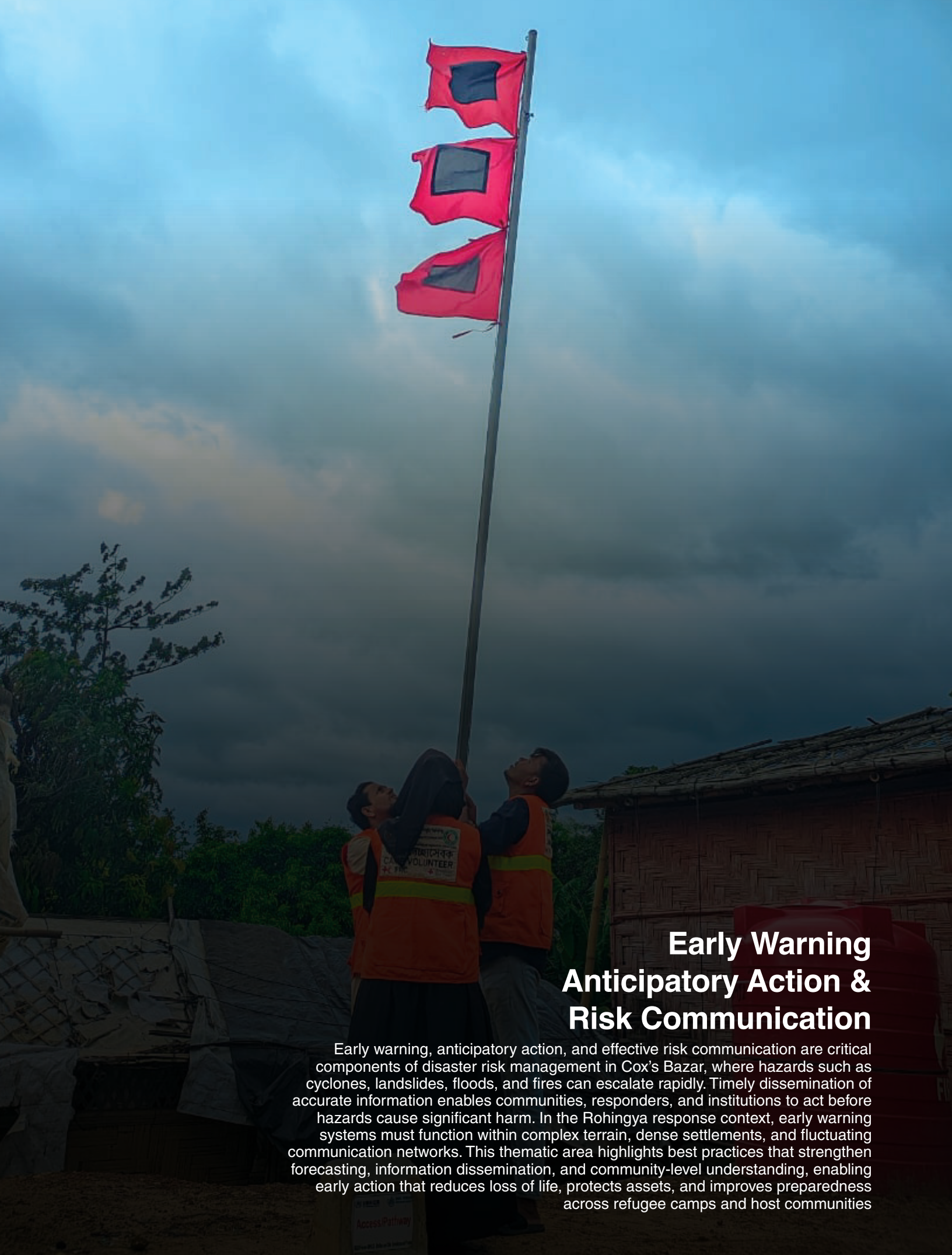
   • Scalability and adaptability in other contexts

   • Inclusivity and participation of vulnerable groups

   The findings from the analysis were used to develop a comprehensive compendium that included actionable recommendations for improving DRM practices.

6. **Validation and Dissemination**
   A validation workshop was held to present the draft compendium to key stakeholders, including government representatives, UN agencies, Red Cross and Red Crescent Movement, INGOs, NGOs, and community members. The workshop provided an opportunity for feedback and refinement of the compendium. The final version was disseminated widely, with a focus on ensuring the uptake of evidence-based recommendations by relevant decision-makers at the national and sub-national levels.

7. **Quality Assurance and Inclusivity**
   To ensure the quality and inclusivity of the process, the methodology incorporated regular feedback loops from stakeholders. This included consultations with government agencies, UN bodies, INGOs, NGOs, and community representatives. GESI were prioritised throughout the data collection and analysis process, ensuring that the perspectives of all community members, including women, children, elderly individuals, and persons with disabilities, were reflected in the compendium.



Early Warning Anticipatory Action & Risk Communication

Early warning, anticipatory action, and effective risk communication are critical components of disaster risk management in Cox's Bazar, where hazards such as cyclones, landslides, floods, and fires can escalate rapidly. Timely dissemination of accurate information enables communities, responders, and institutions to act before hazards cause significant harm. In the Rohingya response context, early warning systems must function within complex terrain, dense settlements, and fluctuating communication networks. This thematic area highlights best practices that strengthen forecasting, information dissemination, and community-level understanding, enabling early action that reduces loss of life, protects assets, and improves preparedness across refugee camps and host communities

01 Replication of Cyclone preparedness Programme (CPP), expansion of national Cyclone Early Warning System (EWS) in camp settlement and further extension of role in multi-hazard risk management: Collective effort towards localising disaster risk management initiatives.

Location: Rohingya Camp

Implementer: BDRCS/IFRC

Collaborating partners: IOM, UNHCR, and SMS (ACTED, Action Aid, BRAC, DRC)

Hazard: Multi-hazard

Introduction

Cox's Bazar camp settlement is currently accommodating more than 1 million displaced people from Rakhine state of Myanmar who are residing over the 33 camp locations of Ukhiya and Teknaf sub-districts of Cox's Bazar. Factoring the multi-hazard risk especially higher exposure to cyclone and associated hazards, BDRCS/IFRC continuously supporting in developing local capacity to handle multi-dimensional crisis situation in camp settlement jointly with Government of Bangladesh (RRRC, CPP), ISCG, IOM, UNHCR, and their site management partners. Since 2018, followed by the replication of cyclone early warning system and expansion of national cyclone early warning system in camp settlement, currently there are around 3,300 Rohingya volunteers who are acting as the camp-based first responders group in all 33 camps who are managed by respective site management supported by AoR agencies (IOM, UNHCR) where BDRCS/IFRC supporting in capacity enhancement through continuous training, orientation, refresher courses on multi-hazard preparedness including early warning, search & rescue, first aid. The volunteers' network in each of the camps are receiving mentorship support by one designated "CPP Camp Focal Point" (who are from adjacent host communities). This hierarchy also encompasses "CPP Camp Supervisors" and "CPP Camp Coordinator" who are working closely with respective site management deployed by CPP/BDRCS/IFRC since 2018. The whole structure including the 3,300 Rohingya volunteers and CPP host community volunteers are working side by side to prepare more than 1 million people residing in camps to combat against camp level adverse situations caused by cyclone, flood, landslide, fire, and others.

Summary

Since 2018, BDRCS/IFRC is engaged as capacity enhancement partner of site management and AoR agencies (IOM, UNHCR) to provide periodic trainings and refreshers courses on Multi-hazard preparedness and response, First Aid, context specific Search and Rescue (SAR), cyclone early warning and anticipatory action and including equipping of up to 3,300 camp volunteers (maintaining these teams at 100 per camp and recruitment and training where there are drop outs) as part of commitment towards localization and developing community capacity through adopting the globally recognized CPP model in all 33 camps of Cox's Bazar camp settlement.

Background

The year 2025 marks the 8th year since nearly 700,000 Rohingya women, men, and children were forced to flee Myanmar due to the outbreak of violence in Rakhine State and moved to Bangladesh. Although successive waves of Rohingya have fled into Bangladesh since 1978, over 1,000,000 Rohingya refugees have presently sought shelter in Cox's Bazar camp settlement. The speed and scale of the refugee influx led to a critical and complex humanitarian emergency in the region while creating the world's most densely populated refugee settlement in 2017 and remains one of the most complex and challenging refugee crises worldwide. The refugee arrivals from Myanmar have been concentrated in two sub-districts (Upazilas) of the district of Cox's Bazar: Ukhiya and Teknaf, which are geographically exposed to cyclone and cyclone associated hazards due to closest proximity to Bay of Bengal.

Considering the risk factor posed by high exposure to cyclone and cyclone associated hazards, and seeing the devastation took place in this region triggered by Cyclone "MORA" on 30 May 2017, the Government

of Bangladesh and humanitarian organizations feel the need of having a systematic and structured cyclone preparedness effort for camp settlement. At the request of the Ministry of Disaster Management and Relief, the CPP began its expansion into the Rohingya refugee camps in February 2018. The entire effort is supported by BDRCS/IFRC maintaining close coordination with RRRC Office, ISCG, IOM, UNHCR, WFP, FAO, UNDP, and Site Management partners in all 33 camps.

Action Taken

- Expansion of CPP activities and training of camp volunteers in camp settlement by CPP and BDRCS encompassing milli-hazard approaches with endorsement and directives of MoDMR and RRRC in all 33 camps.
- CPP trained camp volunteers units were formed by selecting members from the existing Disaster Management/Site Management Support volunteers in all 33 camps maintaining close coordination with RRRC, ISCG, UNHCR, IOM and site management support agencies.
- Representatives from BDRCS American Red Cross, IFRC IOM, UNHCR and Translators Without Borders (TWB) were engaged in order to ensure quality of training in Rohingya language.
- Trainings of Trainers on the national cyclone EWS and anticipatory action were provided to communicators from several organizations in partnership with Communication with Communities (CWC) working group, BBC Media Action, TWB, IOM, UNHCR to replicate training for staff/volunteers and further cascading at community level.
- Multi-hazard preparedness and response guidebook is developed jointly by BDRCS, IFRC, American Red Cross, BBC MA, TwB/Clear Global with the guidance of CWCWG/AAPWG and EPRWG of ISCG, in consultation with a technical working group involving UN and I/NGO partners.
- BDRCS, IFRC and American Red Cross jointly with ISCG, IOM, UNHCR developed the disaster preparedness and response coordination mechanism (guideline for Disaster Management Committee) in all 33 camp which has lately been approved by RRRC office along with a directive/ office order to roll out on the ground and facilitation of joint CSI for DMC capacity enhancement.
- Capitalizing on the existing CPP interventions, Multi-hazard Risk Reduction activities are being expanded in the camp settlement jointly with RRRC, ISCG, IOM and site management support agencies.

Lessons Learnt

Lesson 1: Collective efforts can bring additional success; in disaster risk management especially when we talk about Cox's Bazar camp settlement which is an exceptional ground for the whole country even globally, partnership building, collaboration, and harmonisation were the key and over the years these proven factors.

Lesson 2: Localisation comes with empowerment; nowadays we talk much about localization which follows empowerment-especially for the complex ground like camp settlement this has been proved. Collectively, we are observing the changes in camps where the community itself takes responsibility to save their own people from disasters and devastation caused by several hazards and emergencies.

Conclusion

In order to prepare for multi-hazard (cyclone, flood, landslide, fire, and others), the organizing of the refugee communities and their training on Disaster Risk Reduction (DRM) has been ongoing in all 33 camps by BDRCS, CPP and IFRC, in close collaboration with RRRC, ISCG, UNHCR, IOM and Site Management partners since early 2018 onwards. These collective efforts have allowed the refugees and agencies to better prepare for and respond to risks and hazard events. Despite the down trend of funding scenarios, this life-saving effort should go on where again the collective planning, implementation, collaboration, and partnership building approaches are the key to success which will bring durability of efforts and strengthen localization through improved community ownership and engagement.

02 Empowering Local Disaster Management with Early Action Contingency Funds in Cox's Bazar

Location: Host Community (Teknaf and Ukhiya)

Implementer: UNDP

Hazard: Multi-hazard

Introduction

Cox's Bazar, located in southeastern Bangladesh, is one of the most disaster-prone regions, frequently facing cyclones, floods, landslides, and fires. The Rohingya refugee camps and surrounding host communities are particularly vulnerable to these natural hazards. Despite a strong local commitment to DRM, the lack of timely access to emergency funds often delays critical actions such as evacuations, early warnings, and the provision of life-saving support. Recognizing this gap, the Early Action Response Contingency

Fund was introduced by UNDP to empower local authorities in Teknaf and Ukhiya Upazilas to respond quickly and independently during disasters. The fund, amounting to BDT 1,500,000 for each upazila, enables the local DMCs to take immediate action, ensuring a rapid and effective response to natural calamities. This best practice highlights how flexible, locally controlled funding can improve disaster preparedness and resilience, particularly in high-risk areas.

Summary

In Cox's Bazar, the need for a flexible, accessible emergency contingency fund to support local DMCs during disasters was identified as a key gap in the DRM system. In response, the Early Action Response Contingency Fund was introduced by UNDP to support the UzDMCs of Teknaf and Ukhiya Upazilas. This fund, amounting to BDT 1,500,000 per upazila, has empowered local authorities to act quickly and independently during emergencies, reducing delays and improving the overall disaster response. The fund supports a range of activities, including early warning dissemination, evacuation, transportation, prepositioning of supplies, and search and rescue operations, ensuring that essential services are provided to the most vulnerable populations even before external aid arrives.

Background

Cox's Bazar is highly vulnerable to a range of natural hazards, including cyclones, floods, landslides, and fires. Despite significant local commitment to disaster preparedness, the lack of immediate access to funding often delayed emergency actions, impacting the timeliness of evacuations, response coordination, and life-saving support. The Standing Orders on Disasters (SOD)-2019 and the Disaster Management Act 2012 recognized the importance of local-level contingency funding, allowing Upazila-level DMCs to manage emergency funds for rapid response. However, without accessible and flexible funding, local authorities were unable to act swiftly when disasters struck. To bridge this gap, the Early Action Response Contingency Fund was established to provide immediate financial support to local authorities, ensuring quicker, more effective responses to disasters.

Action Taken

- **Fund Allocation:** UNDP allocated BDT 1,500,000 to both Teknaf and Ukhiya Upazilas, creating a fund that could be accessed immediately by the UzDMCs for emergency preparedness and response activities.
- **Guideline Development:** In collaboration with local stakeholders, including Union and Upazila DMCs, UNDP developed a clear and flexible guideline for utilizing the contingency funds. This living document is regularly updated to adapt to changing disaster risk contexts, ensuring that the funds are used efficiently and transparently.
- **Coordination and Monitoring:** The fund was transferred to the UNO of Teknaf and Ukhiya through cheques, ensuring adherence to the guidelines. Regular monitoring and coordination were conducted with humanitarian agencies to streamline the fund utilization and ensure transparency.

- Community Engagement: The contingency fund also supported CHWs and volunteers in disseminating early warnings, identifying vulnerable individuals, and assisting with evacuations. This approach involved active community participation, ensuring that the most vulnerable households received timely support.

Outcomes

- **Reduced Delays in Response:** The Early Action Response Contingency Fund ensured that local authorities could make swift decisions and mobilize resources without waiting for external aid, reducing delays during emergencies.
- **Improved Coordination:** The fund fostered better coordination between local government, DMCs, and humanitarian partners, ensuring a more organized and efficient response to disasters.
- **Increased Preparedness:** The availability of funds allowed for the prepositioning of essential supplies, including medical kits, water purification tablets, and food rations, ensuring readiness in the event of a disaster.
- **Empowered Local Authorities:** The fund increased the capacity of local authorities to act decisively, bolstering their confidence in disaster response and ensuring that communities received timely and effective assistance.
- **Community Trust:** Community members expressed increased trust in the disaster management system, knowing that their local authorities had the
resources and ability to respond quickly to emergencies.

Lessons Learnt

Lesson 1: Proactive Planning and Prepositioning: Prepositioning essential supplies and securing emergency funding in advance significantly improved the efficiency and timeliness of disaster responses.

Lesson 2: Community Involvement and Ownership: Active community participation and local ownership of the fund led to better identification of needs, effective distribution of resources, and stronger community resilience during disasters.

Lesson 3: Clear Guidelines and Flexibility: The development of a clear, adaptable guideline for fund usage ensured that the money could be used quickly and appropriately, depending on the specific needs of the situation.

Lesson 4: Multi-Sectoral Coordination: Effective coordination between local authorities, humanitarian agencies, and community volunteers is essential for ensuring that resources are mobilized quickly and efficiently during disasters.

Lesson 5: Sustainability Through Local Leadership: By empowering local authorities to manage the funds, the initiative ensured that disaster response efforts were grounded in local realities, making them more sustainable and responsive to the needs of the community.

Conclusion

The Early Action Response Contingency Fund in Teknaf and Ukhiya Upazilas has proven to be a successful initiative in improving disaster response times and enhancing the overall capacity of local authorities to manage emergencies. By ensuring quick access to funding, empowering local DMC , and improving coordination among stakeholders, this initiative has helped safeguard vulnerable communities in Cox's Bazar during times of crisis. Moving forward, the lessons learned from this approach should be integrated into other disaster-prone areas, ensuring that local authorities are better prepared to respond swiftly and effectively to future emergencies. This model of decentralized, flexible disaster funding has proven its effectiveness and scalability, offering a valuable resource for enhancing disaster resilience in similar humanitarian contexts.

03 Eyes in the Sky: How Drones Reduce Disaster Risks in Rohingya Camps

Location: Rohingya Camp

Implementer: IOM

Hazard: Multi-hazard

Introduction

In Cox's Bazar, Bangladesh, the intersection of natural disasters and the ongoing refugee crisis presents significant challenges for DRR and humanitarian response. The influx of Rohingya refugees, coupled with the frequent occurrence of floods, cyclones, and landslides, demands innovative solutions to mitigate risks and enhance emergency preparedness. In response to this need, IOM Bangladesh, through its NPM program, introduced UAVs in 2017. UAVs have revolutionized disaster management in the region by providing high-resolution, real-time imagery for rapid damage assessment, flood and landslide risk analysis, and the planning of safe camp relocations. This paper explores how UAVs have transformed disaster risk reduction efforts in the Rohingya camps, focusing on their role in disaster preparedness, site planning, and improved decision-making for humanitarian actors. The integration of UAV technology has not only strengthened disaster resilience but has also set a precedent for data-driven, scalable solutions to disaster risks in refugee and host communities.

Summary

IOM Bangladesh, through its NPM under the global Displacement Tracking Matrix, introduced UAVs in 2017 to support emergency response and disaster risk reduction in Cox's Bazar. Drones provide rapid, high-resolution imagery for mapping cyclones and flood damage, erosion, fire hazards, and camp expansion. Key outputs include Digital Elevation Models for flood and landslide risk analysis, site planning, and relocation strategies. UAVs enable real-time data collection, improve disaster preparedness, and assist humanitarian actors in decision-making and civil engineering activities.

Background

IOM Bangladesh's NPM, part of the global Displacement Tracking Matrix, introduced UAV technology in 2017 to address the challenges of disaster response and site management in Cox's Bazar. The influx of Rohingya refugees and frequent natural hazards such as floods, landslides, and cyclones created an urgent need for accurate, timely spatial data. UAVs enable rapid mapping, real-time imagery, and Digital Elevation Models (DEM) to support risk analysis, relocation planning, and emergency preparedness. This approach enhances humanitarian coordination, site development, and disaster risk reduction by providing precise geospatial data for decision-making.

Action Taken

In 2017, an innovative initiative began in Cox's Bazar, Bangladesh, using drones (UAVs) to strengthen emergency response and disaster risk reduction. The objectives were clear: collect imagery, produce maps for humanitarian actors, visualise site conditions, monitor camp development, and identify hazard-prone areas. UAVs enabled the creation of DEM for flood and landslide risk analysis, supporting rapid response, relocation planning, and preparedness. Direct beneficiaries included humanitarian actors and site management teams, while Rohingya refugees and host communities benefited indirectly through improved disaster resilience. Key activities ranged from flying drones during emergencies for rapid assessment, mapping shelters, roads, and facilities, to fire hazard response and monitoring camp expansion for mitigation planning. Innovative tools like UAVs, DEMs, Mbtiles, DSM, and timeline comparison mapping revolutionised site development and hazard analysis, ensuring data-driven decisions for safer communities.

Outcomes

The success of this initiative in Cox's Bazar was driven by key elements such as the use of UAVs for rapid and accurate damage quantification through high-resolution mapping, the development of DEM for

risk analysis, and real-time data sharing for emergency response and planning. These innovations led to significant results: disaster preparedness and response improved, site planning and relocation strategies became more effective, and hazard-prone areas were better visualised. The impact was profound—emergency response capacity was strengthened, risk reduction planning and civil engineering activities were supported, and resources were utilised more efficiently. Sustainability is ensured as UAV-based mapping and DEM creation continue as regular activities for site monitoring and disaster risk reduction. Ongoing flights and updated risk maps provide up-to-date scenarios, addressing climate change and extreme weather events, making this approach a lasting solution for resilience and safety.

Lessons Learnt

Lesson 1: Rapid UAV deployment improves disaster response: Using drones for real-time mapping and Digital Elevation Models enables quick decision-making during floods, landslides, and fires, reducing delays in humanitarian action.

Lesson 2: Integration with humanitarian planning is critical: Coordinating UAV data with site management and engineering teams ensures effective relocation, risk reduction, and infrastructure development.

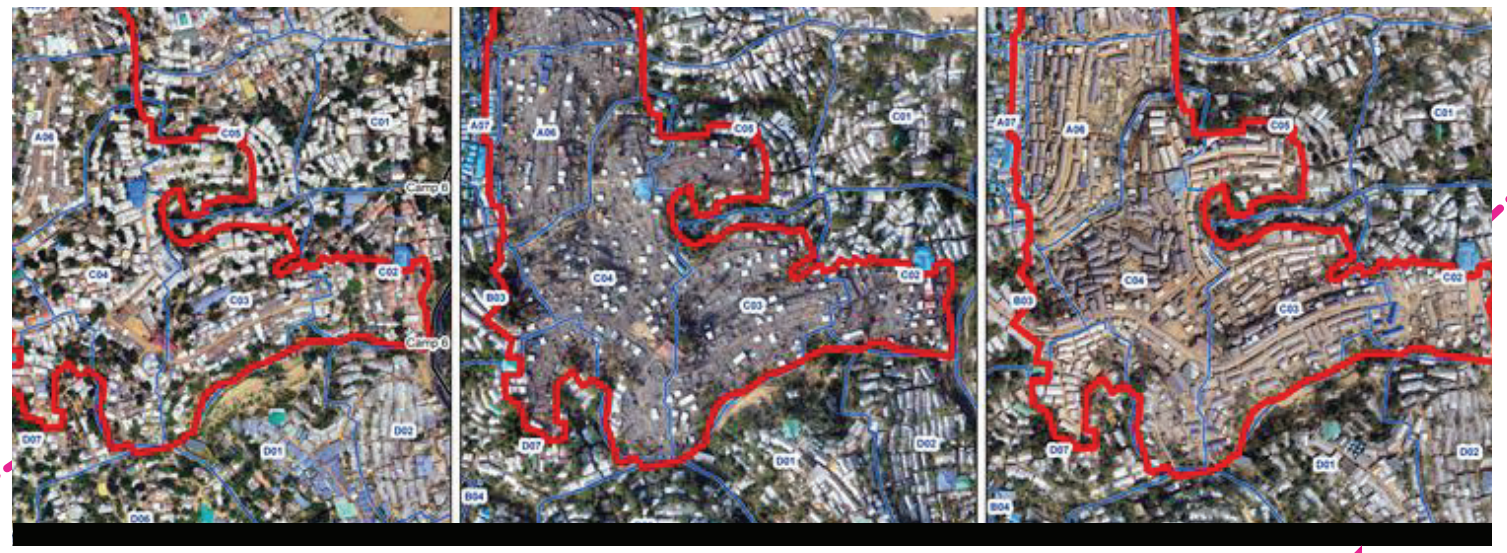
Lesson 3: Scalability potential: UAV-based mapping can be replicated in other disaster-prone regions, provided there is technical capacity and coordination with local authorities.

Lesson 4: Data-driven risk analysis enhances resilience: DEM and hazard maps informed proactive planning, showing the importance of geospatial data for disaster preparedness.

Lesson 5: Continuous monitoring sustains impact: Regular drone flights for camp expansion and hazard tracking demonstrate that ongoing investment in technology ensures long-term benefits.

Conclusion

The use of UAVs in Cox's Bazar has marked a pivotal shift in how disaster risk reduction and emergency response are approached in the Rohingya refugee camps. By providing high-resolution imagery and creating DEMs, UAVs have enabled rapid, data-driven decision-making that has significantly improved disaster preparedness, response, and site management. The integration of UAV technology with humanitarian planning has enhanced coordination and allowed for more effective relocation strategies and hazard mitigation. Moreover, the scalability of this technology offers the potential for broader application in other disaster-prone regions, provided the necessary technical capacity and local coordination are in place. The continued use of UAVs for regular monitoring and updated risk mapping ensures the long-term sustainability of these efforts, contributing to a more resilient future for displaced populations and host communities alike. This approach not only mitigates immediate risks but also builds a foundation for enduring disaster resilience.



Evacuation & Safe Shelter Planning

Safe evacuation and shelter planning are essential life-saving measures in a high-density and hazard-prone context like Cox's Bazar. Limited space, fragile shelter structures, and vulnerable populations complicate evacuation during cyclones, landslides, fires, and floods. This thematic area focuses on practices that improve evacuation planning, shelter safety, and relocation processes while ensuring dignity and protection. The documented practices demonstrate how coordinated planning, community engagement, and inclusive shelter solutions reduce exposure to hazards and support safer movement and temporary accommodation during emergencies

04 Fire- and Disaster-Resilient Mud Tally Shelter: Safe and Durable Shelter for the Rohingya Community

Location: Rohingya Camp

Implementer: BRAC

Hazard: Cyclones, Fire, Heat wave

Introduction

Refugee settlements in low-lying, high-density areas are particularly vulnerable due to the use of flammable and lowdurability materials such as tarpaulin and untreated bamboo. Fire incidents, extreme heat, and strong winds frequently damage shelters, threatening lives, property, and critical infrastructure. Addressing these risks requires Disaster Risk Reduction (DRR)–oriented shelter solutions that are durable, fire- and weather-resistant, and resilient to multiple hazards. To address these challenges, BRAC developed a fire- and weather-resistant shelter model under the Temporary Safer Shelter (TSS) approach. The model combines mud tally (terracotta) roofing, geo-textile walls, ferro-cement walls, and metal structural, integrating traditional and modern materials to enhance fire resistance, structural strength, and long-term durability under extreme conditions. The construction process actively involves both FDMN and host community members, fostering DRR awareness, community ownership, and capacity for safe shelter practices.in the region.

Summary

The frequent occurrence of fire, extreme heat, cyclones, and heavy rainfall in dense settlements requires integrated DRR solutions. The BRAC Fire- and Weather-Resistant Shelter Model addresses these hazards through durable materials and robust design. Key features include mud tally roofing, geo-textile and ferro-cement walls, firebreaks, and metal structure, which together prevent fire spread, withstand extreme heat, and improve structural durability. Engagement of FDMN and host community members in construction promotes ownership, DRR awareness, and skills development, while local production of mud tally and ferro-cement components supports entrepreneurship. This approach delivers a scalable, cost-effective, and hazard-resilient shelter solution.

Background

Cox's Bazar's high-density settlements are highly vulnerable to fire, extreme heat, and other weather hazards. Traditional shelters made of tarpaulin and untreated bamboo degrade rapidly, leaving residents at risk during fire incidents, heatwaves, and heavy rain events. While flash floods occasionally affect low-lying areas, fire and extreme weather remain the most recurrent and destructive hazards, necessitating proactive DRR interventions. The TSS approach, developed by the SCCCM Sector, addresses these shortcomings by using mud tally roofing, geo-textile walls, ferro-cement walls, and metal structures, which provide durable, fire- and weather-resistant construction suitable for densely populated settings. Involving both FDMN and host community members in shelter construction builds DRR awareness, fosters ownership, and strengthens community resilience against multiple hazards, while promoting sustainable, long-term shelter solutions.

Action Taken

- Material Selection: The shelter uses mud tally roofing, geo-textile walls, ferro-cement walls, and a metal structural frame, selected for fire and weather resistance, thermal comfort, long-term durability, and low maintenance.
- Shelter Design: Modular shelters incorporate firebreaks and robust structural connections to withstand fire, extreme heat, cyclonic winds, flash flood and heavy rainfall.
- Community Involvement: Both FDMN and host community members participate in construction process, fostering DRR awareness, local capacity building, and community ownership of safe shelters
- Local Entrepreneurship: Host community artisans produce mud tally and ferro-cement components, creating income opportunities while maintaining

high-quality fire- and weather-resistant materials.

• **Collaborative DRR Approach:** BRAC coordinated with Shelter Sector partners, including UNHCR, IOM, and other NGOs, to ensure integration of DRR principles, fire mitigation, and sector standards in the shelter model.

Outcomes

• **Enhanced Fire and Weather Safety:** Mud tally roofing, geo-textile and ferro-cement walls, metal frames, and firebreaks significantly reduce fire propagation, improve heat resistance, and enhance durability against storms and heavy rainfall.

• **Strong Structural Durability:** The combination of metal structure & strong walls ensures long-term stability, minimizing maintenance and improving shelter resilience under extreme conditions.

• **Community Ownership and DRR Awareness:** Participation of FDMN and host community members builds skills, fosters ownership, and strengthens awareness of fire and weather risks.

• **Livelihood Opportunities:** Local production of shelter components promotes entrepreneurship and income generation in host communities.

• **Scalability for DRR:** The modular, fire- and weather-resistant design can be replicated across high-density settlements, improving DRR capacity at scale.

Lessons Learnt

Lesson 1: Fire- and Weather-Resistant Materials Are Key to DRR Mud tally roofing, geo-textile and ferro-cement walls, and metal structure provide strong protection against fire, extreme heat, and storms.

Lesson 2: Integrated Firebreaks Enhance Safety Strategically placed firebreaks prevent rapid fire spread and protect clusters of shelters.

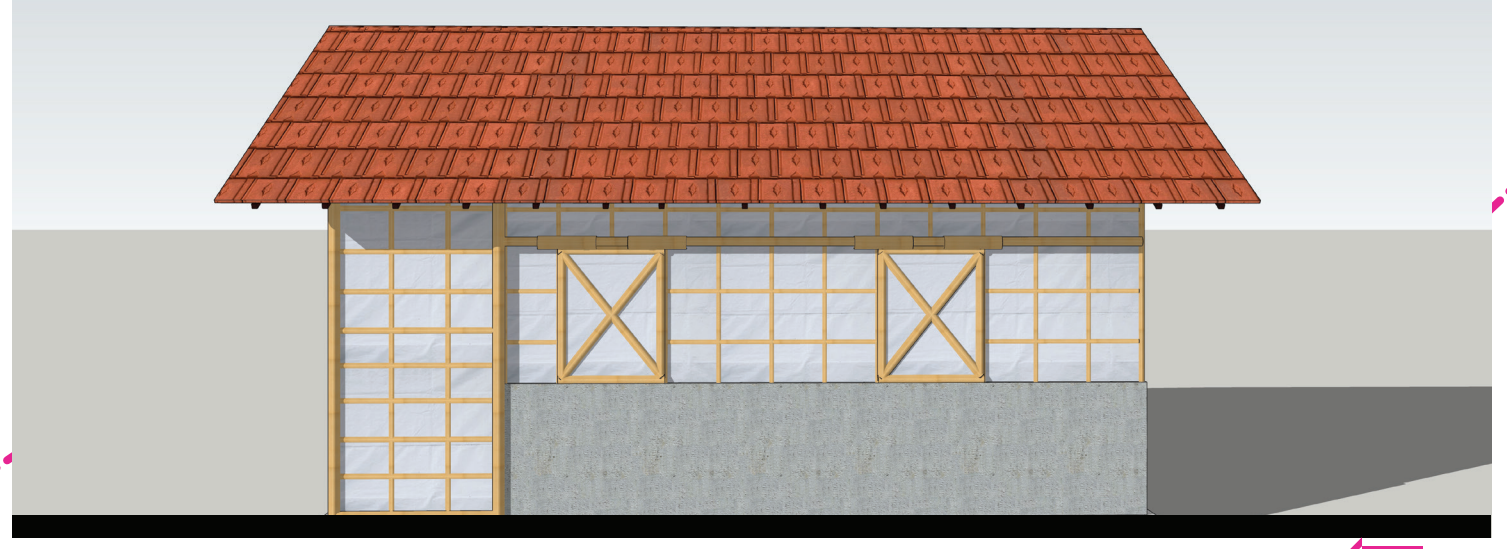
Lesson 3: Community Participation Strengthens DRR Capacity Engaging FDMN and host community members improves ownership, DRR awareness, and adoption of safe construction practices.

Lesson 4: Combining Traditional and Modern Materials Increases Resilience Mud tally, ferro-cement walls, and metal structure offer durability, low maintenance, and hazard resistance.

Lesson 5: Modular, Hazard-Resilient Design Is Scalable The model is replicable across the hazardous, high-density settlements to reduce disaster risk from multiple hazards.

Conclusion

The BRAC Fire- and Weather-Resistant Shelter Model provides a DRR-focused, strong, and durable solution for dense refugee settlements in Cox's Bazar. By integrating mud tally roofing, geo-textile and ferro-cement walls, metal structure, and firebreaks, the shelter addresses fire and extreme weather hazards while minimizing long-term maintenance. Participation of FDMN and host community members strengthens DRR awareness, ownership, and local capacity, while host community production supports entrepreneurship. The model demonstrates a scalable, resilient, and sustainable approach for improving safety and living conditions in disaster-prone settlements.



Site Risk Mitigation through Nature-Based Solution (NbS)

Site-related hazards are among the most persistent and severe risks in the Rohingya camps, driven by steep slopes, deforestation, inadequate drainage, and highly flammable shelter materials. NbS plays an increasingly important role in reducing disaster risks while restoring degraded ecosystems in Cox's Bazar. Landslides, Cyclone, fires, and flooding pose recurring threats to lives, infrastructure, and essential services. This thematic area presents best practices that address site-level risks through engineering interventions, fire mitigation measures, drainage improvements, and risk-sensitive site planning with NbS approaches, including slope stabilization, Pathways, bamboo stair, reforestation, watershed management, and ecosystem restoration. These interventions aim to reduce hazard exposure, enhance environmental resilience, and offer cost-effective, sustainable alternatives to purely structural solutions, prevent secondary disasters, and enhance the overall safety of camp environments.

05 Site Engineering for Resilience; Drainage Slope Stabilisation, Safer Latrine and Bathing

Location: Rohingya Camp

Implementer: SHED

Hazard: Multi-Hazard

Introduction

Camp 13, located on steep and unstable hilly terrain in Cox's Bazar, faces significant challenges due to its vulnerability to rainfall-induced landslides, inadequate drainage systems, and high population density. The risks of infrastructure collapse, particularly WASH) facilities, are heightened during the monsoon season, with potential impacts on sanitation access, water contamination, and public health. To address these issues, SHED, supported by the BRAC Pooled Fund, implemented disaster-resilient WASH interventions in Camp 13, focusing on slope stabilisation, drainage improvement, and securing WASH infrastructure. By reinforcing latrines, bathing cubicles, deep tube wells (DTWs), and other essential sanitation facilities, the project aimed to enhance the resilience of these services, ensuring continuous access to safe sanitation despite environmental challenges. This paper outlines the interventions taken, the outcomes achieved, and the lessons learned from this DRR initiative.

Summary

SHED, with BRAC Pooled Fund support, implemented disaster-resilient WASH interventions for 26,078 participants in Camp 13 (Blocks B–E). The project stabilised drainage slopes, built retaining walls, and tied down WASH superstructures- protecting 34 latrines, 7 bathing cubicles, 3 DTWs, 8 water reservoirs, and 2 tap stands- benefiting 2,028 households (9,989 people) with sustained safe sanitation. Additionally, 20 Sludge Transfer Tanks were secured, serving the entire coverage area. SHED also identified 30 latrines and 8 bathing units in high-risk slope zones requiring further WASH support.

Background

Camp 13 is located on steep hilly terrain with unstable soil layers and densely populated shelters, making it highly susceptible to rainfall-induced landslides. Within this challenging environment, SHED operates and maintains 925 latrines, 416 bathing cubicles, and 95 deep tube wells to serve thousands of residents. However, a technical assessment identified that some latrines and bathing facilities needed resilient protection. Among them, some facilities were planned to be provided protection by the WASH Project implemented by SHED. These facilities were at imminent risk of collapse, particularly during the monsoon season. Damage to these structures could result in loss of access to sanitation, contamination of surface water, and increased public health hazards. To address these issues, SHED designed a targeted Disaster Risk Reduction intervention focused on slope stabilisation, improved drainage management, and secure foundation reinforcement for WASH facilities located in hazardous areas.

Action Taken

To reduce disaster risks, SHED implemented comprehensive site engineering and stabilization works across high-risk zones of Camp 13. Priority actions included drainage construction, slope stabilization, and structural reinforcement to enhance the resilience of vulnerable WASH facilities. Key interventions involved improving surface runoff management with side drains, concrete channels, and slope lining; constructing retaining walls and sandbag barriers to prevent erosion; reinforcing latrine and bathing cubicle frames with iron rods and concrete bases; and upgrading DTW platforms with reinforced concrete and proper drainage outlets. In total, 34 latrines, 7 bathing cubicles, 3 DTWs, 8 water reservoirs, and 2 tap stand platforms were protected. These measures benefited 2,028 households (9,989 individuals), ensuring safe, reliable, and continuous access to sanitation and hygiene services during heavy rainfall and landslides.

Outcomes

The site protection and engineering interventions brought measurable improvements to the resilience and safety of the WASH infrastructure in Camp 13. Communities now benefit from secure facilities that can withstand heavy rainfall and slope movement, reduce the frequency of damage, and ensure sustained access to essential services. Key outcomes achieved:

- **Enhanced structural stability:** Reinforced foundations and retaining walls now protect latrines and bathing cubicles from erosion and collapse.
- **Improved drainage performance:** Stabilised slopes and drainage lines effectively divert runoff water, minimising water clogging and hygiene risks.
- **Continuous service delivery:** WASH facilities remain functional throughout the monsoon season, avoiding service disruption for hundreds of households.
- **Increased community trust:** Users expressed a higher sense of safety, leading to more consistent hygiene behaviour and responsible facility use.
- **Reduced maintenance costs:** Preventive engineering solutions lowered the need for frequent repairs and emergency rehabilitation.
- **Strengthened local capacity:** SHED field staff and volunteers gained practical experience in integrating DRR measures with WASH infrastructure, ensuring sustainability and replicability in other camps.

Lessons Learnt

Lesson 1: Early risk identification through site surveys enables cost-effective and timely interventions.

Lesson 2: Collaboration with WASH and Site Management partners is critical for ensuring technical soundness and resource optimisation.

Conclusion

The disaster-resilient WASH interventions implemented by SHED in Camp 13 have significantly enhanced the safety and sustainability of sanitation infrastructure. By stabilizing drainage slopes, constructing retaining walls, and reinforcing WASH superstructures, the project has reduced the vulnerability of essential sanitation facilities to erosion, collapse, and damage caused by heavy rainfall and landslides. The intervention has improved access to reliable sanitation for 2,028 households (9,989 individuals), ensured continuous service delivery during monsoon season, and fostered greater community trust in the resilience of the facilities. The integration of DRR measures into WASH infrastructure has proven to be a cost-effective solution, lowering maintenance costs and ensuring long-term sustainability. Furthermore, the collaboration between WASH and Site Management partners, along with the active involvement of SHED staff and volunteers, has strengthened local capacity and laid the foundation for replicating these interventions in other camps. The lessons learned from this initiative emphasize the importance of early risk identification, technical collaboration, and community engagement in building resilient infrastructure and improving disaster preparedness in vulnerable communities.

06 Strengthening Community Resilience: Slope Stabilisation through Food Assistance for Assets Creation

Location: Rohingya Camp

Implementer: WFP

Cooperating partners: Acted, Action Aid, BRAC, Care

Hazard: Landslide

Introduction

Landslides pose a significant and life-threatening risk to the Rohingya refugee communities in Cox's Bazar, Bangladesh, particularly in areas with steep and unstable terrain. Between 2018 and 2024, the frequency of landslides across the 33 refugee camps increased dramatically, with 2,758 recorded incidents. The risks posed by these landslides, particularly during the monsoon season, threaten the safety of both refugees and local infrastructure. In response, the WFP has prioritised slope stabilisation as a critical disaster preparedness measure. The successful implementation of slope stabilisation interventions, particularly in Camp-12, is seen as a model and best practice for mitigating landslide risks in the camps. This paper explores the actions taken, the outcomes achieved, and the lessons learned from the slope stabilisation project in Camp-12, which has significantly improved community resilience and reduced the vulnerability of the affected population to landslides.

Summary

WFP, together with cooperating partners, implemented slope stabilisation measures as part of a broader disaster preparedness strategy in camp setting. Slope stabilisation emerged as a standout example as life-saving activity of WFP. This initiative demonstrates how combining technical innovation with community participation can reduce disaster risks and strengthen resilience in highly vulnerable environments across 33 camps. Among these, Camp-12 has been proposed as a success story and best practice for slope stabilisation.

Background

The geographical position of the Rohingya camps, combined with unpredictable monsoon seasons and heavy rainfall, has intensified landslide hazards. Camp-12 was flagged as a high-risk zone by ISCG and SMS agencies, where 65 landslide incidents were reported in 2024. Among all high-risk are, this site with nearly 160 fragile shelters and 675 individuals exposed to landslide and mudslide threats. Essential facilities- including a nutrition centre, water supply network, vehicular access road, youth centre, mosque, and madrasha were also endangered. To address these risks, WFP's NRM team, in collaboration with CP CARE, initiated slope stabilisation in early 2024. This intervention not only mitigated immediate risk but also strengthened community resilience by stabilising the slope, improving accessibility and advancing food security.

Action Taken

WFP and its cooperating partners conducted community consultations and stakeholder coordination to initiate the stabilisation work. Meanwhile, WFP's technical team, in collaboration with partner engineers and the site development team, conducted a primary assessment, technical assessment, and ESS for the site. WFP proposed the best practice using geotextile-wrap face technology to stabilise the site with proper technical drawings, designs, and estimates. After receiving RRRC approval, WFP and its partner agency, CARE, initiated the slope stabilisation work. Rohingya refugee beneficiaries were selected to participate in the work. Community sensitisation regarding the project modality, payment procedures, and post-stabilisation care and maintenance were conducted throughout the project. WFP ensured quality control through on-site monitoring by its dedicated technical team. WFP also ensured gender and disability inclusion in the project, allowing individuals to build their own assets.

Outcomes

- The project was implemented in two phases: the first phase from May 2024 to August 2024, and the second phase from October 2024 to December 2024. The project successfully protected against potential landslides during the 2024 and 2025 rainy seasons and mitigated the associated risks.
- 1,394 SQM of slope was stabilised, 52 SQM of stairs were rehabilitated, and 210 running meters of drainage were rehabilitated.
- The project mitigated risks to 160 shelters, one integrated nutrition centre, a vehicular access road, one youth centre, one water network point, one madrasha, and several community WASH blocks.
- No household relocation was required for this stabilisation project, which was crucial due to the space crisis faced by Camp Administration.
- A total of 368 refugee individuals participated in Cash for Work activities under this project. All participants received cash support, advancing food security and enhancing self-reliance.
- The quality of life and disaster resilience of the community has improved, making them more resilient to shocks and stressors.
- A digital attendance mechanism was implemented to prevent fraudulent activities, with cash provided via Financial Service Providers (FSPs) and enrolment through the SCOPE platform.

Lessons Learnt

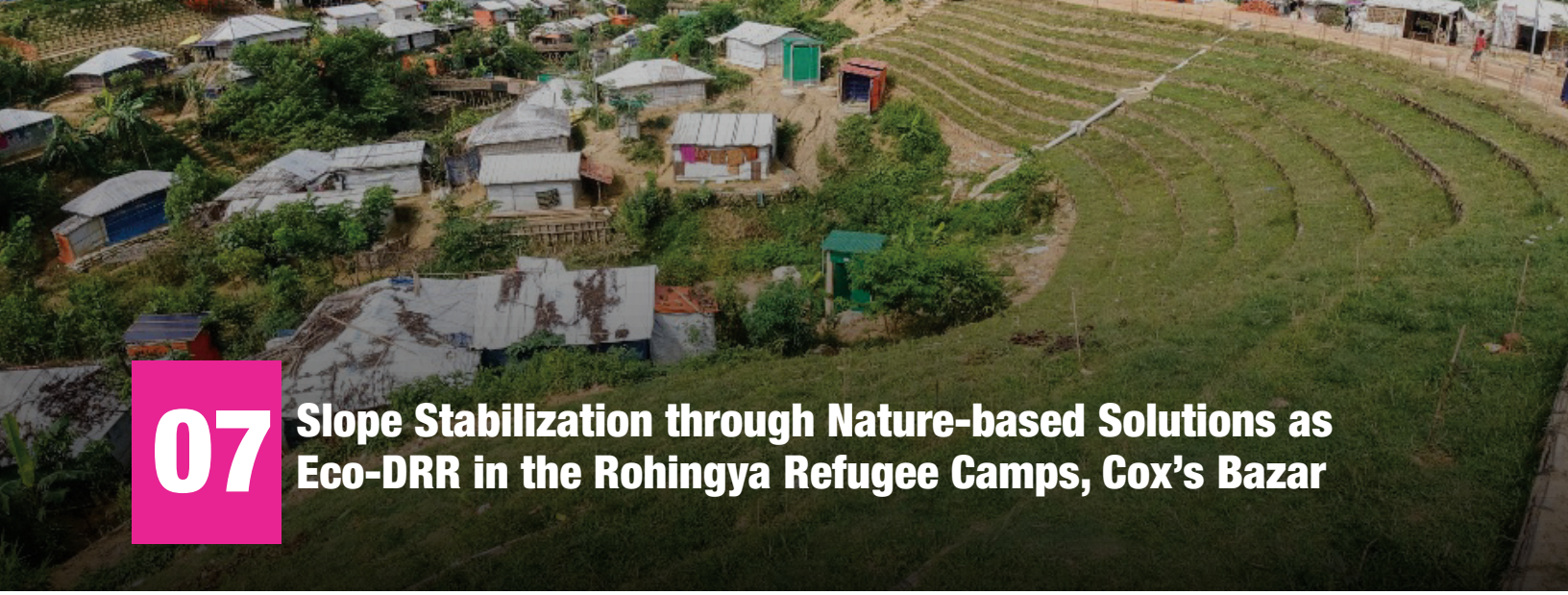
Lesson 1: Ensuring proper community participation in building assets within their own community enhances community ownership. Continuous sensitisation and awareness sessions help to influence the care and maintenance of this project by surrounding communities.

Lesson 2: Adapting new technologies, such as geotextile-wrap face technology, to mitigate risk is now in high demand in refugee camps, especially during the space crisis. This technology helps avoid the need to relocate shelters/households living in high-risk areas. It is more sustainable and durable than non-durable bamboo structures.

Lesson 3: Cash incentives through CFW activities under WFP's Food Assistance for Assets program help advance food security, motivate community engagement, reduce involvement in anti-social activities, and build resilience against shocks and stressors.

Conclusion

The slope stabilisation project in Camp-12 has proven to be a successful and effective intervention in mitigating landslide risks and enhancing disaster preparedness. Through the strategic use of geotextile-wrap face technology, the project stabilised slopes, rehabilitated drainage systems, and improved access routes, protecting vulnerable shelters and community infrastructure from potential landslides during the 2024 and 2025 monsoon seasons. The active participation of 368 refugees in the CFW program not only contributed to the success of the project but also strengthened community ownership and resilience. The project's focus on inclusivity, gender, and disability considerations ensured that all members of the community were engaged and benefited from the intervention. By preventing household relocations and avoiding disruptions to the already limited space within the camp, the project has provided a sustainable solution to landslide risks in a highly constrained environment. The successful implementation of this project in Camp-12 has demonstrated the potential for scaling similar interventions across other refugee camps, reinforcing the importance of community engagement, technological innovation, and cross-sector collaboration in disaster risk reduction and preparedness.



07 Slope Stabilization through Nature-based Solutions as Eco-DRR in the Rohingya Refugee Camps, Cox's Bazar

Location: Rohingya Camp

Implementer: FAO

Hazard: Landslide

Introduction

The Rohingya refugee camps in Cox's Bazar, Bangladesh, are located in a region highly vulnerable to a variety of natural hazards, including cyclones, landslides, flash floods, and the looming threat of sea-level rise. The intensifying risks, driven by climate change and long-term environmental degradation, have put both the displaced population and the host communities at great risk. The environmental challenges are compounded by widespread deforestation, soil erosion, and reduced biodiversity, which have weakened the natural resilience of the area. In response to these challenges, FAO has implemented a NbS approach to reduce landslide risk, restore degraded land, and improve ecological resilience in the refugee camps. This initiative, which combines biological slope stabilization with reforestation and community-led stewardship, aims to protect lives, infrastructure, and the environment. Complemented by a LEWS, FAO's approach strengthens DRR efforts, fosters anticipatory actions, and enhances long-term environmental sustainability. This paper examines the effectiveness of this NbS intervention and its potential as a scalable model for disaster risk reduction in other humanitarian settings.

Summary

FAO applies a robust, evidence-driven NbS approach to stabilize landslide-prone slopes and rehabilitate degraded ecosystems across the Rohingya refugee camps in Cox's Bazar. Through biological slope stabilization and restoration, deep-rooted native species planting, and community-led stewardship, the intervention reduces landslide and erosion risks while improving vegetation cover, soil health, and carbon storage. Complemented by the LEWS, the initiative strengthens anticipatory action, protects lives and critical infrastructure, and promotes long-term environmental resilience in one of the world's most hazard-prone humanitarian settings.

Background

Cox's Bazar faces intense exposure to cyclones, landslides, flash floods, and sea-level rise-risks that have escalated due to climate change and decades of environmental degradation. Extensive deforestation, soil erosion, and stream siltation have weakened natural buffers, reduced community resilience, and increased disaster risks. From 2001 to 2023, nearly 10,000 ha of forest cover disappeared, releasing an estimated 4.87 million tons of CO_2 and reducing humid primary forest by 32%. The refugee influx has further intensified pressure on constrained natural resources: over 2,500 ha of protected forest were cleared for shelters, and the continued over-exploitation of forest resources has emerged as a significant threat to both biodiversity and environmental stability. As a result, an additional 7,000 hectares of forestland have been degraded, amplifying ecological vulnerabilities across the region.

Action Taken

FAO implemented a multi-tiered NbS approach in Ukhiya and Teknaf to reduce landslide risk, restore degraded land, and enhance resilience. The intervention integrates biological slope stabilization using grasses, bamboo, native tree species, shrubs, and other locally adapted vegetation, together with nature-based solutions such as live staking and vegetative barriers, and active community engagement to enhance slope stability, biodiversity conservation, and carbon sequestration. Vulnerable slopes were identified through GIS and field assessments, with plantation layouts, erosion control, and monitoring baselines established. RRRC and CiC approvals ensured alignment with camp priorities, while coordination with SMS actors, UN agencies, NGOs, and communities harmonized schedules and integrated DRR and environmental activities. Site preparation included debris removal, levelling, vegetation clearing, and soil enrichment to improve sapling survival. Contour trenches were constructed to reduce runoff, and saplings were

planted for root anchorage and slope stability. Vetiver grass reinforced soil, reduced erosion, and improved infiltration. Protection and maintenance measures-ring-fencing, boundary fencing, watering, mulching, weeding, and fertilization- ensured strong vegetation survival and ecological integrity.

Outcomes

Supported by SAFE+ and SAFE+2, FAO implemented standardized NbS interventions in 25 camps, rehabilitating ~600 ha of degraded land. Restoration focused on deep-rooted native species such as Arjun, Bahera, Jarul, Garjan, Sonalu, and Pitali, selected for their soil-binding capacity, ecological value, and climate resilience. These measures sequestered ~25,802 tons of CO_2, restored ecosystem functions, and enhanced biodiversity. More than 50,000 individuals, including Rohingya volunteers, participated through cash-based schemes, strengthening stewardship and ownership. FAO also enhanced the Landslide Early Warning System through continuous landslide inventories, rainfall monitoring, and field observations, enabling timely anticipatory action, safer household relocations, and better risk mapping. Overall, the intervention rehabilitated ~600 ha, stabilized slopes, and improved vegetation integrity; stored ~25,802 tons of CO_2; reduced landslide occurrence through biological slope stabilization; and strengthened preparedness via timely LEWS alerts. Community engagement improved maintenance quality and resilience, while combining NbS with LEWS reduced disaster risk at 40–60% lower cost than mechanical solutions, offering a scalable model for humanitarian settings.

Lessons Learnt

Lesson 1: Integrated NbS enhances long-term resilience. The integration of biological land stabilization, native species planting, and sustained maintenance yields durable slope stabilization and ecosystem recovery at significantly lower costs than mechanical engineering.

Lesson 2: Active participation of Rohingya volunteers through cash-based incentives improved survival rates, reduced maintenance gaps, and enhanced long-term stewardship of restored landscapes, highlighting the critical role of community ownership in sustaining restoration outcomes.

Lesson 3: Through continuous landslide inventory work and on-the-ground monitoring, FAO has contributed to strengthening the LEWS. Combined with biological slope stabilization and restoration initiatives, these efforts are enhancing risk understanding and enabling more effective anticipatory actions.

Lesson 4: Regular coordination with RRRC, CiCs, SMS agencies, and sector partners aligned interventions, prevented overlap, and ensured efficient investment in Eco-DRR and environmental restoration.

Conclusion

FAO's NbS approach in the Rohingya refugee camps has demonstrated the transformative potential of ecological interventions in DRR. By using biological slope stabilization, native species planting, and community stewardship, the initiative has not only reduced the risk of landslides and erosion but has also restored critical ecosystem functions, improved soil health, and sequestered significant amounts of CO_2. The integration of the LEWS further enhanced anticipatory actions, ensuring that communities were better prepared for potential disasters. Through active community engagement and the involvement of Rohingya volunteers, the initiative has fostered ownership, ensuring the sustainability of the interventions. The results- such as the rehabilitation of 600 hectares of land, the sequestration of 25,802 tons of CO_2, and improved biodiversity- highlight the effectiveness of Nature-based Solutions in both mitigating environmental hazards and promoting long-term resilience in vulnerable regions. Furthermore, the project's cost-effectiveness compared to traditional mechanical solutions underscores its viability as a scalable model for other humanitarian contexts. This holistic, community-driven approach not only strengthens disaster resilience but also provides a valuable framework for integrating environmental restoration with disaster risk management in refugee settings.

08 Restoring Nature and Promoting Sustainability: Community-Led Watershed Management in Camp and Host Community

Location: Rohingya Camp and Host Community

Implementer: IOM

Hazard: Multi-Hazard

Introduction

In Cox's Bazar, Bangladesh, the Rohingya refugee camps and the surrounding host communities face significant environmental challenges, including frequent landslides, soil erosion, flooding, and the mismanagement of solid and liquid waste. These issues not only undermine public health and safety but also exacerbate tensions between the displaced population and host communities. Compounding these problems are climate change-induced disasters that further strain the region's already vulnerable ecosystems. To address these challenges, a community-driven, integrated watershed management approach was initiated. This project focused on improving drainage networks, stabilising slopes, cleaning canals, and enhancing waste management systems while promoting community engagement. With the active participation of both Rohingya refugees and host community members, this initiative aimed to restore natural water flow, improve irrigation capacity, reduce flood risks, and foster long-term environmental resilience. This paper examines the impact of this integrated watershed management approach in enhancing disaster resilience, improving public health, and promoting sustainable environmental practices.

Summary

Landslides, soil erosion, flooding, and both solid and liquid waste are challenges experienced in the Rohingya refugee camps, impacting the neighbouring host community. To address these issues, the project utilised a community-driven, integrated watershed management strategy, directly benefiting approximately 22,000 Rohingya and host-community families. It included improvements to drainage networks, canal cleaning and desilting, construction of permeable pathways for improved access, restoration of canal banks, riparian planting, and wastewater purification through filtration methods. This ensured reductions in flood risks, public health risks and contamination, and increased irrigation capacity. Community engagement and watershed measures within camps before they reach host communities.

Background

As stated regarding the issues prevalent in the camps and the host communities, thousands of individuals are still directly and indirectly affected every monsoon due to massive flooding, landslides, and other environmental disasters. Lack of proper drainage network connectivity, ineffective slope mitigation measures, lack of control of solid and liquid waste at the source, deforestation, and lack of community engagement are the key challenges that are further exacerbated by climate change-induced disasters. These interconnected problems have led to recurring impacts on agricultural land, heightened health risks from stagnant water and waste, and increased tension between the Rohingya and host community. The community-led integrated watershed management project was initiated. By restoring natural water flow, reinforcing risky slopes, improving waste management, and engaging both Rohingya and host community members, the project builds resilience against future climate disasters.

Action Taken

The project addressed severe flooding, landslides, and waste management issues in the Rohingya camps and neighboring host communities through a community-led, integrated watershed management approach. Joint consultations among CiC, IOM, Rohingya leaders, and host-community representatives defined clear objectives- restoring water flow, reducing flooding, rehabilitating cropland, and improving environmental health. Implemented in multiple camps and adjacent host lands, the initiative benefited about 22,000 families by improving drainage, cleaning canals, stabilizing slopes, and introducing innovative filtration systems together with water hyacinths and dolkolmi. Key activities included land reclamations for intervention expansion, drainage re-excavation, riparian planting, and waste control and removal, with inclusive participation of

women, elderly, and vulnerable individuals in maintenance tasks. Community buy-in, nature-based solutions, and capacity-building were crucial for success, while ongoing challenges include ensuring sustained maintenance, ownership, and land-use cooperation. The project highlights the importance of robust community engagement and sustainable, scalable measures.

Outcomes

The project achieved its core objectives of reducing flood and landslide risks, improving water quality, and restoring degraded land. Enhanced drainage networks and canal desilting restored natural water flow, while slope stabilization and riparian planting minimized erosion. Wastewater filtration systems reduced contamination, lowering health risks from stagnant water. Reclaimed land enabled cultivation on 2.5 hectares, improving food security for both Rohingya and host communities. Approximately 22,000 families benefited through safer access routes, improved irrigation, reduced exposure to waterborne diseases, and improved overall health and living conditions. Socially, the inclusive participation of women, elderly, and vulnerable groups strengthened ownership and cohesion, ensuring sustainability. Key success factors included nature-based solutions, multi-stakeholder coordination, and capacity-building. Remaining challenges include sustaining maintenance and land-use cooperation. If addressed, these improvements can scale to other flood-prone areas. The initiative demonstrated strong potential for replication, offering a cost-effective, eco-friendly model for climate resilience and disaster risk reduction.

Lessons Learnt

Lesson 1: Community Negotiation is Essential: Early, transparent dialogue with landowners and community leaders is crucial. Resistance decreases when benefits are demonstrated through evidence and site visits.

Lesson 2: Nature-Based Solutions Are Sustainable: Low-cost interventions like jute bags and filtration plants proved effective, easy to maintain, and highly suitable for replication in similar flood-prone areas.

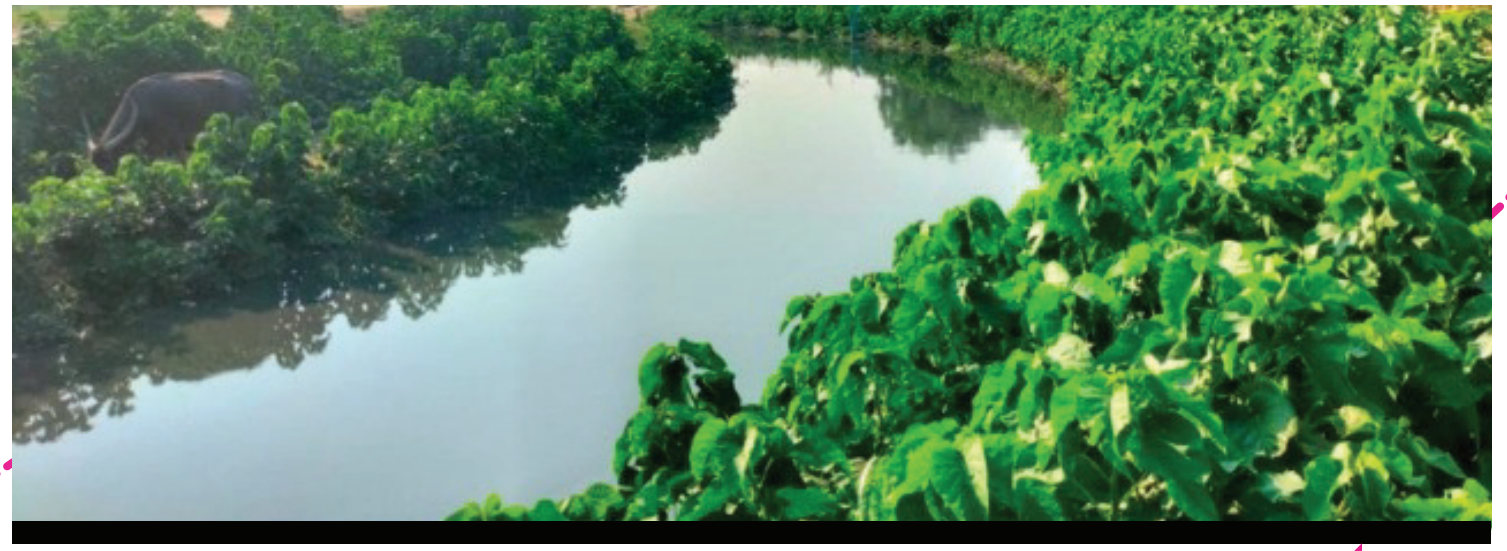
Lesson 3: Inclusive Participation Strengthens Ownership: Involving women, elderly, and vulnerable groups in CFW and community-led initiatives boosted social cohesion and created long-term community responsibility for maintaining the system.

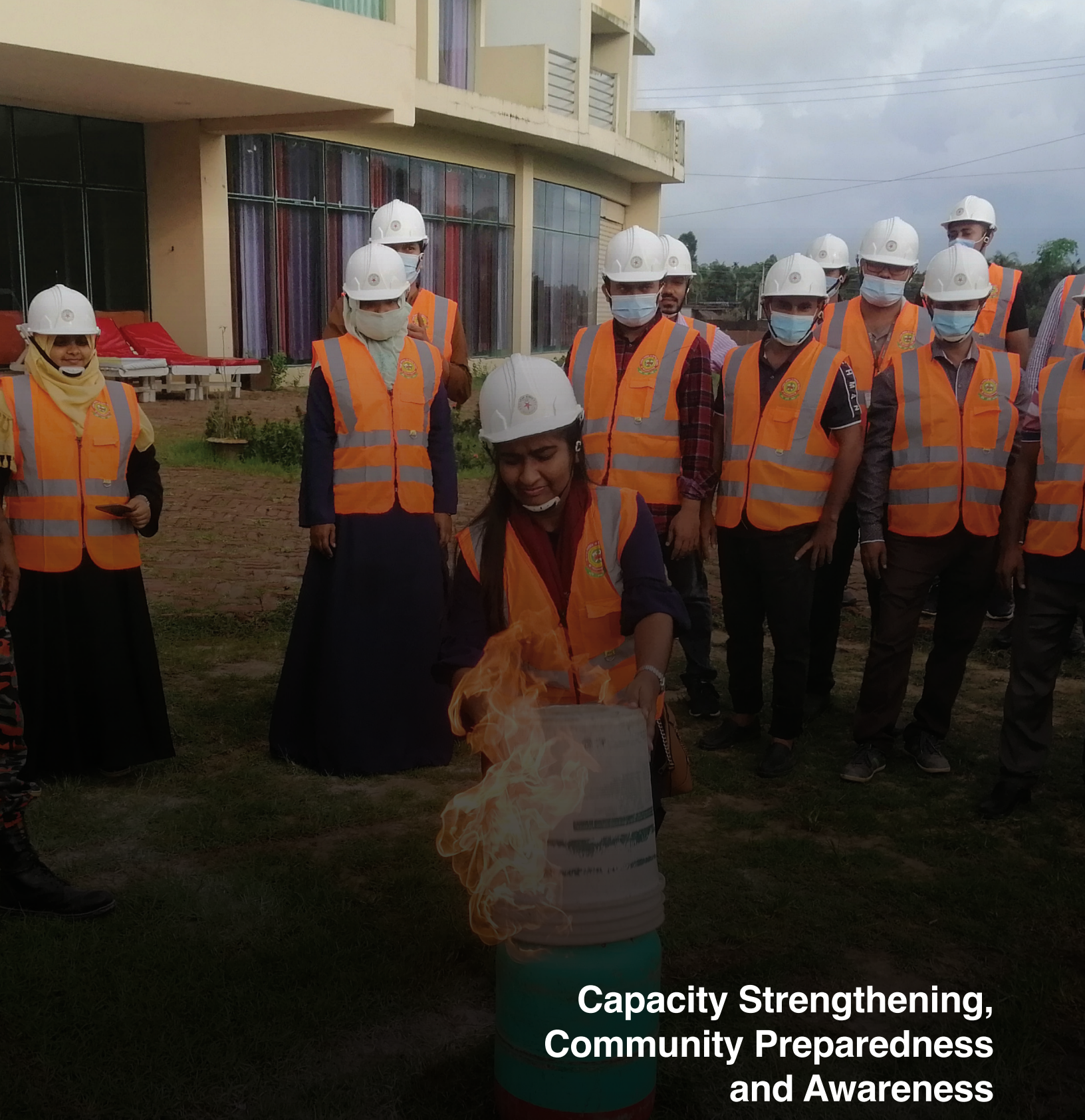
Lesson 4: Waste Management Must Be Integrated: Combining watershed interventions with robust waste management strategies, including plastic removal and waste traps, is essential to prevent re-blockage and maintain drainage efficiency.

Lesson 5: Multi-Stakeholder Coordination Drives Success: Develop clear coordination frameworks among government, UN agencies, NGOs, and community representatives to ensure alignment, quick decision-making, and scalability.

Conclusion

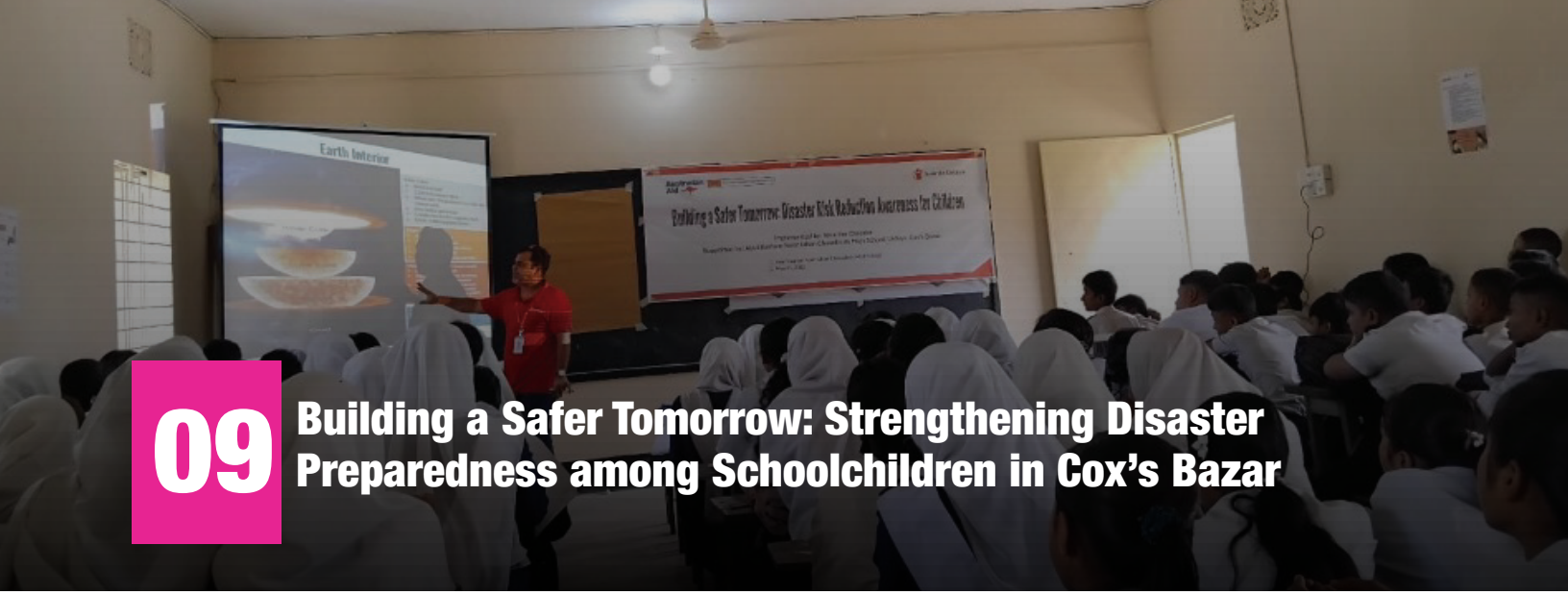
The community-led integrated watershed management initiative in the Rohingya camps and surrounding host communities has successfully addressed a range of environmental challenges, from flooding and soil erosion to waste management and water quality. Through collaborative efforts, the project has restored natural water flow, reduced flood risks, and improved irrigation capacity, benefiting approximately 22,000 families. The use of nature-based solutions, such as riparian planting, wastewater filtration, and slope stabilisation, has proven to be both cost-effective and sustainable, contributing to long-term environmental resilience. Moreover, the inclusive participation of women, elderly, and vulnerable groups in maintenance activities has strengthened social cohesion and ensured community ownership of the project. While challenges remain- particularly in maintaining the improvements and ensuring continued cooperation among landowners and community leaders—the project has demonstrated the effectiveness of community-driven, eco-friendly solutions in disaster risk reduction. With continued support and scaling, this approach offers a valuable model for enhancing climate resilience and disaster preparedness in similar flood-prone areas





Capacity Strengthening, Community Preparedness and Awareness

Factoring the multi-hazard vulnerability of the Cox's Bazar camp settlement, key humanitarian agencies including Government, CPP, UN agencies, RCRC Movement, INGOs/ NGOs are continuously mobilising resources to develop camp-based first responders' capacity enhancement on multi-hazard risk management and mobilising the trained volunteers in reaching out to the affected people through several awareness activities including awareness campaign, drill/simulation, block level awareness activities in order to develop community capacity to respond to muliti-dimensional crisis situation in camps. This thematic area documents best practices related to enhancing community capacity and awareness raising initiatives to strengthen community preparedness, identify gaps in response-readiness efforts, and foster collaboration between community members, volunteers, and emergency service providers



09 Building a Safer Tomorrow: Strengthening Disaster Preparedness among Schoolchildren in Cox's Bazar

Location: Host Community (Ukhiya)

Implementer: Save the Children

Hazard: Multi-Hazard

Introduction

Cox's Bazar, located in the southeastern part of Bangladesh, is one of the country's most disaster-prone areas, constantly exposed to hazards like cyclones, landslides, floods, and heatwaves. These disasters disproportionately affect children, who, due to their limited mobility, reliance on adults for protection, and lack of access to timely information, are more vulnerable to physical harm, emotional distress, and educational disruption. In this context, disaster preparedness initiatives targeting schoolchildren are critical for reducing risks and enhancing community resilience. On May 21, 2025, Save the Children conducted a comprehensive Disaster Preparedness Session at Abul Kashem Noor Jahan Chowdhury High School in Ukhiya, Cox's Bazar. This session, designed for students, teachers, and school leadership, aimed to equip children with the knowledge and confidence to respond to emergencies and foster a culture of disaster readiness within their homes and community. This paper explores the outcomes of this initiative and its potential for replication in other disaster-prone regions, emphasizing the importance of child-focused DRR in building safer, more resilient communities.

Summary

Cox's Bazar, highly vulnerable to hazards such as cyclones, landslides, floods, and heatwaves, disproportionately affects children due to their limited mobility, dependence on adults, and lack of access to reliable information. These disasters not only expose children to physical risks like injury and disease but also disrupt their education, emotional well-being, and overall safety. On May 21, 2025, Save the Children conducted a Disaster Preparedness Session at Abul Kashem Noor Jahan Chowdhury High School, engaging students, teachers, and school leadership. Children gained life-saving knowledge, developed confidence to respond to emergencies, and shared safety practices at home, improving household preparedness and fostering a culture of resilience and protection within their community.

Background

Cox's Bazar is one of Bangladesh's most climate-vulnerable districts, exposed to recurring hazards such as heatwaves, heavy rainfall, lightning, flash floods, landslides, and cyclones – especially between April and November. Its hilly terrain, fragile slopes, and low-lying coastal areas increase disaster risks, while hosting the world's largest refugee settlement further strains resources and infrastructure. Children are among the most affected due to limited mobility, dependence on adults, and lack of access to timely information. Disasters disrupt their safety, education, and emotional well-being, making child-focused disaster preparedness essential for reducing risks and strengthening community resilience.

Action Taken

On May 21, 2025, Save the Children conducted a focused Disaster Preparedness Session at Abul Kashem Noor Jahan Chowdhury High School in Ukhiya, Cox's Bazar, facilitated by the Disaster Risk Reduction team. The session engaged students in understanding the impact of climate change, local hazards, and practical early warning systems. Through interactive discussions, real-life examples, and hands-on guidance, students learned life-saving preparedness measures for landslides, cyclones, lightning, and heatwaves. Teachers and school leadership actively participated, reinforcing the importance of timely preparedness as the monsoon season began. The initiative aimed to empower children with confidence and knowledge to protect themselves, influence household safety practices, and foster a culture of disaster readiness in the community.

Outcomes

The Disaster Preparedness Session significantly enhanced the capacity of schoolchildren to respond safely to hazards, including landslides, heavy rainfall, cyclones, lightning, and heatwaves. Students developed practical knowledge, gained confidence in interpreting early warning signals, and learned to take protective actions during emergencies. Beyond individual skills, children became catalysts for household preparedness, sharing guidance with siblings and parents, which promoted safer behaviours and increased community awareness. Teachers and school leadership deepened their engagement in disaster risk reduction, reinforcing the integration of safety practices within schools. The initiative also helped reduce children's vulnerability, safeguarded education continuity, and strengthened emotional resilience in the face of disasters. By fostering a culture of preparedness, these efforts are contributing to safer, more informed, and resilient communities in Cox's Bazar, ensuring that both children and families are better equipped to face recurring climate and disaster risks.

Lessons Learnt

Lesson 1: Child-focused disaster preparedness enhances not only students' safety but also household and community resilience, demonstrating the value of integrating children into DRR initiatives.

Lesson 2: Empowering children with disaster preparedness knowledge builds confidence and practical skills, enabling them to act as agents of change within their families and communities.

Lesson 3: Children as knowledge multipliers can promote scalable and cost-effective disaster preparedness, reach wider households and influence community safety behaviours.

Lesson 4: Interactive and context-specific training, using real-life examples, increases engagement and retention, making sessions more effective and replicable in other hazard-prone areas.

Conclusion

The Disaster Preparedness Session conducted by Save the Children in Cox's Bazar has proven to be a vital step in strengthening disaster resilience among schoolchildren and their families. By empowering students with life-saving knowledge and practical skills, the initiative not only enhanced individual safety but also contributed to broader community resilience. Students gained confidence in interpreting early warning signs, took protective actions during emergencies, and shared their knowledge with family members, amplifying the impact of the training across households. The active participation of teachers and school leadership further integrated disaster preparedness into the school culture, reinforcing its importance in daily life. This approach has demonstrated that child-focused DRR initiatives are essential not only for safeguarding children but also for fostering a culture of preparedness that benefits entire communities. By equipping children to act as knowledge multipliers, this initiative has created a sustainable and scalable model for improving disaster preparedness in Cox's Bazar. Moving forward, these efforts should be expanded to other schools and communities to ensure that children across hazard-prone areas are better prepared to face future disasters.

10 Strengthening Fire Preparedness Through Community-Led Drills

Location: Rohingya Camp

Implementer: IOM, UNHCR, BDRCS, IFRC

Collaborating partners: Site management partners ACTED, Action Aid, BRAC, DRC

Hazard: Fire

Introduction

In the densely populated Rohingya refugee camps, fire presents a constant and deadly risk, particularly given the narrow pathways, closely packed shelters, and limited access to firefighting infrastructure. With frequent fire incidents exacerbated by the lack of preparedness and resources, it is critical to build a culture of fire safety within the camps. In response, the DRC in Camp 12 has initiated monthly fire simulation drills to strengthen community fire preparedness and enhance response times. These drills, supported by MFFUs and the active involvement of trained DMU volunteers and community-based fire equipment wardens, aim to ensure a coordinated and efficient response during actual fire emergencies. This paper explores the impact of these community-led drills in improving fire preparedness, fostering collaboration, and building resilience against fire risks in Camp 12.

Summary

Camp 12's DRC SMS team conducts monthly fire simulation drills, combining MFFUs, including Tuk Tuk, Wheely frame, Cary frame, Fire Drum, and Fire tanks, with the support of trained DMU volunteers and community-based fire equipment wardens. These exercises enhance community preparedness, foster collaboration, and ensure rapid, coordinated responses during actual fire incidents.

Background

Fire is a constant threat in densely populated Rohingya camps, where narrow pathways and closely packed shelters make containment difficult. To reduce risk and improve readiness, DRC's Camp 12 SMS team, under IOM funding, equipped DMU volunteers with MFFUs and provided comprehensive training. Recognising that equipment alone isn't enough, the team emphasised hands-on drills and active community participation to build confidence, coordination, and resilience.

Action Taken

Each month, the call "Fire! Fire!" echoes through Camp 12- not a real emergency, but a test of readiness. DMU volunteers like Elias, Ayub, Tosmin, and Roshida Begum lead the charge, coordinating 15 wardens across four main blocks. The DMU, wardens, and SMS staff and volunteers gather with purpose, each taking on their assigned roles. Together, they map fire-prone areas, organise groups, and set up communication trees for rapid alerts. DMUs handle hosepipes, water pumps, and first aid, while wardens oversee equipment readiness at the block level. Around them, the community watches closely, learning every move, every signal; preparing in their minds for the moment a real fire might strike. Everyone, from DMU to SMS staff, plays a role, turning the drill into a dynamic exercise in teamwork. Fire hydrants are positioned strategically, water pumps roar to life, and DMUs move with purpose; each action rehearsed but every moment carrying the intensity of a real fire. The drill transforms the camp into a living classroom, where knowledge, coordination, and quick thinking converge to strengthen community resilience.

Outcomes

Regular drills have cultivated a culture of preparedness in Camp 12. DMU volunteers and wardens gained confidence in handling equipment and managing emergencies. The drills revealed practical gaps in communication and logistics, which were addressed collaboratively, ensuring faster response times. Community members now recognise the importance of their role in fire safety, fostering

trust and cooperation. The integration of equipment, trained personnel, and active community participation has created a replicable model for other camps. Camp residents are not just observers; they are active participants in safeguarding their own safety, resulting in a stronger, more resilient community ready for multi-hazard scenarios.

Lessons Learnt

Lesson 1: Engaging community members in drills builds ownership, confidence, and rapid response capabilities.

Lesson 2: Collaborative planning between DMU, wardens, and volunteers ensures smooth execution and effective communication.

Lesson 3: Hands-on practice with real equipment is essential to translate training into practical readiness.

Lesson 4: Strategically mapping fire-prone areas and assigning responsibilities improves coordination and safety.

Lesson 5: Regular, inclusive drills strengthen resilience and can be scaled for broader impact.

Conclusion

The community-led fire simulation drills in Camp 12 have significantly strengthened fire preparedness and response within the camp. By engaging DMU volunteers, wardens, and the broader community in hands-on, realistic training, the initiative has cultivated a culture of preparedness and quick response. The regular drills have allowed for the identification and rectification of logistical and communication gaps, leading to faster and more coordinated responses during emergencies. The active participation of camp residents in these drills has not only boosted their confidence in handling fire incidents but has also fostered a sense of ownership and responsibility for their own safety. The combination of proper equipment, well-trained personnel, and community involvement has created a replicable model for other camps, ensuring that residents are better equipped to respond to fire risks and other hazards. The success of these drills underscores the importance of collaboration, community engagement, and hands-on practice in building resilience in disaster-prone settings.

11 Empowering First Responders: Fire Safety Training for SMS and DMU Volunteers in Rohingya Camps

Location: Rohingya Camp

Implementer: IOM, UNHCR, BDRCS, IFRC

Collaborating partners: Site management partners ACTED, Action Aid, BRAC, DRC

Hazard: Fire

Introduction

In Cox's Bazar, Bangladesh, where over 1.1 million Rohingya refugees live in densely packed, temporary shelters, fire poses one of the most significant risks to life and property. The camp's shelters, constructed under tight timelines and using highly flammable materials, are vulnerable to frequent and devastating fires. In response to this recurring hazard, Acted launched a fire safety initiative aimed at empowering local communities to take the lead in DRM. By training SMS and DMU volunteers as first responders, Acted has strengthened the capacity of these volunteers to prevent, respond to, and coordinate during fire incidents. This initiative not only enhances disaster preparedness but also promotes resilience, especially in a setting where external emergency services may be limited or delayed. Through practical and theoretical training, over 3,000 volunteers have been equipped to manage fire risks effectively, with a notable success during the December 2024 Camp 1W fire, where trained volunteers played a crucial role in containing the blaze. This paper explores the effectiveness of this community-based approach and the lessons learned from the training program.

Summary

Frequent and devastating fires in densely populated Rohingya camps pose severe risks for over 1.1 million displaced people. To address this, Acted is strengthening fire preparedness across 33 camps by providing training to SMS and DMU volunteers as first responders. Through two refresher cycles (2023–2025), 3,070 volunteers received theoretical and practical sessions on fire prevention, response, and coordination under a "One Camp Approach." This localized capacity proved vital during the December 2024 Camp 1W fire, where 395 trained volunteers from 13 camps helped contain the blaze that damaged 748 shelters. The initiative reduces disaster risks, fosters resilience, and highlights the importance of community-led emergency response.

Background

Rohingya camps in Cox's Bazar were built under extreme time pressure, resulting in densely packed shelters made of highly flammable materials. This structural vulnerability, combined with limited access routes, makes fire one of the most severe hazards for over 1.1 million displaced people. Between January and March 2023 alone, 222 incidents were reported, including 203 fires that damaged 720 shelters and affected 949 households. A major fire in Camp 5 in January 2023 destroyed 976 shelters and displaced 887 households. These recurring disasters highlighted the urgent need for localized response capacity. Acted prioritised fire safety under its DRM programming, identifying SMS and DMU volunteers as key actors to lead first response efforts and mitigate risks.

Action Taken

To address recurring fire hazards, Acted is implementing a comprehensive fire safety training program across 33 Rohingya camps. The objective is to build community-based first-response capacity by equipping SMS and DMU volunteers with practical skills and knowledge. Acted has organised regular refresher training to maintain readiness and included modules for newly recruited volunteers. Between 2023 and 2025, 3,070 SMS/DMU volunteers, including 768 women and 26 persons with disabilities, participated in two refresher cycles, with a third cycle planned. Training combines theoretical sessions on fire prevention, risk assessment, and coordination with practical "Live Fire" drills to simulate real emergencies. The "One Camp Approach" is emphasised, enabling volunteers to assist neighbouring camps during large-scale incidents.

Acted has also provided essential tools and strengthened linkages with camp management and emergency services. Volunteers were prepared to respond at any time, including weekends and holidays, ensuring inclusive and timely disaster response.

Outcomes

Acted's fire safety initiative significantly improved disaster preparedness in Rohingya camps. Over 3,070 SMS and DMU volunteers, including 768 women and 26 PwDs, are now trained as first responders, reducing reliance on external actors and enabling rapid intervention during emergencies. Practical learning through 130 live fire drills enhanced confidence and coordination, leading to faster evacuation and containment during incidents. The effectiveness of this approach was demonstrated during the December 2024 Camp 1W fire, which affected 3,879 individuals and destroyed 748 shelters. Acted-trained volunteers from 13 camps, including 395 responders, played a critical role in controlling the fire and preventing further damage. Similar interventions during major fires in Camps 18, 7, 26, and NRC reinforced the value of localized response capacity. Despite challenges in finding suitable training spaces and water sources, Acted mitigated these through strong coordination with SMS agencies and CICs. The initiative fosters resilience, promotes inclusion, and offers a scalable model for DRM in high-risk settings.

Lessons Learnt

Lesson 1: Community-based volunteers are critical for rapid response; investing in their capacity ensures sustainability. Training local volunteers creates a reliable first line of defence during emergencies. Their familiarity with the community allows immediate action, reducing dependency on external responders and ensuring continuity even when access is restricted for other external or formal actors.

Lesson 2: Combining theory with practical drills builds confidence and operational readiness. Volunteers often lack prior emergency experience. Practical exercises, such as fire suppression and evacuation drills, translate theoretical knowledge into real-life skills, boosting confidence and ensuring they can act effectively under pressure.

Lesson 3: A "One Camp Approach" strengthens inter-camp coordination and resource sharing during large-scale incidents. Fires can spread quickly across camp boundaries. Training volunteers to assist neighbouring camps fosters collaboration, maximises available resources, and creates a network of responders capable of managing complex emergencies.

Lesson 4: Regular refresher training maintains skills and motivation, reducing response gaps over time. Skills degrade without practice. Periodic refreshers keep volunteers updated on protocols, reinforce confidence, and sustain engagement, ensuring readiness for future incidents.

Lesson 5: Linking volunteers with formal emergency services enhances coordination and maximises impact during crises. Integration with camp management and emergency services ensures structured response, clear communication, and access to additional resources, making interventions more effective and reducing chaos during emergencies.

Conclusion

The fire safety training program for SMS and DMU volunteers in Rohingya camps has proven to be a critical component in strengthening disaster risk management and response efforts. By equipping over 3,070 local volunteers with the necessary skills and knowledge, Acted has created a reliable, community-based first-response system that significantly reduces the reliance on external actors during fire emergencies. The practical fire drills, combined with theoretical training, have built confidence and improved operational readiness, as demonstrated during the December 2024 Camp 1W fire, where trained volunteers played a pivotal role in controlling the fire and mitigating further damage. The "One Camp Approach," which encourages coordination between neighboring camps, has also enhanced inter-camp collaboration, making it a scalable model for disaster response in similar high-risk settings. The initiative underscores the importance of continuous capacity-building through regular refresher training and the integration of local volunteers with formal emergency services for more efficient coordination. Going forward, this approach provides valuable insights into how community-led disaster response systems can foster resilience and preparedness in vulnerable refugee camps.

12 Rapid, Compassionate, and Coordinated Response in Crises at the HOPE Field Hospital, Cox's Bazar

Location: Rohingya Camp and Host communities

Implementer: Hope Foundations for Women and Children of Bangladesh

Hazard: Multi-Hazard

Introduction

Cox's Bazar, Bangladesh, has faced continuous and overlapping crises since the Rohingya influx in 2017, including monsoon floods, cyclones, landslides, fires, and disease outbreaks. In this context, the HOPE Emergency Response Team (HERT) has been a cornerstone of rapid medical assistance, providing lifesaving care to both Rohingya refugees and the surrounding host communities. Established in 2018 by the HOPE Foundation for Women and Children of Bangladesh, HERT is strategically based at the HOPE Field Hospital in Camp 4, with a focus on swift deployment, community engagement, and women-centered care. This paper explores how HERT's preparedness, capacity building, and strong coordination across sectors have enabled effective emergency response, highlighting the success of these efforts in saving lives, particularly during Cyclone Mocha in 2023, when the team maintained zero maternal deaths.

Summary

HERT, based at HOPE Field Hospital in Cox's Bazar, delivers rapid, lifesaving care during disasters affecting Rohingya and host communities. Since 2018, HERT has treated over 2,400 patients through prepositioned supplies, trained responders, and coordinated deployment. Key strengths include zero maternal deaths during Cyclone Mocha, 24/7 readiness, and strong community engagement. Lessons highlight the value of preparedness, women-centred care, and multi-sectoral coordination. Future plans include expanding mobile units and integrating mental health support.

Background

Since the onset of the Rohingya influx in 2017, Cox's Bazar has become one of the world's largest humanitarian response zones, exposed to multiple overlapping crises—monsoon floods, landslides, cyclones, fire incidents, disease outbreaks, and mass displacement. Recognizing the urgent need for a rapid medical response mechanism, the HOPE Foundation for Women and Children of Bangladesh established the HERT in 2018 as part of its integrated DRM approach. Two fully functional HERT units are based at the HOPE Field Hospital for Women in Camp 4, strategically positioned to serve both Rohingya refugees and the surrounding host communities.

Action Taken

1. **Prepositioning of Emergency Supplies:** HOPE Field Hospital prepositions essential items—medicines, surgical kits, IV fluids, delivery packs, PPE, and water purification tablets—before cyclone and monsoon seasons. Cold chain systems powered by solar energy ensure vaccine integrity during power outages.
2. **Training and Capacity Building:** HERT members undergo regular refresher training on mass casualty management, first aid, IPC, and EmONC. Quarterly simulation drills are conducted with the Health Sector, Protection Sector, and CiC offices to enhance readiness.
3. **Rapid Deployment and Coordination:** HERT activates within one hour of a distress alert. Coordination with ISCG, the Civil Surgeon Office, and FSCD ensures efficient response, avoids duplication, and strengthens referral pathways.
4. **Community Engagement and Risk Communication:** HERT collaborates with CHWs to deliver early warning messages and identify high-risk individuals such as pregnant women, the elderly, and persons with disabilities. During emergencies, community mobilizers assist in guiding patients to HOPE's emergency triage unit.

Outcomes

- Over 2,400 patients have been treated through emergency deployment since 2018, including trauma, burns, obstetric emergencies, and dehydration cases.
- Zero maternal deaths during the 2023 Cyclone Mocha response due to rapid mobilization and continuity of maternity care.
- 100% operational readiness maintained during seasonal monsoon flooding through stockpiled supplies and 24/7 standby teams.
- Strengthened multi-sectoral coordination improved efficiency, linking health, WASH, and protection responses.

Lessons Learnt

Lesson 1: Prepositioning Saves Lives: Early planning and stockpiling of emergency materials enabled uninterrupted service delivery even during supply chain disruptions.

Lesson 2: Women-Centred Response: Inclusion of trained female responders ensured access and dignity in care, especially for women survivors of GBV or obstetric emergencies.

Lesson 3: Preparedness is Key: Regular drills and refresher training-built confidence and cohesion across health and non-health teams.

Conclusion

HERT ability to deliver rapid, coordinated, and compassionate medical care during emergencies in Cox's Bazar underscores the importance of preparedness and community-centered response strategies. Prepositioning essential supplies, maintaining 24/7 readiness, and ensuring continuous training have been key to HERT's success in providing lifesaving services, including trauma care, obstetric emergencies, and disease management. Notably, the zero maternal deaths during the Cyclone Mocha response reflect the effectiveness of HERT's rapid mobilization and its focus on maintaining continuity of maternity care during crises. Furthermore, HERT's close coordination with ISCG, the Civil Surgeon Office, and other sectors like WASH and protection enhanced the efficiency and impact of the response. Moving forward, expanding mobile units and integrating mental health support into the emergency response will be crucial for addressing the growing needs of affected populations. The lessons learned from HERT's work demonstrate the vital role of proactive planning, multi-sectoral collaboration, and women-centered care in building resilience and ensuring uninterrupted healthcare access during disasters.

13 Linking DRR Awareness with Plastic Pollution Reduction in Camp-13

Location: Rohingya Camp

Implementer: World Vision Bangladesh

Collaborating partners: IOM, ActionAid, BDRCS, and SHED

Hazard: Water logging and Climate induced hazard

Introduction

In Cox's Bazar, Bangladesh, Camp-13 faces frequent disasters such as cyclones, flooding, and landslides, which pose significant risks to the safety and well-being of its residents. Traditionally, DRR efforts in the camp have focused on emergency response and preparedness for such events. However, a critical gap was identified in the community's understanding of how environmental factors, such as plastic pollution, exacerbate disaster risks. Blocked drainage systems caused by plastic waste, coupled with unstable slopes, were contributing to increased vulnerability during the rainy season. In response, World Vision Bangladesh, in collaboration with IOM, ActionAid, BDRCS, and SHED, led a campaign aimed at shifting the community's perspective from reactive emergency preparedness to proactive environmental management. The innovative "Plastic Exchange Shop" model encouraged community participation in waste collection, with the added incentive of exchanging plastic waste for DRR preparedness items. This intervention not only addressed plastic pollution but also strengthened disaster resilience, making the connection between environmental cleanliness and reduced disaster risk clearer to the community.

Summary

An innovative DRR campaign in Camp-13 integrated environmental cleanliness with disaster preparedness by implementing a Plastic Exchange Shop model. The initiative transformed community understanding from response-focused emergency preparedness to preventive, environment-linked risk reduction. Approximately 200 community members participated in collecting plastic waste and exchanging it for DRR preparedness items, resulting in improved waste management practices, enhanced drainage systems, reduced disaster vulnerability, and demonstrated a scalable model for integrating environmental sustainability with disaster preparedness through community-driven action.

Background

Camp-13 residents viewed Disaster Risk Reduction primarily through cyclone preparedness and emergency response. However, they were unaware of how plastic pollution caused drain blockages, flooding, and landslides- thereby increasing disaster vulnerability. This gap meant that communities did not address preventive environmental measures. World Vision Bangladesh, under the Food Security Sector, recognised this critical disconnect. The campaign aimed to shift understanding from reactive emergency response to proactive environmental management linked to disaster risk reduction. Collaborating with IOM, ActionAid, BDRCS, and SHED through the Site Management Sector, the initiative promoted shared responsibility for disaster risk reduction and environmental protection. The goal was to demonstrate that clean surroundings reduce disaster risks.

Action Taken

- **Objectives & Leadership:** World Vision Bangladesh led objective definition with the SMS and partners (IOM, ActionAid, BDRCS, SHED) to shift community understanding from response-focused to prevention-focused DRR.
- **Implementation:** The campaign was conducted on July 21, 2025, in Camp-13, involving approximately 200 participants, including DMU volunteers, CPP members, NGO staff, and community members.
- **Key Activities:** Instead of conventional DRR simulation, the campaign adopted a

behaviour-change approach using an innovative "Plastic Exchange Shop," where participants collected discarded plastics and exchanged them for DRR items (torches, whistles, gloves, masks). Interactive demonstrations highlighted how unmanaged waste causes landslides, waterlogging, and health hazards.

• **Inclusion:** Block-level mobilization engaged women, youth, and households, ensuring accessibility for different age groups.

• **Stakeholders:** World Vision Bangladesh (implementer), IOM, ActionAid, BDRCS, SHED, CIC, and DMU volunteers collaborated closely, demonstrating multi-sectoral coordination.

Outcomes

• **Community Awareness:** Residents now understand that plastic pollution directly increases disaster vulnerability by clogging drains and destabilising slopes. DRR is viewed not only as emergency preparedness but as a daily responsibility linked to environmental care, representing a fundamental perception shift and enhanced community ownership.

• **Waste Management:** Observable reduction in scattered plastics and bottle littering in public areas. Households began segregating waste and disposing of plastics responsibly, indicating sustained behavioural change.

• **Environmental & Health:** Cleaner surroundings reduced water stagnation and waterborne disease risks. Drainage systems function more effectively, minimizing flooding during heavy rainfall- critical for monsoon preparedness.

• **Multi-Sectoral Collaboration:** The initiative fostered strong coordination among humanitarian actors, government representatives, and community volunteers. It demonstrated how environmental management, DRR, and community empowerment can be addressed together under an integrated framework, breaking sectoral silos.

• **Objectives Achievement:** The primary objective of shifting community understanding from response to prevention-focused DRR was achieved. The secondary objective of demonstrating an innovative scalable model succeeded through the community reception of the Plastic Exchange Shop.

Lessons Learnt

Lesson 1: Integrating environmental action with disaster preparedness messaging creates stronger community engagement than conventional DRR awareness alone. When residents understand the link between their daily environment and disaster vulnerability, they transition from passive beneficiaries to active change agents.

Lesson 2: Incentive-based participation models like the Plastic Exchange Shop effectively motivate community involvement in environmental management. Transforming waste collection into a rewarding exchange rather than a burdensome cleanup increases participation while generating a positive association with environmental care.

Lesson 3: Multi-sectoral collaboration with clear role definition strengthens DRR initiatives by leveraging complementary expertise and ensuring alignment with broader humanitarian objectives. Single-sector approaches address vulnerabilities less comprehensively than coordinated multi-sector strategies.

Lesson 4: Timing campaigns with seasonal risk periods enhances message relevance and community receptiveness. Communities are more motivated to engage with disaster preparedness content when seasonal hazards are imminent, making pre-monsoon campaigns particularly effective for flooding risk reduction.

Lesson 5: Positioning community volunteers and existing structures (DMU, CPP) as leaders rather than implementers strengthens sustained behavioural change. Their credibility, ongoing presence, and community relationships make them more effective agents of change than external actors.

Conclusion

The "Plastic Exchange Shop" initiative in Camp-13 successfully linked environmental action with disaster preparedness, driving a significant shift in the community's understanding of DRR. By demonstrating how plastic pollution directly contributes to disaster risks like flooding and landslides, the campaign empowered residents to take responsibility for their environment and disaster preparedness. The incentive-based model encouraged participation, with residents actively engaging in waste management and environmental protection activities, leading to cleaner surroundings, improved drainage systems, and reduced flooding risks. The initiative also strengthened multi-sectoral collaboration among humanitarian partners, government representatives, and community volunteers, demonstrating the value of a coordinated approach to disaster risk reduction. The success of this model, particularly in fostering community ownership and sustainable behaviour change, presents a scalable solution for integrating environmental sustainability into disaster preparedness efforts in other camps and vulnerable regions. Moving forward, campaigns that combine environmental management with disaster preparedness should be prioritized, as they not only enhance resilience but also contribute to long-term sustainability and community empowerment.

14 Community Centred Integrated Disaster Risk Reduction

Location: Rohingya Camp

Implementer: IRC

Hazard: Multi-Hazard

Introduction

The Rohingya refugee camps and surrounding host communities in Cox's Bazar, Bangladesh, are situated in a hazard-prone region that regularly experiences cyclones, monsoon flooding, landslides, fires, and other climate-induced shocks. High population density, fragile shelter structures, environmental degradation, and the effects of climate change have significantly increased disaster risks, disrupting essential services such as education, health, and protection, and threatening lives and livelihoods. These risks are further compounded by limited preparedness capacity, barriers to inclusive response, and the disproportionate impact of disasters on women, children, and persons with disabilities.

In response, DRR is integrated as a core component across the sectors to strengthen the community and institutional system for disaster risk management, resilience and enhance preparedness. As part of community-based disaster risk management, multi-hazard preparedness and response training for the community structures, household-level contingency planning, anticipatory action to ensure learning continuity, capacity enhancement of the frontline response team, and building emergency leadership of the local DMC, and disability-inclusive DRR approaches in institutional disaster response planning, the intervention aims to reduce disaster risks and ensure the continuity of critical services during emergencies. Aligned with the ISCG multi-hazard response plan and national disaster management frameworks, these efforts enhance early action, local response capacity, and long-term resilience among Rohingya refugees and host communities.

Summary

In line with the IRC's strategic priorities, it implements a comprehensive, community-centred DRR approach to strengthen preparedness, early action, and resilience among Rohingya refugees and host communities in Cox's Bazar. To ensure community readiness for emergency response, activities are implemented in integration with community structures, including CBPC, Community-Based CPC, women's groups, youth groups, PERU and MMT, ensuring inclusive participation, community ownership, and strong emergency referral linkages

Through community-based DRM, multi-hazard preparedness and response training, contingency planning, and simulation exercises, the intervention enhances local capacity to anticipate and respond to cyclones, floods, landslides, and fires. . In addition to this, the facility focal points of all sectoral facilities were trained on facility risk assessment to periodically identify the risk of multi-hazards and take risk mitigation measures, and also develop facility-level contingency planning, and anticipatory actions to ensure continuity of education and essential services further reduce disaster-related risks. Aligned with the ISCG multi-hazard response plan and national disaster management frameworks, IRC's DRR interventions protect lives, safeguard critical services, and reinforce community resilience in a highly hazard-prone humanitarian context in Cox's Bazar.

Background

Cox's Bazar is one of Bangladesh's most disaster-prone regions, regularly exposed to cyclones, monsoon flooding, landslides, and fires. The area hosts over one million Rohingya refugees living across 33 highly congested camps, many of which are located on environmentally fragile and deforested land. As highlighted in the project design, 97% of Rohingya households are highly vulnerable to disasters, largely due to shelters constructed with lightweight and flammable materials, unstable slopes,

and limited drainage and access routes.

Climate-induced shocks repeatedly disrupt essential services, livelihoods, and community safety. The refugee population has extremely limited coping capacity, with 97% of households dependent on humanitarian assistance for survival. Vulnerability is further compounded by demographic factors, as 12% of the refugee population are persons with disabilities (UNHCR Population Factsheet), many of whom face barriers to accessing early warning information, evacuation support, and emergency services during disasters. Recurrent monsoon and cyclone events frequently interrupt health, education, and protection services, reinforcing cycles of risk and recovery challenges for both Rohingya refugees and host communities. These conditions underscore the urgent need for strengthened, inclusive DRR measures to reduce risk, safeguard lives and services, and build long-term resilience.

Action Taken

IRC implemented targeted, community structure based DRR activities to strengthen preparedness, leadership, and emergency response capacity within Rohingya refugee camps in Cox's Bazar. The intervention focused on empowering frontline community and facility-linked structures to effectively respond to multi-hazard risks, including fires, floods, cyclones, landslides, and health emergencies.

Capacity-building initiatives were conducted for frontline health staff of IRC's MMT in mass-casualty incident management, thereby strengthening their readiness to respond to large-scale emergencies. In parallel, specialized training was provided to the PERU and frontline GBV responders in emergency response, in coordination with the Protection Sector and EPR) mechanisms, to ensure survivor-centered , coordinated protection responses during crises.

Community-linked service providers were further strengthened through first-aid training for learning center teachers, enabling them to provide immediate, life-saving support during emergencies involving children. Leadership and inclusive disaster-response planning training sessions were delivered to members of the Camp Disaster Management Committee, including CPP volunteers, Imams, Majhis, SMS volunteers, and Union Disaster Management Committee representatives, reinforcing coordinated leadership, inclusive decision-making, and community-led emergency response.

Multi-hazard preparedness and emergency response training were conducted for CBP , CBCP), youth, women and adolescent groups, and other community structures, enhancing their capacity to act as first responders and disseminators of preparedness information. Community engagement interventions, including outreach sessions on fire, flood, cyclone, landslide, and thunderstorm preparedness, were implemented to strengthen risk awareness and household-level preparedness.

Facility-based simulation exercises were conducted in Camps 22, 11, and 25 in collaboration with BDRCS, IFRC, IOM, CPP, and CiC offices, focusing on the activation of EWS , coordinated rescue operations, and safe evacuation and relocation procedures. These simulations tested roles, coordination mechanisms, and referral pathways under real-time emergency conditions. In parallel, facility-level multi-hazard risk assessments and emergency response plans were developed for IRC centres to strengthen preparedness, ensure timely response, and maintain the safety, functionality, and continuity of essential services during emergencies.

Outcomes

Through a structured, community- and facility-linked Disaster Risk Reduction (DRR) approach, the IRC strengthened multi-hazard preparedness, leadership, and emergency response capacity across Rohingya refugee camps and host communities in Cox's Bazar. Community structures including CBP, CBCP youth and adolescent groups, WPE , and Camp DMC members-were equipped with practical skills in multi-hazard preparedness, first aid, emergency response, and inclusive leadership, enabling them to function as effective frontline responders during fires, floods, cyclones, landslides, and health emergencies.

Health and protection response capacity was reinforced through targeted training of IRC Mobile Medical Teams on mass casualty management and capacity building of the PERU and frontline GBV responders, strengthening coordinated, survivor-centered responses during emergencies. Learning center teachers trained in first aid enhanced child safety and immediate life-saving support within education facilities. Facility-level multi-hazard risk assessments and emergency response plans improved the safety and functionality of IRC centers, while simulation exercises in Camps 22, 11, and 25 tested coordination, referral pathways, and real-time response with key actors, including BDRCS, IFRC, IOM, CPP, and Camp-in-Charge offices.

Overall, the intervention improved preparedness, early action, and coordination at community and facility levels; strengthened inclusive leadership and decision-making; enhanced first-response and mass-casualty readiness; and increased risk awareness and household preparedness through community engagement. By embedding inclusive, community-led DRR practices within existing structures, the intervention reduced disaster-related risks, safeguarded critical services, and strengthened collective resilience in one of the most hazard-prone humanitarian contexts.

Lessons Learnt

Lesson 1: Community-structure-led DRR strengthens preparedness and response effectiveness.
Engaging established community structures such as CBP, CBCP, youth and adolescent groups, Women Protection Entities, and Camp Disaster Management

Committees proved critical in strengthening early warning dissemination, first-response actions, and coordination during multi-hazard emergencies.

Lesson 2: Inclusive leadership enhances timely decision-making during emergencies.
Capacity building for community leaders, including CPP volunteers, Majhis, Imams, SMS volunteers, and Union Disaster Management Committee members, improved inclusive leadership, enabling faster and more coordinated decision-making during early warning activation, evacuation, and relocation processes.

Lesson 3: Facility-based simulations on inclusive EWS, rescue, and relocation improve operational readiness.
Simulation exercises focusing on early warning activation, search and rescue, and safe relocation strengthened practical understanding of roles, referral pathways, and coordination among responders, enhancing preparedness for real-time emergency response.

Lesson 4: Cross-sector capacity building strengthens life-saving response.
Training health staff on mass casualty management, strengthening PERU and frontline GBV responder capacity, and equipping learning center teachers with first aid skills improved integrated, survivor-centered responses and ensured continuity of essential services during emergencies.

Lesson 5: Sustained coordination with authorities and partners maximizes DRR impact.
Regular engagement with Camp-in-Charge offices, sector coordination platforms, and humanitarian partners ensured alignment with the multi-hazard response framework, minimized duplication, and enhanced the effectiveness of early warning, rescue, and relocation efforts.

Conclusion

The International Rescue Committee's community- and facility-based DRR interventions in Cox's Bazar demonstrate the effectiveness of inclusive, multi-hazard preparedness in strengthening resilience within complex humanitarian settings. By embedding DRR within existing community structures and critical service facilities, the initiative enhanced early warning activation, rescue and relocation readiness, and coordinated emergency response across Rohingya refugee camps and host communities. Capacity building for community leaders, youth, health workers, teachers, and protection responders strengthened frontline response capabilities, while facility-level risk assessments, emergency planning, and simulations translated preparedness into operational readiness.

The integration of EWS, community-led preparedness actions, and inclusive leadership ensured that response measures were timely, coordinated, and responsive to the needs of the most vulnerable, including women, children, and persons with disabilities. Strong coordination with government authorities, sector platforms, and humanitarian partners further reinforced alignment with multi-hazard response frameworks and improved the efficiency of emergency actions. Overall, the intervention illustrates how a community-centred, inclusive DRR approach can reduce disaster-related risks, safeguard essential services, and build sustainable resilience, offering a replicable model for disaster preparedness and response in hazard-prone humanitarian contexts.

Inclusive Disaster Risk Management

Disaster risks are not experienced equally. Women, children, older persons, and persons with disabilities often face greater barriers to accessing information, evacuation support, and services during emergencies. Inclusive DRM ensures that preparedness, response, and recovery measures address diverse needs and protect dignity. This thematic area presents best practices that mainstream inclusion into DRM programming, demonstrating how targeted preparedness measures, accessible tools, and community engagement enhance safety and resilience for the most vulnerable populations.

15 Enhancing Multi-Hazard Preparedness for Persons with Disability through Safe Evacuation Kit (Quick Run Bag)

Location: Rohingya Camp

Implementer: Oxfarm and PROTTYASHI

Hazard: Multi-Hazard

Introduction

In the Rohingya refugee camps of Cox's Bazar, Bangladesh, vulnerable populations such as PSNs- including those with disabilities, the elderly, and female-headed households- face heightened risks during emergency situations like cyclones, fires, and landslides. These individuals often encounter difficulties in accessing critical information, evacuating safely, or maintaining essential supplies during crises. To address these challenges, a targeted initiative was implemented to enhance the emergency preparedness of PSNs through the distribution of Safe Evacuation Kits (Quick Run Bags). These kits, equipped with essential safety, hygiene, and communication tools, were designed to support these individuals in responding quickly and effectively to sudden-onset hazards. This intervention, funded by Oxfam Hong Kong and implemented by Oxfam in Bangladesh and PROTTYASHI, in close collaboration with community representatives and local authorities, aimed to reduce vulnerabilities, enhance self-protection, and foster a stronger sense of community preparedness. This paper examines the effectiveness of the Safe Evacuation Kits in improving the resilience and safety of PSNs in the refugee camps.

Summary

A total of 957 targeted Safe Evacuation Kits (Quick Run-Bags) was distributed among the Rohingya Refugees in Camps 3 & 4 to strengthen the preparedness and resilience of PSNs during emergencies. The initiative provided critical items for safety, communication, and hygiene, ensuring that vulnerable households could respond quickly during sudden-onset hazards. Through strong coordination with the relevant stakeholders, the distribution was transparent, person-with-disability-friendly, and responsive to beneficiaries' needs. This initiative strengthened community confidence and readiness and supported broader efforts in multi-hazard preparedness and anticipatory action.

Background

The Rohingya population experiences diverse vulnerabilities, particularly among PSNs such as persons at heightened risk, including persons with disabilities, female-headed households, the elderly, and others who face additional challenges during emergencies. Rapid-onset hazards such as fire incidents, cyclones, and landslides frequently threaten the safety and stability of these persons. Persons with disabilities often face greater challenges in accessing emergency information, moving to safe areas, or maintaining essential supplies during crises. To address these gaps, the Oxfam Protection Team launched Safe Evacuation Kits to help persons with disabilities and other at risk households act quickly in the first critical moment of emergency. Unlike standard relief kits, these were designed with inclusivity in mind, ensuring preparedness was practical, accessible, and responsive to the needs of the most vulnerable

Action Taken

Beneficiaries were selected based on UNHCR vulnerability criteria, focusing on persons with disabilities, elderly people, single parents/caregivers and female-headed households. The safe evacuation kits, containing key emergency items such as a duffle bag, umbrella, torchlights, plastic document folder, whistles, and essential hygiene materials, were identified and provided to the households. Based on community consultation, the items were verified and finalized to ensure the relevance of the items and their effectiveness. Awareness and orientation sessions accompanied the distribution to reinforce early action, safe evacuation procedures, and disaster-specific preparedness

Outcomes

• **Improved Emergency Preparedness:** Beneficiaries reported greater readiness and confidence to act rapidly during emergencies.

• **Reduced Vulnerability:** The kits improved persons with disabilities' ability to self-protect and safely evacuate during high-risk situations.

• **Strengthened Community Trust:** Transparent processes and strong coordination reinforced positive relationships between the community and implementing agencies.

• **Enhanced Multi-Hazard Response:** The initiative contributed to broader preparedness efforts, supporting anticipatory action.

Lessons Learnt

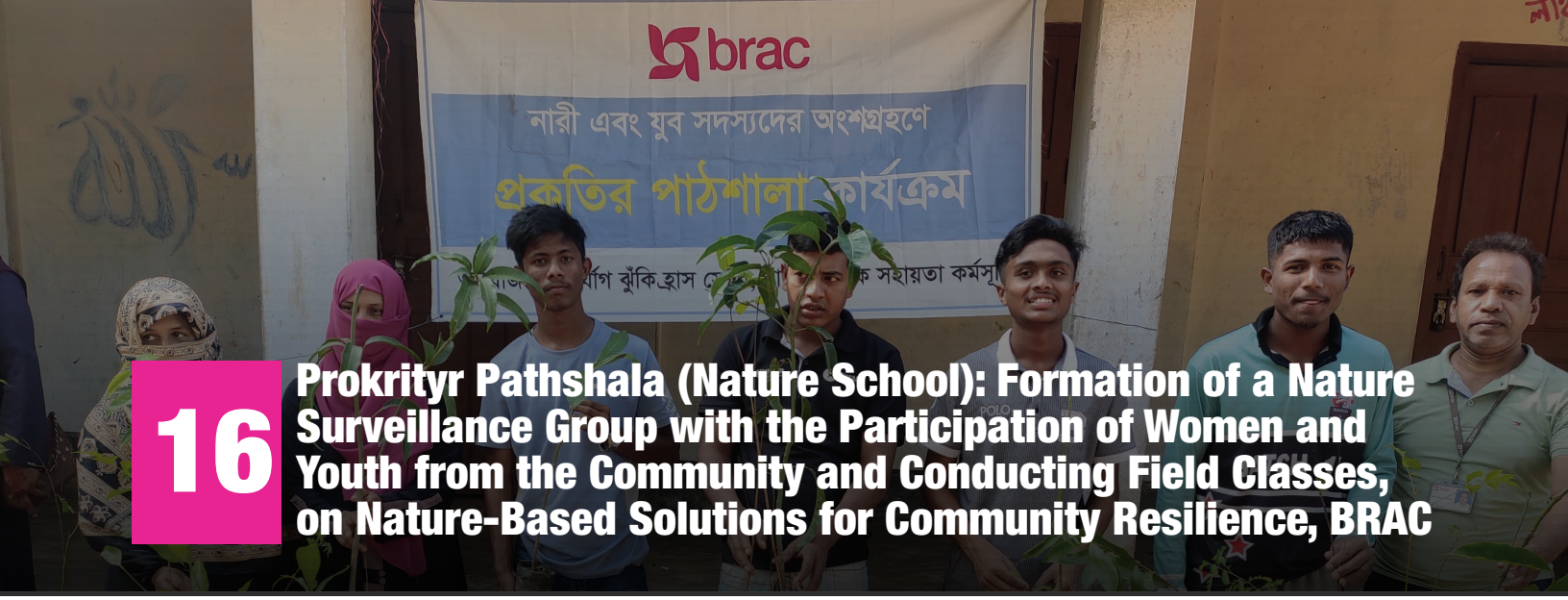
Lesson 1: Targeted approaches ensure higher impact, especially when focusing on persons with disabilities and households with additional challenges.

Lesson 2: Combining material assistance with awareness messaging enhances the practical utility of the kits and promotes safer community behaviour.

Lesson 3: Participatory feedback mechanisms improve relevance. Community consultation and beneficiary involvement in verifying kit contents-built trust and dignity, ensuring that distributed items matched real needs.

Conclusion

The Safe Evacuation Kit initiative in the Rohingya refugee camps has proven to be a crucial intervention for enhancing the preparedness and resilience of PSNs. By providing essential emergency supplies, including hygiene items, communication tools, and evacuation gear, the kits enabled vulnerable households to respond swiftly to emergencies and navigate the complexities of evacuations. The initiative's focus on community coordination and transparency strengthened trust between the refugees and humanitarian agencies, ensuring that the distribution was inclusive and tailored to the needs of the beneficiaries. Feedback mechanisms and awareness sessions further enhanced the practical use of the kits, reinforcing safe evacuation practices and disaster preparedness. This targeted approach has not only improved the immediate response capacity of PSNs but also contributed to broader multi-hazard preparedness efforts, making it a model for future interventions in similar humanitarian contexts. Moving forward, the success of this initiative highlights the importance of prioritizing inclusivity and accessibility in disaster response and preparedness planning.



16 Prokrityr Pathshala (Nature School): Formation of a Nature Surveillance Group with the Participation of Women and Youth from the Community and Conducting Field Classes, on Nature-Based Solutions for Community Resilience, BRAC

Location: Host Community (Ukhiya)

Implementer: BRAC

Hazard: Multi-Hazard

Introduction

Cox's Bazar is one of Bangladesh's most disaster-prone regions, exposed to recurring cyclones, floods, landslides, waterlogging, and climate-induced hazards. These risks have intensified following the large-scale Rohingya refugee influx, which has placed significant pressure on the local environment through deforestation, hill cutting, water pollution, and unplanned waste disposal. Environmental degradation has increasingly emerged as a key driver of disaster vulnerability for both Rohingya refugees and host communities, particularly those dependent on natural resources for water, agriculture, and livelihoods. Despite facing these risks, many communities had limited understanding of the direct link between environmental mismanagement and disasters. Disaster preparedness efforts often focused on emergency response rather than preventive environmental actions. And water body is one of the natural components are polluted which create water crisis. To address, Prokrityr Pathshala (Nature School) was introduced as a community-based environmental education initiative focused on "Watershed Management" specifically natural water bodies Naf & Raju canal. The approach aimed to strengthen disaster risk reduction by improving environmental awareness, promoting sustainable practices, and empowering communities to take preventive action against environmental hazards that contribute to disasters.

Summary

The project organised "Prokrityr Pathshala- Nature's School" with the active participation of women and youth groups residing in the watershed area. Through this initiative, participants discussed watershed-related challenges, identified community-led and nature-based innovative solutions, and took youth and women leadership roles in implementation. Key interventions included protection of natural water reservoirs, cleaning and excavation of natural canals, community-based solid waste management, plantation, and other nature-based solutions. From the proposals developed during Prokrityr Pathshala, the project selected one or two priority solutions and provided technical and financial support for implementation. Training modules and knowledge products were developed specifically for "Prokrityr Pathshala-Nature's School." These modules provided guidance on early warning dissemination, anticipatory action planning, environmental stability and restoration processes, and examples of innovative nature-based solutions to protect communities from multiple hazards while enhancing livelihood opportunities.

Background

Since the large-scale Rohingya influx in 2017, environmental pressure has intensified due to deforestation, hill cutting, groundwater depletion, waste accumulation, and surface water pollution. These environmental challenges have increased disaster risks and trigger climate change for both Rohingya refugees and host communities. Host communities in Ukhiya and Teknaf many of whom rely directly on natural resources for water, agriculture, and livelihoods have been particularly affected by waterborne diseases, reduced agricultural productivity, landslide risks, and climate variability. However, limited awareness and lack of structured community-level environmental education constrained preventive action. Prokrityr Pathshala was initiated to address this gap by strengthening environmental knowledge to disaster risk reduction.

Action Taken

The Prokrityr Pathshala initiative was implemented as a two-day community-based training programme using participatory and experiential learning methods. Key actions included:

• Curriculum Development: A structured training module covering surface water pollution, groundwater scarcity, waterlogging, landslides, deforestation, climate change impacts, and environment-friendly agriculture, all linked to disaster risk reduction.

• Participatory Training Delivery: Training sessions used group discussions, local hazard analysis, visual materials, storytelling, and experience sharing to ensure accessibility for participants with varying literacy levels.

• Targeting and Inclusion: Community members including men, women, youth, farmers, and vulnerable households from Ukhiya was engaged.

• Local Context Integration: Participants identified local environmental problems and discussed practical, locally feasible solutions to reduce disaster risks.

• Community Engagement: Emphasis was placed on collective responsibility and community-led actions such as waste management, drainage maintenance, water conservation, and tree planting.

The initiative was implemented through close engagement with community members, ensuring relevance, ownership, and practical application.

Outcomes

The implementation of Prokrityr Pathshala led to the following outcomes:

• Improved community understanding of the relationship between environmental degradation and disaster risks.

• Increased awareness of safe water practices, water conservation, and prevention of waterborne diseases.

• Enhanced community capacity to identify causes of waterlogging and take preventive actions.

• Improved knowledge of landslide risks linked to hill cutting and deforestation.

• Increased adoption of environment-friendly and climate-resilient agricultural practices.

• Strengthened community willingness to take collective action for environmental protection and risk reduction.

• Develop Women and Youth surveillance group for awareness campaigning, message dissemination.

Lessons Learnt

Lesson 1: Environmental education is a powerful entry point for disaster risk reduction in hazard-prone communities.

Lesson 2: Participatory and context-specific learning increases understanding, ownership, and behaviour change.

Lesson 3: Linking daily environmental practices with disaster risks helps shift communities from reactive to preventive approaches.

Lesson 4: Community knowledge and lived experience are critical assets in DRM programming.

Lesson 5: Regular follow-up and refresher engagement are important to sustain behavioural change and collective action.

Conclusion

Prokrityr Pathshala (Nature School) demonstrates that community-based environmental education can play a critical role in disaster risk reduction in fragile and hazard-prone contexts such as Cox's Bazar. By linking environmental protection with disaster risks, the initiative successfully shifted community understanding from reactive response to preventive action. Participants gained practical knowledge on water management, land protection, climate resilience, and environmentally sustainable livelihoods, contributing to improved local preparedness and reduced vulnerability. The initiative highlights the importance of participatory learning, local context integration, and community ownership in achieving sustainable DRM outcomes. By strengthening environmental stewardship at the community level, Nature School not only reduced disaster risks but also fostered long-term resilience and collective responsibility. The approach offers a scalable and replicable model for integrating environmental education into DRM programming, supporting both humanitarian response and long-term resilience building in disaster-prone regions.

17 Ensuring Continuity of Essential Reproductive Health Services During Adverse Weather Events

Location: Rohingya Camp

Implementer: RTM international

Hazard: Multi-Hazard

Introduction

In Cox's Bazar, Bangladesh, the Rohingya refugee camps are highly vulnerable to adverse weather events, including cyclones and heavy rainfall. These events often disrupt essential healthcare services, particularly SRH services, which are crucial for the well-being of women and girls in the community. When Cyclone Shakti and subsequent heavy rainfall threatened to disrupt healthcare delivery, proactive planning and effective coordination ensured that SRH services, such as antenatal care, normal vaginal delivery, postnatal care, and family planning, continued without interruption. This paper explores how coordinated efforts, strong community engagement, and preparedness measures were successfully implemented to maintain SRH service continuity, demonstrating resilience in a crisis and offering a model for future disaster response in humanitarian settings.

Summary

In response to the heavy rainfall and Cyclone Shakti, healthcare service delivery faced potential disruption across the supported camps. Despite these challenges, proactive planning, strong coordination, and dedicated frontline efforts ensured uninterrupted access to essential SRH services.

Background

A comprehensive preparedness and response mechanism was effectively implemented to maintain service continuity during the cyclone and subsequent heavy rainfall. All essential SRH services- including Antenatal Care (ANC), Normal Vaginal Delivery (NVD), Postnatal Care (PNC), and Family Planning (FP)—were delivered without interruption across supported facilities. Women-Friendly Spaces (WFS) and Primary Health Centres (PHCs) remained fully functional, ensuring access to quality care for women and girls.

Action Taken

Key actions included:

- **Continuous Communication and Follow-up:** CHWs maintained real-time communication with pregnant women in the catchment areas to monitor safety and provide timely support.
- **Emergency Referral and Response:** ERTs were on active duty to facilitate referrals for obstetric and emergency cases, ensuring no delay in life-saving care.
- **Readiness and Supplies:** Emergency boxes and essential SRH commodities were pre-positioned to ensure uninterrupted service delivery.
- **Strong Supervision and Coordination:** The management team provided continuous oversight, technical guidance, and logistical support to all service delivery points.

Outcomes

Through timely preparedness, coordinated response, and strong community linkages, SRH services continued seamlessly despite the severe weather conditions. This approach safeguarded maternal and newborn health and demonstrated a model of resilience and quality service delivery in humanitarian settings.

Lessons Learnt

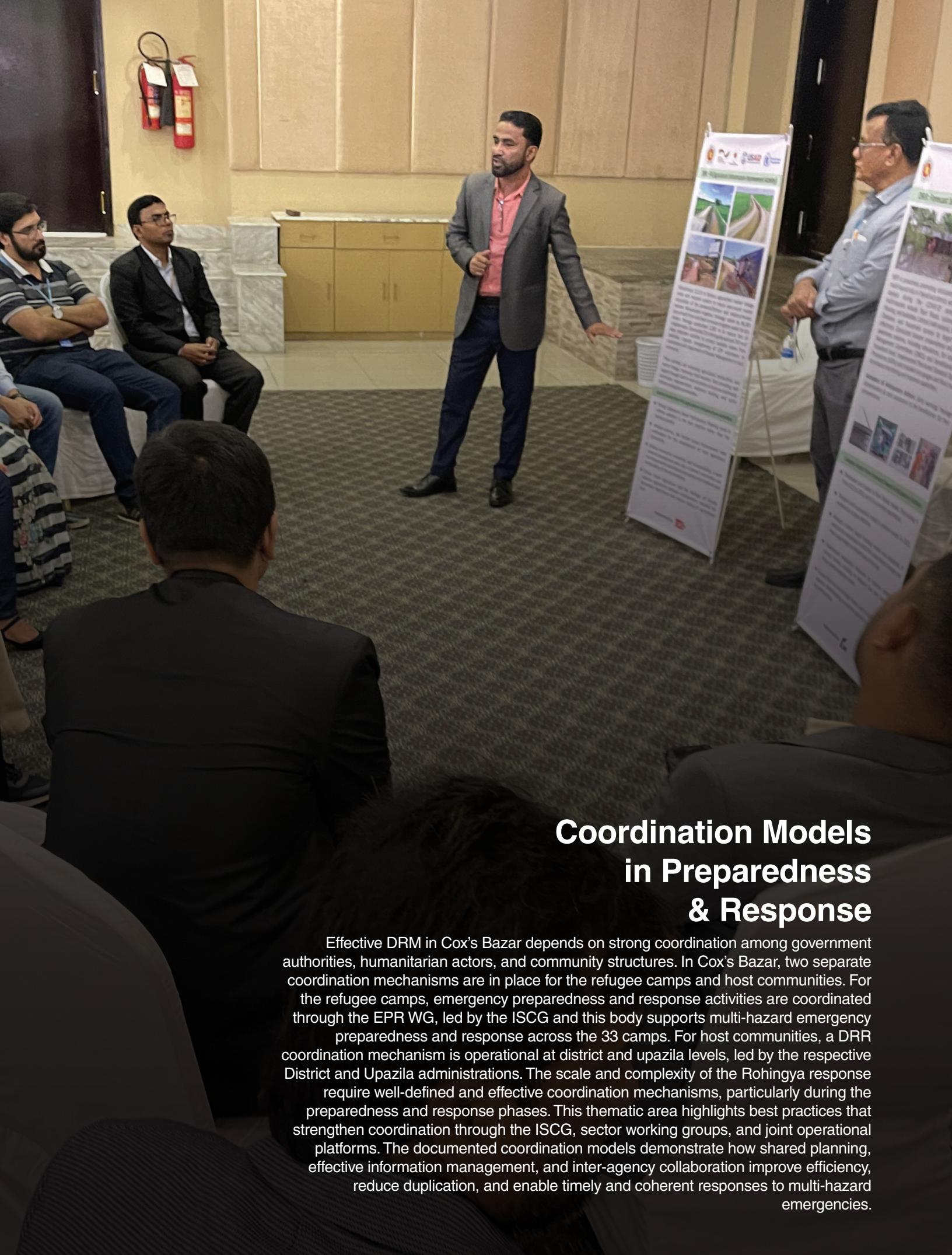
Lesson 1: Proactive preparedness, community engagement, and inter-team coordination are key to maintaining uninterrupted SRH services during natural disasters. This practice serves as a replicable model for resilience building and emergency response in crisis-affected contexts.

Lesson 2: Pre-positioning essential supplies, maintaining functional referral systems, and leveraging real-time communication with the

community significantly enhance the continuity, accessibility, and quality of SRH services during emergencies.

Conclusion

The response to Cyclone Shakti and heavy rainfall in the Rohingya camps demonstrated the critical importance of proactive preparedness, coordination, and community involvement in ensuring the continuity of essential services, particularly SRH care. Through real-time communication with CHWs, ERTs, and pre-positioned supplies, SRH services remained uninterrupted, safeguarding the health of women and newborns during a challenging time. The seamless delivery of care at WFS and PHCs illustrates how, with strong coordination and preparedness, even during emergencies, it is possible to maintain quality health services in crisis-affected communities. This approach not only ensured access to vital maternal and reproductive health services but also created a replicable model for building resilience in humanitarian settings, emphasizing the need for continuous planning, community engagement, and efficient logistics in disaster response.



Coordination Models in Preparedness & Response

Effective DRM in Cox's Bazar depends on strong coordination among government authorities, humanitarian actors, and community structures. In Cox's Bazar, two separate coordination mechanisms are in place for the refugee camps and host communities. For the refugee camps, emergency preparedness and response activities are coordinated through the EPR WG, led by the ISCG and this body supports multi-hazard emergency preparedness and response across the 33 camps. For host communities, a DRR coordination mechanism is operational at district and upazila levels, led by the respective District and Upazila administrations. The scale and complexity of the Rohingya response require well-defined and effective coordination mechanisms, particularly during the preparedness and response phases. This thematic area highlights best practices that strengthen coordination through the ISCG, sector working groups, and joint operational platforms. The documented coordination models demonstrate how shared planning, effective information management, and inter-agency collaboration improve efficiency, reduce duplication, and enable timely and coherent responses to multi-hazard emergencies.

18 Joint Needs Assessment (JNA) in Rohingya Camps for Disaster Risk Reduction

Location: Rohingya Camp

Implementer: IOM

Hazard: Multi-Hazard

Introduction

The Rohingya refugee camps in Cox's Bazar, Bangladesh, have been vulnerable to a range of disasters, both natural and man-made, exacerbating the challenges faced by displaced populations and host communities. DRR efforts in these camps must be rapid, coordinated, and evidence-based to ensure effective responses. The JNA is one such innovative mechanism, developed by the ISCG in collaboration with various sectors and supported by the NPM. This tool was specifically designed to assess disaster impacts and provide quick estimates of affected populations, priority needs, and severely impacted areas. Implemented within hours of a disaster, the JNA employs a mix of direct observations, key informant interviews, and cutting-edge data collection technologies such as GSM/SMS templates, radio codes, Kobo forms, and even drone imagery. This paper explores the role of the JNA in disaster risk reduction efforts in Rohingya camps, analyzing its implementation, outcomes, and key lessons learned for improving disaster management in humanitarian settings.

Summary

The 4-Hour JNA is a rapid, coordinated tool developed by ISCG with sector collaboration and NPM support to assess disaster impacts in Rohingya refugee camps and host communities in Cox's Bazar. It provides quick estimates of affected populations, identifies priority needs, and informs immediate response decisions. Implemented post-disaster, JNA uses direct observation, key informant interviews, and innovative tools like GSM/SMS templates, radio codes, Kobo forms, and drone imagery. When access is delayed, a 72-hour JNA is conducted. This mechanism ensures timely, evidence-based decisions for life-saving interventions through interagency coordination.

Background

The JNA is a rapid assessment mechanism designed to provide a quick overview of disaster impacts and immediate needs for operational decision-making. Developed by the ISCG in collaboration with sectors and supported by NPM, the JNA framework for Rohingya refugee camps was adapted from Bangladesh's national JNA. Its primary purpose is to estimate affected populations, identify priority needs, and highlight severely impacted areas. The 4-hour JNA is activated immediately after a disaster for urgent response, while a 72-hour JNA is used when access is delayed. Data collection combines direct observation, key informant interviews, and innovative tools such as GSM/SMS templates, radio codes, Kobo forms, and drone imagery. This coordinated approach ensures timely, evidence-based decisions for life-saving interventions in Cox's Bazar, focusing on refugees and host communities.

Action Taken

After the disaster, the JNA aimed to rapidly overview impacts and damages to guide urgent decisions and identify priority needs, affected populations, and severely impacted areas. ISCG, with NPM's technical support, led the process with sectors. Implemented within 4 hours-or 72 if delayed-in Rohingya camps in Ukhiya and Teknaf, it directly benefited refugees and indirectly host communities. Preparedness included early warnings, securing shelters, and pre-positioning medicines; post-landfall, teams deployed after UNDSS clearance. Data came via observation, interviews, GSM/SMS, radio, Kobo forms, plus drone and satellite imagery. Tools included GSM/SMS templates, radio codes, and Kobo forms. Inclusion of women, children, elderly, and persons with disabilities was ensured through systematic reporting, with gender-sensitive elements triggering timely support. Alternatives like rapid or delayed JNA and varied data methods were considered, prioritisation based on ISCG decisions.

Stakeholders-ISCG, NPM, sectors, NGOs, INGOs, RRRC, CiCs, and HCTT-played key roles.

Outcomes

Despite regular orientations by responsible organisations, a lack of willingness among people to engage in emergency mechanisms remains a challenge. Access to camps immediately after disasters often faces delays, sometimes requiring a 72-hour Joint Needs Assessment instead of the intended 4-hour response. Communication also becomes difficult when GSM networks fail, forcing reliance on radios or alternative methods. However, strong interagency coordination among ISCG, sectors, and NPM, along with standardised tools and methodologies-such as a single questionnaire and unified processes- played a key role in success. Innovative tools like GSM/SMS templates, radio codes, Kobo forms, and drone imagery further strengthened data collection and communication. The initiative achieved its objectives, delivering both qualitative and quantitative results, and indirectly supported policymakers and government authorities in planning improvements for Rohingya refugee camps in Cox's Bazar. These changes are expected to remain effective, ensuring sustainability and continued impact.

Lessons Learnt

Lesson 1: Standardised tools and methodology (single questionnaire, single process) ensured consistency and comparability of data across multiple agencies, enabling rapid decision-making and coordinated response.

Lesson 2: Innovative communication methods like GSM/SMS templates, radio codes, and Kobo forms allowed data collection even in low-connectivity environments, improving operational flexibility during emergencies.

Conclusion

The JNA has proven to be an essential tool for Disaster Risk Reduction in the Rohingya camps in Cox's Bazar. Its ability to deliver timely, evidence-based data in the immediate aftermath of disasters has facilitated efficient decision-making and prioritization of needs. Despite challenges such as delayed access and communication breakdowns, the integration of innovative tools and strong interagency collaboration has enhanced the effectiveness of the assessment. The lessons learned from JNA's implementation, such as the importance of standardized tools and methodologies, and the use of flexible communication technologies, are crucial for refining disaster response strategies. Moving forward, strengthening these mechanisms and addressing access and communication barriers will be vital in ensuring sustainable and more effective disaster management in refugee camps and other humanitarian settings.

19 Site Management: Category Incident Report as Best Practice to Reduce Disaster Risk in Rohingya Refugee Camps

Location: Rohingya Camp

Implementer: IOM

Hazard: Multi-Hazard

Introduction

The Rohingya refugee camps in Cox's Bazar, Bangladesh, house nearly one million displaced individuals living in precarious conditions, vulnerable to annual disasters such as floods, landslides, and cyclones. The fragile shelters made from bamboo and tarpaulin, along with the camps' location in hilly and low-lying areas, exacerbate the risks faced by these populations during monsoon and cyclone seasons. Recognizing the urgent need for timely and coordinated DRM in these camps, the Shelter-CCCM Sector, in collaboration with IOM's NPM, the ISCG, and UNHCR, launched the Daily Incident Reporting System in May 2018. This system aims to provide quick, verified data on disaster-related incidents, enabling rapid, protection-sensitive responses. By leveraging SMS agencies, KoBo forms, and a centralized server, the system ensures that incidents are reported and verified daily, allowing humanitarian actors to mobilize resources quickly and effectively. This paper discusses the Daily Incident Reporting System as a best practice for disaster risk reduction in the Rohingya camps, exploring its implementation, outcomes, and the key lessons learned from its use.

Summary

The Rohingya camps in Cox's Bazar house nearly one million people in fragile shelters vulnerable to floods, landslides, and fires during monsoon and cyclone seasons. To address these risks, ISCG, the Shelter-CCCM Sector, with IOM's NPM and Site Management agencies, launched the Daily Incident Reporting System in May 2018. Using KoBo forms and centralized servers, SMS agencies report verified incidents daily, enabling rapid response and protection-sensitive interventions. This system improved disaster preparedness, informed policy planning, and strengthened coordination among humanitarian actors, ensuring timely support for the affected population.

Background

The Rohingya refugee camps in Cox's Bazar, Bangladesh, are home to nearly one million people living in extremely congested and fragile conditions. Most shelters are made of bamboo and tarpaulin, located on hilly or low-lying land. Every year, heavy rains, cyclones, and strong winds expose these communities to floods, landslides, and fires, making disaster risk management a critical priority. To address these challenges, the Shelter-CCCM Sector, with technical support from IOM's NPM and in coordination with ISCG and UNHCR, introduced the Daily Incident Reporting System in May 2018. This mechanism has become a cornerstone of disaster risk reduction in the camps.

Action Taken

The SCCCM Daily Incident Report system, launched in May 2018 in Rohingya camps, systematically collects and verifies data on damages and displacement from weather-related and man-made incidents. Its goals are to gather initial data, enable rapid response, provide insights through daily/weekly reports, and ensure timely support during cyclone and monsoon seasons. Developed by the Shelter-CCCM Sector with NPM support and coordination by ISCG, IOM, and UNHCR, the system uses SMS agencies and volunteers for field data, verified by site focal points and submitted via KoBo forms before 20:00 daily. Key activities include reporting, compilation, and dataset dissemination. Tools like KoBo questionnaires and a centralized server streamlined reporting. Protection-sensitive elements ensured inclusion of women, children, elderly, and persons with disabilities. Decisions followed a clear chain from camp-level verification to sector review for response mobilization. UN agencies and NGOs contributed to development, coordination, and data management, making this initiative vital for emergency preparedness and response.

Outcomes

The Daily Incident Report system, launched in May 2018 in Rohingya refugee camps in Ukhiya and Teknaf, addressed recurring challenges of cramped living conditions, fragile shelters made of tarpaulin and bamboo, and high vulnerability to floods, landslides, and cyclones. Refugees remain fully dependent on humanitarian aid, and these risks persist annually during monsoon and cyclone seasons. Overcoming these issues would lead to safer living conditions and improved resilience. Implementation faced challenges such as frequent changes in site management focal points without proper orientation, sometimes affecting reporting quality. Despite this, key elements ensured success: the introduction of daily and weekly incident reporting, coordination among Shelter-CCCM Sector, NPM, ISCG, IOM, and UNHCR, use of KoBo questionnaires for standardized reporting, and centralized data management by NPM. Timely and accurate data enabled immediate response, achieving project objectives. The initiative indirectly supported policymakers and government authorities in planning improvements for camp conditions. Sustainability is assured as the system continues to function effectively. This collaborative approach strengthened emergency preparedness and remains vital for protecting vulnerable populations in disaster-prone environments.

Lessons Learnt

Lesson 1: Timely Incident Reporting Improves Disaster Response: A daily reporting system enabled rapid identification of localized disasters, guiding quick interventions. This approach can be scaled to other disaster-prone refugee settings for better preparedness.

Lesson 2: Multi-Stakeholder Coordination Is Key: Collaboration among Shelter-CCCM, NPM, ISCG, UNHCR, and SMS agencies ensured smooth implementation. Strong coordination frameworks are essential for replicability in similar humanitarian contexts.

Lesson 3: Digital Tools Enhance Efficiency: Using KoBo forms and centralized servers streamlined data collection and reporting. Standardised digital tools can be replicated in other emergency response systems for scalability.

Lesson 4: Community Engagement Strengthens Data Accuracy: Volunteers in camps played a vital role in reporting incidents. Engaging local actors ensures sustainability and can be adapted for other crisis settings.

Lesson 5: Focus on Seasonal Risks Improves Resilience: Designing interventions around predictable hazards like monsoons and cyclones reduces vulnerability. This lesson is applicable for policy planning in other disaster-prone regions.

Conclusion

The Daily Incident Reporting System, introduced in the Rohingya refugee camps in May 2018, has proven to be a vital tool in improving disaster risk management and response during cyclone and monsoon seasons. By providing real-time, verified data through the use of digital tools like KoBo forms and centralized servers, the system has significantly enhanced emergency preparedness and coordination among humanitarian actors. Despite challenges, such as frequent changes in site management focal points, the system has enabled rapid identification of localized disasters, ensuring timely interventions that have directly benefitted vulnerable populations. The success of this initiative highlights the importance of multi-stakeholder coordination, the value of community engagement in data collection, and the scalability of digital tools in enhancing disaster response efficiency. Moving forward, the Daily Incident Reporting System can serve as a model for other disaster-prone refugee settings, contributing to improved resilience and protection for displaced communities. Its continued use will be essential in sustaining disaster preparedness and response in the Rohingya camps, ensuring that these vulnerable populations are better equipped to face future risks.

20 Advancing Multi-Hazard Health Emergency Preparedness and Coordination through WHO-Led EPR, Cox's Bazar

Location: Rohingya Camp

Implementer: WHO

Hazard: Multi-Hazard

Introduction

Cox's Bazar, one of the most disaster-prone regions globally, faces a constant risk of multiple hazards, including cyclones, fires, floods, and outbreaks. These disasters impact both the Rohingya refugee population and the host communities, straining the already limited resources and infrastructure. To strengthen disaster preparedness and ensure a coordinated health response during emergencies, the WHO has played a pivotal role in leading the Health Sector within the ISCG. Under WHO's leadership, the EPR TC was revitalised, and the HEOC was institutionalised. This paper explores how WHO has advanced multi-hazard health emergency preparedness and coordination in Cox's Bazar by improving interoperability among health partners, enhancing coordination, and developing integrated systems for disaster response. These efforts have significantly strengthened the resilience of the health sector and improved response times during emergencies, ultimately saving lives and reducing the impact of disasters.

Summary

As Health Sector Lead and Chair of the EPR TC, WHO Cox's Bazar has spearheaded inter-agency health emergency coordination under the ISCG framework. Working alongside the Civil Surgeon Office, RRRC, DGHS, and over 45 partners, WHO institutionalised the HEOC, developed unified contingency plans, and enhanced multi-hazard readiness through MMTs, DRU, and Medical Hubs. These coordinated systems have improved early warning, joint response, and resilience against cyclones, fires, floods, and outbreaks - ensuring evidence-based decision-making across the ISCG-led Cox's Bazar humanitarian architecture.

Background

Cox's Bazar remains one of the most hazard-prone humanitarian settings globally. Within the ISCG's coordination structure, the Health Sector, led by WHO, provides strategic leadership and technical guidance for preparedness and response to multi-hazard crises affecting both Rohingya refugees and host communities. Fragmented coordination and limited interoperability among partners initially hindered a timely health response. WHO prioritised strengthening the district's coordination architecture - establishing the HEOC within the Civil Surgeon Office, revitalising the EPR TC, and aligning all partner preparedness efforts under the ISCG's EPRWG. This integration fostered cohesive multi-sectoral coordination, reducing duplication and enhancing joint emergency operations across the response.

Action Taken

- **Institutional Coordination:** Strengthened the health emergency architecture through the EPR TC and HEOC under the Health Sector, ensuring seamless interoperability with ISCG's EPR Working Group for multi-sectoral response.
- **Leadership & Governance:** Reactivated the EPR TC to unify over 45 health partners and align preparedness actions with ISCG's DRM priorities.
- **System Development:** Institutionalised and optimised the DRU and Medical Hub network, enhancing coordination among ambulances and MMTs.
- **Contingency Planning:** Co-developed and regularly updated multi-hazard contingency plans (Cyclone, Fire, Monsoon) harmonised with ISCG's Joint Contingency Plan.
- **Capacity Building:** Conducted simulation exercises and training on MCIM, Fire Safety, Burn Care, and PFA to strengthen multi-agency frontline readiness.
- **Risk & Data Systems:** Carried out facility readiness assessments and vulnerability mapping integrated into ISCG's joint risk analysis and humanitarian overview.

Outcomes

- **Operationalised District-Level HEOC:** A functional, government-owned coordination hub established within the Civil Surgeon Office, ensuring 24/7 activation during major hazards (Cyclones Mocha, Hamoon, Remal; Fires in Camps 5, 9, 13).
- **Stronger Multi-Sector Synergy:** Health emergency actions systematically aligned with ISCG's EPR WG and Disaster Management WG, promoting cross-sector coordination with Shelter, WASH, and Protection sectors.
- **Enhanced Partner Readiness:** 500+ responders from 40+ agencies trained, improving multi-agency interoperability and reducing response time through standardised ICS protocols.
- **Unified Referral and Communication Systems:** The WHO-supported DRU streamlined ambulance dispatch across partners, reducing duplication and ensuring efficient patient triage and referral.
- **Evidence-Based Decision-Making:** WHO introduced readiness scorecards, post-incident After Action Reviews, and sectoral dashboards feeding into ISCG's Information Management System.
- **Sustained Government Ownership:** WHO's technical support enabled institutionalisation of the HEOC within the Civil Surgeon's Office, ensuring continuity and scalability within the government system beyond project cycles.
- **Community Impact:** Coordinated actions across ISCG partners reduced mortality and improved service continuity for 8,000+ affected persons during multiple hazard events in 2023–2025.

Lessons Learnt

Lesson 1: Institutional Integration for Coherence - Embedding EPR coordination within ISCG structures ensured alignment across sectors, reducing duplication and fostering a unified emergency response model that can be replicated in other multi-agency humanitarian settings.

Lesson 2: Government Leadership for Sustainability - Active leadership by the Civil Surgeon Office, supported by WHO, institutionalised EPR systems within government structures- ensuring ownership, continuity, and sustainability.

Lesson 3: Joint Simulation for Trust and Interoperability – Regular joint simulations and contingency planning built mutual trust, strengthened partner coordination, and enhanced interoperability-demonstrating a scalable approach to collective readiness.

Lesson 4: Unified Command for Faster Response - The unified referral and command system under the DRU model drastically reduced response times and improved efficiency, presenting a replicable model for coordinated multi-agency emergency response.

Lesson 5: Capacity Building for Operational Readiness - Continuous partner training on MCIM, Fire Safety, and PFA created a scalable and adaptable capacity-building framework, ensuring sustained operational readiness across diverse humanitarian contexts.

Conclusion

WHO's leadership in establishing robust health emergency preparedness systems in Cox's Bazar has substantially improved multi-hazard readiness and inter-agency coordination. By institutionalising the HEOC within the Civil Surgeon's Office and aligning health emergency efforts with ISCG's broader disaster response frameworks, WHO has enhanced the overall effectiveness of the humanitarian response. The operationalisation of the DRU, the integration of MMTs, and the development of multi-hazard contingency plans have collectively enabled faster, more efficient responses during crises such as cyclones, fires, and disease outbreaks. The active participation of over 500 responders from more than 40 agencies has improved interoperability, while regular training and simulation exercises have ensured that partners are better equipped to manage emergencies. The inclusion of readiness scorecards and sectoral dashboards further promoted evidence-based decision-making, leading to more effective and timely responses. WHO's role in embedding these systems within government structures, particularly through the leadership of the Civil Surgeon's Office, ensures the sustainability and scalability of these efforts, ultimately benefiting both the refugee and host communities. Moving forward, this integrated, multi-sectoral approach can serve as a model for strengthening health emergency preparedness and coordination in other humanitarian settings globally.

21 Integrated MMT–MCI Response Model with CHW Basic First Aid, MHPSS and SRH Mainstreaming in Rohingya Camps

Location: Rohingya Camp

Implementer: IOM

Hazard: Multi-Hazard

Introduction

Rohingya refugee camps in Cox's Bazar, Bangladesh, are highly vulnerable to a range of disasters, including cyclones, floods, landslides, and fires. The frequent occurrence of these multi-hazard events often results in mass casualties, displacement, and significant disruption to services, exacerbating the challenges of providing timely medical care. The lack of a coordinated first-response capacity has historically limited the ability to stabilize victims, conduct triage, and facilitate referrals during emergencies. To address these critical gaps, the IOM implemented an integrated MMT and MCI response model, incorporating CHWs trained in Basic FA, MHPSS, and SRH referral pathways. This approach, which includes a robust ICS and close coordination with other camp stakeholders, aims to ensure a rapid, comprehensive, and well-coordinated response to disaster-related injuries and crises. This paper explores the implementation of this model, its outcomes, and the lessons learned from strengthening disaster preparedness and response in Rohingya camps.

Summary

IOM strengthened multi-hazard preparedness and MCI response through an integrated MMT with an Incident Command-based MCI model. CHWs were trained with Basic First Aid, MHPSS PFA, and SRH referral pathways. This approach fostered early warnings, triaging, life-saving stabilisation, and safe referrals amidst floods, landslides, and fires. The guidance/training from CPP/SFU volunteers facilitated community-level detection, safety messaging, and first-line immediate treatment. All MMT staff were trained on MISP to ensure timely response to the needs of WRA during crisis situations.

Background

Rohingya refugee camps are prone to multi-hazards every year – cyclones, landslides, floods, and fires – and mass casualties, displacement, and disruption of services are expected consequences of disasters. Fragmented first-response capacity limited immediate stabilisation, triage, and referrals in the past. Thus, IOM sought to deploy mobile medical teams which are well-trained in integrated MCI management in the camp, with all CHWs trained in Basic First Aid. It also included MHPSS and SRH service referral pathways for a comprehensive response.

Action Taken

- Established a coordinated MCI system and strengthened trauma care across high-risk camps through medical hubs.
- Deployed 9 IOM MMTs and coordinated 17 MMTs with WHO, boosting surge capacity for cyclones, floods, fires, and landslides.
- Upgraded 10 hubs with emergency supplies, trauma kits, and referral systems.
- Activated an ICS linking MMTs, CICs, community volunteers, DFP/CHFPs, hubs, and ambulances, with DRU coordinating ambulance dispatch.
- Regularly conducted simulation exercises across catchments with MMTs, hubs, and camp stakeholders.
- Equipped 300+ CHWs with Basic First Aid kits and training in bleeding control, burns, fractures, evacuation, and emergency reporting.
- Mainstreamed SRH in MCI workflows with priority triage, obstetric referrals, and transport for pregnant and lactating women.
- Integrated MHPSS via Psychological First Aid, distress screening, and survivor-centred communication.
- Strengthened disability inclusion through vulnerability mapping (pregnant women, PwDs, elderly), safe evacuation, and referrals.

- Trained 17 MMT teams on MISP and prepositioned emergency SRH kits to address WRA needs during crises.

Outcomes

- 17 MMTs fully equipped with deployment, trauma, fire, and medicine kits remain on standby across 33 camps for emergencies.
- Responded to major fires in Camps 9, 5, and 13, supporting 6,700+ people; monsoon/landslide events in Camp 24, Camps 8E/9, and Pallan-para/Rongikhali/Hnila with 1,844 people screened; and maritime/cyclone events at Teknaf jetty (400) and a capsizing (66), with camp-wide activations for Cyclones Mocha, Hamoon, and Remal.
- Early warning alerts and CHW–MMT coordination reduced evacuation delays.
- Medical hubs restored services within hours, and obstetric emergencies were safely referred despite heavy rain and blocked roads.
- ICS coordination and CHW stabilisation enabled faster casualty movement, improved trauma care, and reduced chaos.
- DRU linked 43 ambulances under one dispatch system, cutting duplication, hospital congestion, and maintaining live bed capacity.
- Referral time dropped post-DRU, improving early access to tertiary care (observed during COVID).
- MMTs reached isolated locations with essential supplies, ensuring continuity of care.
- 300+ CHWs provided immediate stabilisation that reduced injury severity at facility arrival.
- Integrated PFA via MHPSS and SRH services supported 1,200+ individuals during Cyclone Hamoon and fire responses, including emergency referrals for 68 pregnant women and 12 GBV survivors (2023–2024).
- Responses strengthened support for WRA through priority triage, safer evacuation, and uninterrupted referral across hazards.

Lessons Learnt

Lesson 1: Integrated MMT-MCI systems work harmoniously when a unified triage system exists between CHWs, CPP/SFU volunteers, and facility teams, all on the same page under ICS command.

Lesson 2: MHPSS and SRH integration should be in place from the onset. PFA, survivor-centred communication openings, and obstetric referrals significantly improve safety and dignity in mass casualty situations.

Lesson 3: Regular SimEx drills improve inter-agency coordination, strengthen role clarity, and reduce response time during real emergencies.

Lesson 4: Prepositioned first-aid kits and differentiated MMT trauma kits (Green/Yellow/Red) increase operational readiness and standardise life-saving care.

Lesson 5: Community mapping (pregnant women, elderly, PwDs) enables targeted evacuation and reduces mortality among high-risk groups.

Conclusion

The integrated MMT- MCI response model has proven to be an effective and comprehensive approach to disaster risk management in the Rohingya refugee camps. By combining the capabilities of MMTs, trained CHWs, and strong coordination through an ICS, this model has significantly enhanced the camp's capacity to respond to emergencies and reduce casualty severity. The inclusion of MHPSS and SRH services within the MCI workflow ensured that mental health support and obstetric care were prioritised during disasters, improving safety and dignity for survivors, especially for women and vulnerable populations. The success of this approach during significant incidents, such as fires and cyclones, underscores the importance of regular training, prepositioned resources, and community-based systems in improving operational readiness. The lessons learned highlight the need for integrated systems that are adaptable, inclusive, and well-coordinated across all levels of response. As this model continues to evolve, it provides a valuable blueprint for enhancing disaster preparedness and response in humanitarian settings, ensuring more resilient and effective care delivery during crises.

Agencies Involved in Guideline Development

Guideline Review, Finalization, and Approval:
Office of The Refugee Relief and Repatriation Commissioner
Cox's Bazar-Bangladesh

Guideline for
Disaster Management Committees (DMCs)
in Camp Settlement
Cox's Bazar, Bangladesh

22 Strengthening Disaster Risk Management Coordination Mechanism: Nexus between the Government and Humanitarian Stakeholders

Location: Rohingya Camp

Implementer: RRRC Office, ISCG, IOM, UNHCR, BDRCS, IFRC

Hazard: Multi-Hazard

Introduction

Cox's Bazar hosts one of the world's largest and most complex humanitarian responses, where over one million Rohingya refugees live in densely populated camp settlements exposed to recurrent and overlapping hazards. Cyclones, fires, landslides, flash floods, monsoon flooding, lightning, and drowning incidents pose persistent risks to lives, infrastructure, and essential services. These risks are further intensified by environmental degradation, climate variability, and rapid land-use changes within and around the camps.

In such a multi-hazard and high-density context, effective disaster risk management depends not only on technical interventions but also on strong coordination, governance, and institutional capacity. Recognising this need, BDRCS and IFRC jointly with RRRC Office, ISCG, IOM, UNHCR initiated efforts to develop a mechanism to coordinate camp level preparedness, anticipatory action, and response interventions as well as to bringing harmonization of the disaster risk management efforts, and avoiding duplication back in 2021. Collectively, BDRCS, IFRC, IOM, UNHCR, and ISCG drafted a guideline for the disaster management committee in camp settlement aligning key notions of Standing Orders on Disaster (SOD) which is one of the key national drivers for disaster management in Bangladesh. Finally, in 2022 RRRC office provided approval to the guideline which was a landmark in terms of collective advocacy, policy development, and streamlining disaster risk management coordination mechanism. Followed by the approval BDRCS/IFRC jointly with IOM, UNHCR, ISCG, RRRC Office continuously extending technical and financial support to strengthen the disaster management committees in camps through facilitating joint Capacity Sharing Initiative (CSI) on Disaster Risk Management (DRM) for Disaster Management Committees (DMCs) in all 33 camps.

Summary

Reinforcement of the multi-hazard disaster management coordination mechanism through development of guidelines, periodic capacity enhancement initiatives on DRM for DMC members in all 33 camps, and extending technical expertise to ensure better functionality of DMCs at camp level jointly with the RRRC office, ISCG, UNHCR, and IOM.

Background

Since the influx happened in August 2017, over 1 million Rohingya people are living in camp settlements in Ukhiya and Teknaf sub-districts under Cox's Bazar district. The geographical location, land characteristics, monsoon climate and coastal morphology made this region highly vulnerable to multi-hazards including cyclone, fire, landslide, flash flood, monsoon flooding, lightning, and drownings. Furthermore, changes in climate variables triggered by concurrent land use patterns, environmental situations have exacerbated the overall situation. These multi-hazard risk management requires preparedness and readiness to response interventions through proper coordination among the agencies working in the camp settlements.

Action Taken

- Facilitate development of guideline for Disaster Management Committee in Camp Settlement in 2021-2022 period
- Facilitate consensus building among the key partners on developed guideline and secure approval from RRRC Office in June 2022
- Co-facilitate joint capacity sharing initiative with IOM, UNHCR, ISCG to strengthen DRM understanding among the DMC members 2022-2024 period.
- Factoring the evolving situation and emerging crisis, propose for revisiting the guideline and

- secure approval of the revised version in June 2025
- Approval of joint CSI roadmap for DMC capacity strengthening and functionality in all 33 camps

Outcomes

- A guideline for Disaster Management committee in camp settlement
- 33 DMCs which are functioning based on the approved guideline
- Facilitation of joint capacity sharing initiative
- Collaboration, partnership among the partners

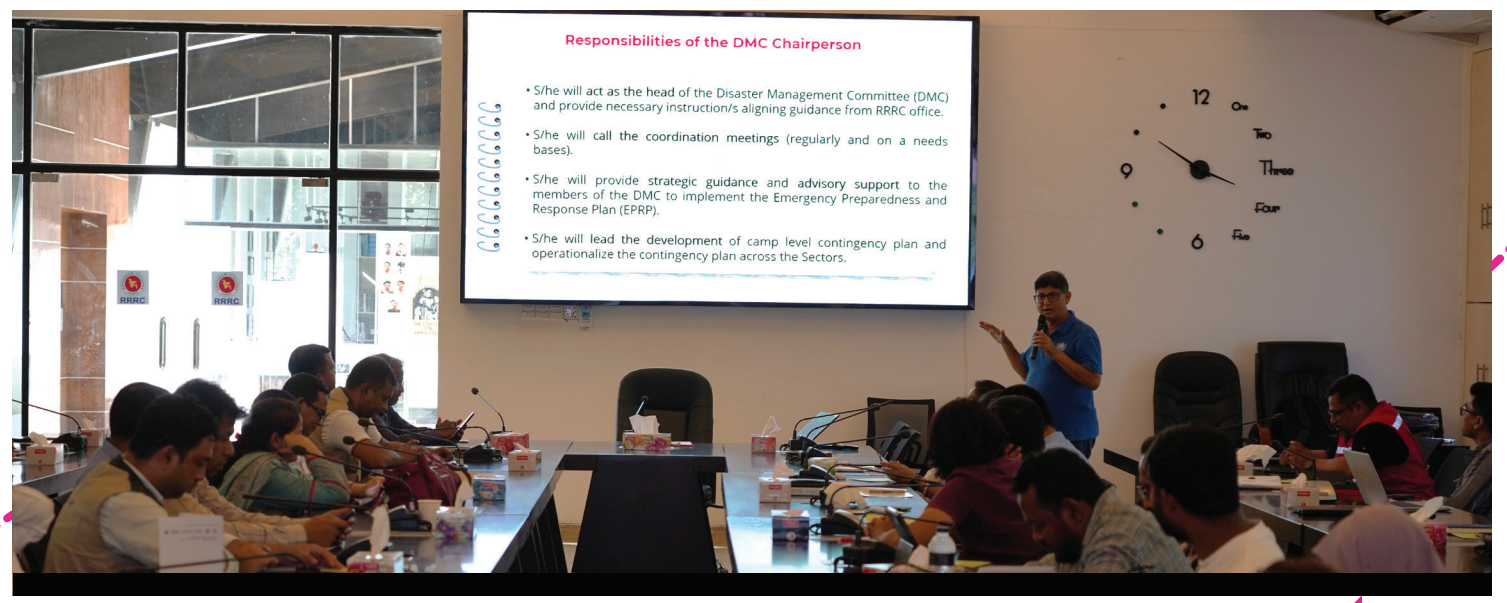
Lessons Learnt

Lesson 1: Collective partnership is key to achieve broader goals

Lesson 2: Co-financing among key partners that reflects burden sharing approach in multi-hazard risk management

Conclusion

The joint initiative of BDRCS, IFRC, IOM, UNHCR, ISCG to strengthen Disaster Risk Management coordination through functional Disaster Management Committees demonstrates the critical importance of structured governance and collective action in complex humanitarian settings. By developing and institutionalising DMC guidelines, facilitating consensus among key stakeholders, and investing in continuous capacity strengthening, the initiative has enhanced preparedness and coordination across all 33 camps in Cox's Bazar. The experience highlights that effective multi-hazard risk management requires shared leadership, clear roles and responsibilities, and sustained collaboration between government authorities and humanitarian actors. Co-financing and joint ownership further reinforced accountability and ensured alignment with evolving risks and operational realities. This best practice offers a replicable model for strengthening DRM coordination in other displacement and disaster-prone contexts, emphasising that resilient systems are built through partnership, adaptability, and long-term institutional commitment.



Practices like to acknowledge

I. Integrated Watershed Management in Camps 20 & 20E, DSK

These interventions reduced erosion, improved water flow, increased greenery, enhanced water availability, and strengthened community resilience. Key lessons include the need for community ownership, climate-resilient designs, nature-based solutions, cross-sector coordination, and long-term maintenance for sustainability.

II. Protecting Lives and Dignity: Making WASH Facilities Safe from Landslides in Camp 05, JSK

Structural repairs, improved drainage and soil stabilisation made all facilities safe and fully functional, ensuring uninterrupted access to dignified sanitation. Ongoing monitoring and community volunteer engagement now help sustain these outcomes.

III. Organized Mock Drill on Cyclone and Fire, SKUS

The events aimed to practice and rehearse emergency response procedures, including evacuation protocols, first aid techniques, communication strategies, and crisis management, to ensure that the community and individuals are prepared to respond effectively during real emergencies.

IV. Learnings from climate induced Flood Response 2025 in Teknaf Upazila of Bangladesh, NRC

In 2025, NRC provided Cash-for-Sanitation support to 100 households in Sabrang Union, giving BDT 15,000 each via mobile money to repair flood-damaged latrines. By combining climate-resilient design with community-led implementation, the initiative empowered households to restore durable sanitation infrastructure, strengthened local ownership, and promoted sustainable, resilient sanitation solutions.

V. Inclusive Climate-Resilient Water Treatment and Supply Solutions for Camps and Host Communities, UNICEF

In Cox's Bazar City, severe drinking water scarcity driven by salinity and iron contamination has left communities without safe groundwater options. To address this, advanced water treatment solutions were introduced and sustainably managed through WASH Committees, with trained Women Water Entrepreneurs operating water ATMs and desalination systems. This approach ensured reliable access to safe drinking water, strengthened community governance and financial accountability, and empowered women with technical, business, and leadership skills, creating a resilient, community-led water supply model.

VI. Strengthening Women's Resilience and Preparedness in Cox's Bazar, Bangladesh, UN WOMEN

UN Women addressed low female participation in DRR training in Rohingya camps and host communities through engaging and trained female volunteers, CiCs, and UNO to integrate gender perspectives into DRR planning. As a result, volunteers gained confidence, and officials committed to gender-sensitive planning, enhancing women's resilience and agency.

VII. Liquid waste management through Filtration system, IOM

A community-led watershed intervention restored drainage and introduced low-cost filtration systems, improving water quality, reducing flooding, and reviving agriculture and aquaculture. Inclusion of women, elderly, and persons with disabilities strengthened social cohesion and livelihoods, fostering sustainable community ownership. The model is affordable, replicable, and adaptable to other camps and host communities.

VIII. A New Dawn: Desalination-based Safe Water Access for Rohingya and Host Community in Camp-26, Teknaf, DSK

Teknaf faces severe groundwater scarcity and high salinity, limiting safe drinking water for Rohingya refugees and host communities. DSK introduced a Reverse Osmosis desalination plant treating Naf River water, providing reliable safe water for around 5,000 people. The initiative reduced waterborne diseases, lowered protection risks from long-distance water collection, and strengthened social cohesion, demonstrating a resilient solution for water-scarce coastal and displacement settings.

VX. Building Back Better for All: An Inclusive Pathway to Safety in Camp 16, CARE Bangladesh, CARE Bangladesh

In Camp 16, CARE Bangladesh and partners upgraded hazardous stairs, pathways, and drainage under the DFAT–AHP CPPC project, using inclusive, risk-informed design and Cash-for-Work with community members, including people with disabilities. Karim Ullah (34), with a disability, can now move safely and independently, while improved infrastructure reduces fall and flood risks for all residents. The intervention strengthened community resilience, awareness of inclusive disaster risk management, and ownership, with residents regularly monitoring hazards and children playing safely in protected spaces.

X. Building Climate-Resilient WASH Facilities to Strengthen Disaster Preparedness in Cox's Bazar Host Communities, HYSAWA

The HYSAWA project introduced climate-resilient WASH systems, including solar-powered water supplies, deep tube wells, and flood-proof latrines, reaching over 12,000

people. Communities, particularly women, were empowered to manage these services, improving hygiene, safety, and dignity, and reducing waterborne diseases. The program strengthened disaster preparedness, enhanced environmental resilience through solar energy and tree planting, and ensured continuous access to clean water and sanitation during floods, providing a sustainable, replicable model for climate-smart WASH.

XI. Coordinated relocation support in response to an eviction threat in Camp 24, NRC

In May 2025, NRC intervened to prevent the eviction of a family in Camp 24 during the pre-monsoon period. Through rapid assessment, community consultation, and negotiation with the landowner, a 10-day extension was secured, followed by relocation to a safer site with reduced flood risk. The intervention safeguarded the family's security and dignity, ensured continued access to essential services, eased community tensions, and reinforced confidence in coordinated humanitarian support.

XII. Empowering Youth for Peace and Resilience: Building Cohesion and Strength in Humanitarian Settings, UNFPA Bangladesh

The Youth4Peace initiative empowers adolescents as agents of social cohesion and resilience through leadership, conflict-resolution, and peer education. Trained youth actively participate in peacebuilding, community decision-making, and advocacy, demonstrating nonviolent communication and conflict management. Peer networks foster empathy, life skills, and inclusive collaboration, while awareness on GBV, trafficking, and exploitation reduces protection risks.

XIII. Humanitarian Volunteer Network (HVN), HAP

HVN has trained and mobilised over 500 refugee and host youth in humanitarian principles, disaster risk reduction, and research. Trained volunteers now support families during landslides, fires, and floods, and contribute to studies such as climate change impacts on persons with disabilities in Teknaf. The programme has strengthened youth leadership, employability, and community recognition, while the Empower Network of 35+ organisations enhances coordination, knowledge sharing, and inclusive climate resilience across camps and host communities.

XIV. Preparedness & Resilience Activity, Action Aid Bangladesh

A total of 795 youth (369 female, 424 male, 2 non-binary) in Cox's Bazar participated in Preparedness and Resilience activities, including training on landslide, cyclone, and fire safety. They conducted regular sessions in high-risk areas, identified hazards, and shared early warnings with the community and authorities. These efforts enhanced youth leadership, improved coordination with stakeholders, increased community safety, and fostered sustained peer-to-peer learning and long-term disaster resilience.

XV. Repaired broken Bridge to ensure safe movement of the community under DRR component, SKUS

In Camp-18, Block D-L, a long-damaged bamboo bridge was repaired, restoring safe passage for children, women, elderly, and people with disabilities. The repair enabled year-round access to schools, MPCs, health centres, and markets, reducing safety risks and improving mobility. The initiative, led by CBCPC, A&Y clubs, and the local community with support from SKUS and Educo Bangladesh, strengthened community resilience, fostered local ownership, and enhanced collective preparedness for future hazards.

XVI. Strengthening Landslide Preparedness Through Multi-Agency Landslide Search and Rescue Simulation Exercises, UNDP

In Cox's Bazar, UNDP strengthened landslide emergency preparedness by building the capacity of the Bangladesh Fire Service and Civil Defence (FSCD) and coordinating large-scale simulation exercises. Through specialised training modules, a Training of Trainers for 20 instructors, and training for 220 FSCD and Ansar–VDP personnel, institutional readiness was significantly enhanced.

CASE STORY

XVII. Safe Relocation Restores Hope for a Family in Camp 21, ActionAid Bangladesh

In Camp 21, Mr. Shamsul Alam's family was safely relocated from a high landslide-risk area. Following a partial shelter collapse, a new Composite Bamboo Shelter was constructed, safeguarding the family's lives and dignity. Strong community engagement and coordination with partners ensured a smooth relocation completed.

XVIII. Cash Support Brings Shelter and Stability to Flood Survivors in Teknaf, NRC

In June 2025, Abdur Sattar and his family were forced to evacuate their home in Cox's Bazar due to prolonged heavy rain and rising river levels, leaving their bamboo house destroyed and belongings ruined, and disrupting their children's education. Through YPSA, supported by NRC, the family received Cash-for-Shelter assistance, enabling them to rebuild a stronger, flood-resilient home on higher ground.

XIX. From Panic to Preparedness: How one Teacher Sparked a Wave of Safety, IRC

Minara Begum, a teacher in Camp 22, used to feel helpless during frequent fires, floods, and cyclones. After participating in IRC's community-based disaster preparedness training, she learned to respond to emergencies, create a household safety plan, and mitigate risks. She shared this knowledge with her neighbors and students, helping them prepare hazard maps and a school safety plan. Her actions turned fear into preparedness and strengthened safety across her community.

XX. Provision of life-saving and dignified Shelter, Disaster Risk Reduction measures and Protection for Rohingya refugees, Caritas

Abdul Hasim, a 65-year-old Rohingya man in Camp 19, Ukhiya, received a new mid-term shelter with a retaining wall, stairs, and drainage after his previous shelter was rendered unsafe by heavy rainfall and landslides, these interventions enhanced his family's safety, improved access to their home, and reduced future landslide and flooding risks.

XXI. Resilience Through Community Action Md. Iqbal's Journey with Community Men's Group in Camp-9, Action Aid Bangladesh

Since 2018, Md. Iqbal, a 59-year-old Rohingya refugee in Camp-09, has led 38 initiatives benefiting over 400 people, including vulnerable groups. Trained in disaster risk management, community engagement, and social support, he raises awareness on cyclone and landslide safety, fire prevention, hygiene, child protection, and mental health, and disseminates emergency alerts during crises.

XXII. Turning Opportunity into Strength: Hamida's Story, IOM

Hamida Begum (38) from Camp 20, joined IOM's stove-repair training in 2023 and gained technical skills, confidence, and a professional toolbox. She now works as a Cash-for-Work Stove Repair Team member, earning a reliable income and supporting her family with dignity. The initiative has reduced the need for new stoves, improved household safety, and strengthened local technical capacity, demonstrating how targeted training can transform individual lives and benefit the wider community.

XXIII. A Journey of Resilience and Hope – The Survival of Three Young Sisters, IOM

Sadeka Khatun (22) and her sisters, Sayeka (17) and Sufaira (16), faced hardship after relocating from Maungdaw, Myanmar, following unrest in 2017 and the loss of their father. Their mid-term shelter deteriorated, compromising safety and well-being. The new Lime Stabilized Soil (LSS) shelter provided a stronger, safer, and more comfortable home, improving privacy, reducing fire risk, and restoring a sense of security. This intervention brought hope, stability, and peace of mind, allowing Sadeka and her family to focus on their children's future rather than mere survival.

XXIV. Case Story of Amena Khatun: Building Community Resilience Through Women's Leadership, Caritas

Through the Community Action Plan, Amena helped identify landslide-prone zones, prioritise site improvements, and participate in CfW activities, enhancing both camp safety and her economic stability. Her leadership increased women's visibility in decision-making, contributed to stronger preparedness, and informed risk mapping now used by camp authorities and partners for future planning, fostering collective responsibility and a more sustainable DRR system.

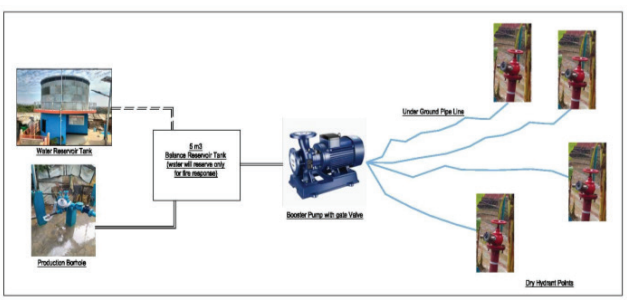
Future Plan: Fire Response Initiative by WASH Sector

Background and Context

The Rohingya refugee camps in Cox's Bazar, Bangladesh, are vulnerable to multiple hazards including cyclones, floods, landslides, drought and fire. Fire is one of the unique and unpredictable hazards compared to other hazards. According to the Daily Incidents Main Dashboard data it was reflected that from 2018 across 33 Camps, over 2000 fire incidents have occurred, over 99,000 people affected, over 59,000 people displaced, 37 individuals died, over 1,000 people injured, around 18000 shelter damaged, around 1,290 water point damaged and 1,882 latrines damaged. Since the beginning of response, WASH and its partners were actively involved in the response of fire through several initiatives. As water is one of the key factors for the quick response to fire and in camps water networks are the main source of water. Currently around 300 water networks are operating by WASH. To utilise the existing potential resources, WASH have developed a design for fire response through water network. This initiative can be bring a significant changes for the fire response. During the development process a consultation workshop have been conducted with key stakeholders included ISCG EPR, FSCD, SCCCM Sector Team, UNICEF, IOM, UNHCR and WASH partners.

Technical Design of The Firewater Hydrant System

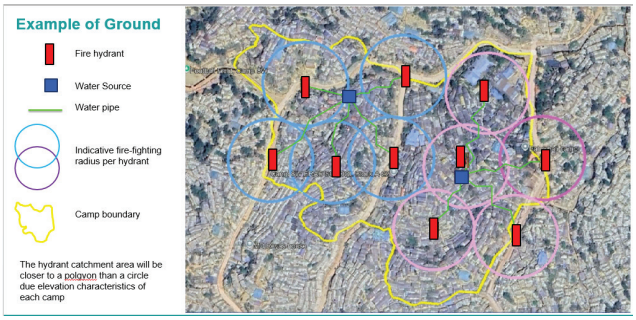
The system was designed focusing on the production borehole of water network with the capacity around 10m m3 per hour which will ensure continues water flow, additional connection also consider from the reservoir tank as a supplementary water source. A 5m3 balance reservoir tank also consider to control the fluctuation of water flow from the production borehole as well as ensure the availability of water 24/7 for fire response. Due to the hilly topography, it will difficult to maintain the adequate pressure and flow of water to the hydrant point through gravity. To mitigate this a booster pump have been included to ensure adequate pressures and water flow to the dry hydrant through beneath earth HDPE pipeline connection. Each of the hydrant will cover 50 m radius area.



Flow Diagram of Fire Water Response through Water Network

Key Outcome of This Design

- An efficient water supply system for fire-fighting that ensure the immediate availability of water in the Rohingya camps to respond to fire incidents.
- A cost-effective fire response system. It maximises the use of the water network and consolidates existing capacities, efforts and resources.
- A unit cost of USD 110,000 per camp
- A decentralised system that caters for the firewater needs of camps areas.
- A community-based response, enhancing the engagement and ownership of the Rohingya refugee volunteers on the system to responsibly manage and effectively operate the fire extinguishing system under the technical supervision and command of the FSCD.



To implement this initiative around USD 3.6 million is required 33 Camp and for each camp it was 110,000 USD. According to the secondary data analysis of humanitarian appeals provided by ISCG for the years 2021 to 2024 reveals that a total fire response cost is USD 57.9 million and per year it was USD 14.5 million.

In conclusion, the WASH Sector emphasizes that the successful implementation and scale-up of this initiative for fire preparedness will significantly contribute to mitigating the impacts of fire hazards on human lives, infrastructures and resources.

Other Key WASH Initiative for Fire Response

Incorporated steel frame super structure in the updated unified latrine design which is approved by RRRC

Specific recommendation to ensure the dedicated water outlet for fire response in all water network have been incorporated in the water strategy document.

- Conducted 6 batch WASH in Emergency Training and built the capacity around 150 WASH partners staff
- Ensured dedicated fire outlet around 45% of water network
- Ensured field level collaboration with SCCCM partners to provide the access of water to the MFFU from water network

Dedicated Water Outlet with Hose Pipe at Water Network for Fire Response

LIMITATIONS

This Compendium of DRM Best Practices was developed to document, synthesize, and share practical and evidence-based DRM interventions implemented in Cox's Bazar by government agencies, humanitarian partners, and community actors. While the compendium provides valuable insights and learning, it is important to acknowledge its scope and inherent limitations.

- **Cost-Effectiveness Analysis Not Conducted**
  Due to scope and time constraints, a detailed cost-effectiveness or cost–benefit analysis of the documented best practices was not conducted. While qualitative efficiency and value-for-impact insights are reflected, the compendium does not provide comparative financial analysis across interventions.
- **Time Constraints**
  The development of the compendium was undertaken within a limited timeframe. As a result, in-depth longitudinal assessments, extended field observations, and outcome tracking over longer periods were beyond the scope of this exercise.
- **Replication Context Not Assessed**
  Although many best practices demonstrate strong potential for replication and scaling, their successful implementation in other locations would require context-specific assessments, including geographical, social, institutional, and resource considerations. Replication would therefore need additional planning, adaptation, and stakeholder engagement in the intended implementation areas.
- **Practice Coverage Limitation**
  As the study depended on voluntary submissions from individual agencies, there is a possibility that some collaborative or jointly implemented best practices were not included, highlighting an opportunity for more collective documentation in future updates.

Despite these limitations, the compendium provides a strong foundation for learning, reflection, and informed decision-making in disaster risk management. It highlights actionable practices and collective experiences that can guide future DRM investments, policy development, and program design in Cox's Bazar and other disaster-prone humanitarian settings.

Way Forward

- **Sustained Community Involvement and Ownership:** Building on the success of community-driven initiatives, it is essential to continue engaging local populations in disaster preparedness and response. Empowering communities to take ownership of DRM practices through education, training, and inclusive decision-making processes will ensure the sustainability of efforts.
- **Expansion and Replication:** The best practices outlined in this compendium offer adaptable solutions that can be replicated in other disaster-prone regions. Expanding these initiatives to other refugee camps, host communities, and high-risk areas within Cox's Bazar will further strengthen resilience across the region.
- **Strengthening Multi-Sectoral Coordination:** Continued collaboration between government agencies, UN bodies, NGOs, and community organisations is crucial to ensuring that disaster management efforts are aligned, efficient, and responsive. Strengthening coordination frameworks and creating more robust information-sharing platforms will help to streamline decision-making and response processes.
- **Investment in Climate-Resilient Infrastructure:** Addressing the challenges posed by landslides, flooding, and other hazards requires substantial investment in climate-resilient infrastructure. Future DRM efforts should prioritize sustainable, durable infrastructure that can withstand extreme weather events and improve the overall safety and well-being of affected populations.
- **Focus on Data Management and Evidence-Based Planning:** Effective disaster risk management relies heavily on accurate data and continuous monitoring. Investing in data collection systems and strengthening risk analysis capabilities will help stakeholders make informed decisions and enhance anticipatory actions in response to emerging threats.
- **Enhancing Policy Advocacy and Integration:** The findings and recommendations of this compendium should be shared widely with policymakers, donors, and practitioners to ensure that evidence-based DRM practices are integrated into national and regional planning frameworks. Continued advocacy for inclusive and sustainable DRM strategies will help ensure that disaster preparedness remains a priority at all levels.

By implementing these next steps, the lessons learned from Cox's Bazar can serve as a guide for disaster-prone regions worldwide, contributing to a more resilient and prepared global community. The compendium serves as a vital resource, but the real success lies in the continued application of these best practices to strengthen disaster risk management in the face of evolving challenges.

Conclusion

- The Best Practices of DRM Compendium highlights the collective efforts of government agencies, humanitarian organizations, and community actors in strengthening disaster resilience within the vulnerable communities of Cox's Bazar, particularly in the Rohingya refugee camps and surrounding host areas. Through the integration of innovative approaches like slope stabilization, fire preparedness drills, and community-driven environmental management, significant strides have been made in reducing disaster risks and improving the capacity of local populations to respond to natural hazards.
- The documented best practices within this compendium underscore the critical role of community engagement, multi-sectoral coordination, and inclusive disaster risk management. By prioritizing vulnerable groups, such as women, children, the elderly, and persons with disabilities, these practices ensure that no one is left behind in the effort to enhance resilience. Furthermore, the incorporation of nature-based solutions and disaster preparedness into everyday practices has helped foster sustainable and scalable models of risk reduction.
- Despite the progress made, challenges remain, particularly in maintaining the momentum of these efforts and addressing emerging risks. Climate change, compounded by ongoing socio-political and economic challenges, necessitates continuous adaptation and innovation in disaster management practices. Gaps in infrastructure, limited space in camps, and the need for long-term funding and resources remain areas that require ongoing attention

References

DW News (2024). Thousands of Rohingya refugees homeless after fire at camp.
https://www.dw.com/en/thousands-of-rohingya-refugees-homeless-after-fire-at-camp/a-67912099

Islam, M. et al. (2023). Spatial landslide risk assessment in a highly populated Rohingya refugee settlement area of Cox's Bazar, Bangladesh. IvySci Journal.
https://www.ivysci.com/articles/4834443

ISCG (2024). Coordination Update – Cox's Bazar Operation. Humanitarian Response.
https://www.humanitarianresponse.info/en/operations/bangladesh/document/iscg-2024-coordination-update

UNDP (2023). Community-led Disaster Risk Reduction in Cox's Bazar. UNDP Bangladesh.
https://www.undp.org/bangladesh/publications/community-led-disaster-risk-reduction-coxs-bazar

UNHCR (2023). Bangladesh – Cox's Bazar Humanitarian Update.
https://data.unhcr.org/en/documents/details/103864

UNICEF (2023). Bangladesh Floods and Landslides Situation Report (17 Aug 2023).
https://www.unicef.org/media/144076/file/Bangladesh-Floods-and-Landslides-SitRep-17-August-2023.pdf

UNICEF (2023). Powerful monsoon rains hit Rohingya refugee camps, raising risks for thousands of children.
https://www.unicef.org/press-releases/powerful-monsoon-rains-hit-rohingya-refugee-camps-raising-risks-thousands-children

United Nations Bangladesh (2024). Nearly 7,000 Rohingya refugees homeless as fire blazes through camp in Cox's Bazar.
https://bangladesh.un.org/en/257336-nearly-7000-rohingya-refugees-homeless-fire-blazes-through-camp-cox%E2%80%99s-bazar

UN OCHA (2023). Cox's Bazar Humanitarian Snapshot – August 2023. Relief Web.
https://reliefweb.int/report/bangladesh/bangladesh-coxs-bazar-humanitarian-snapshot-august-2023

World Bank (2023). Bangladesh Climate and Disaster Risk Profile – Cox's Bazar District.
https://documents.worldbank.org/en/publication/documents-reports/documentdetail/099320223101918358/p1800470d800f80509b2b022da849c1482

COMPENDIUM ON DISASTER RISK MANAGEMENT BEST PRACTICES

BRAC

BRAC Centre
75 Mohakhali
Dhaka 1212
Bangladesh

T: +88 02 2222 81265
F: +88 02 2222 63542
E: info@brac.net
W: www.brac.net

FOLLOW US

/BRACworld