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Swiss Agency for Development
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FINAL REPORT

Disaster Risk Management in Cox's Bazar November 2018 – October 2020



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Acronym

BMD	Bangladesh Meteorological Department
CiC	Camp in Charge
CRA	Community Risk Assessment
DC	Deputy Commissioner
DDM	Department of Disaster Management
DG ECHO	Directorate-General for European Civil Protection and Humanitarian Aid Operations
DM	Disaster Management
DMC	Disaster Management Committee
DRM	Disaster risk management
DRR	Disaster risk reduction
FSCD	Bangladesh Fire Service & Civil Defence
GOB	Government of Bangladesh
GSB	Geological Survey of Bangladesh
HOSOG	Head of Sub-Office
ISCG	Inter Sector Coordination Group
LOA	Letter of Agreement
NWP	Numerical Weather Prediction
PWD	Person With Disability
NGI	Norwegian Geotechnical Institute
RIMES	Regional Integrated Multi-Hazard Early Warning System for Africa and Asia
RRAP	Risk Reduction Action Plan
SDC	Swiss Agency for Development and Cooperation
Simex	Simulation expertise
UNDP	United Nations Development Programme
UNO	Upazila Nirbahi Officer

Executive Summary

Cox's Bazar is one of the most disaster-prone districts in Bangladesh. With its long coastline on the Bay of Bengal and with a landscape consisting of flat deltaic plains and sandy hills, Cox's Bazar is highly vulnerable to natural hazards and extreme weather, including cyclones, torrential rain, landslides, flash floods, storm surges and extreme temperatures. Cox's Bazar has been frequently battered by heavy monsoon and cyclone events - the most recent being cyclone Bulbul and heavy monsoon in 2019. The Rohingya refugee influx in 2017 has further increased the size of population at risk as well as added pressures on the environment which undermine resilience. The spread of COVID19 pandemic in Cox's Bazar since March 2020, presented additional challenges to the local authorities and humanitarian community in preparing for cyclone and monsoon season, addressing humanitarian needs in the Refugee camps, while at the same time responding to COVID19.

The UNDP Disaster Risk Management (DRM) Project has been closely engaged with the Local Government and Inter Sector Coordination Group (ISCG) in their disaster risk reduction efforts and containing the COVID19 pandemic in the camps and the host communities. Since the launch of the DRM Project in 2018, it has significantly contributed to reducing seasonal weather and disaster vulnerability of at-risk Rohingya and Bangladeshi host communities in Cox's Bazar through multi-hazard risk management. In line with the expected project outcomes, DRM Project has achieved the following key results during 2019 and 2020:

- Disaster response planning and decision making has been supported by increased access to improved weather forecasting, risk assessments, modelling and seasonal outlook products. In a recent client survey conducted by DRM Project in October 2020, over 85 percent of Government and humanitarian agencies have reported increase in number of trusted forecasts, risks assessments and seasonal outlook products.
- Over 150 government duty-bearers benefited from training on the application of hazard mapping, modelling and weather forecasting enhancing their skills for risk informed local development planning.
- Over 278 staff/volunteers from the first response agencies (Fire Service Civil Defence, Cyclone Preparedness Programme, Ansar and VDP) have been trained and equipped with flash flood and landslide search and rescue operation skills to assist their respective communities as per the Standing Orders on Disaster (SOD).
- Strengthened coordination among the agencies working on DRR in the host communities and institutionalized it under the leadership of the DC Office, enhancing government and non-government DRR coordination. Over 30 DRR organisations participate in this forum. These efforts such as - DRR Stakeholder coordination platform, partnership with Government institutions, are being utilized by ISCG sectors and humanitarian community in expanding and enhancing humanitarian-development nexus and reflected in the Joint Response Plan 2021.
- Supported the most vulnerable Rohingya and Bangladeshi communities to reduce and manage landslide, flash flood, and cyclone disaster risks through community-based disaster risk reduction initiatives. The project conducted Community Risk Assessments (CRA) and Risk Reduction Action Plans (RRAP) for the 15 most vulnerable unions under Teknaf, Ukha,

Moheshkhali, Pekua and Kutubdia upazila enabling the local authorities and communities to be aware of hazards, risks and risk mitigation actions to be taken. In partnership with Danish Refugee Council (DRC) implemented 71 small-scale DRR mitigation schemes which significantly improved the living condition and reduced risks from flooding and landslides for 48,553 refugees living in Camp 8E and 8W.

- COVID19 response efforts of the Government and ISCG were supported with: installation of disability inclusive handwashing stations; COVID19 preventions supplies such as PPEs, soap, hand sanitizer; deployment of CPP volunteers; COVID19 awareness materials and radio programme targeting people with visual impairment; and cash for food and hygiene kit for 3000 most vulnerable households in Ukhia, Teknaf and Cox's Sadar.
- The DRM project has been closely involved and has assisted ISCG in advancing DRR within the realm of the Rohingya crisis response and facilitating coherent DRR efforts among the stakeholders working within the camps and in the host communities. A shift in understanding and approach to DRR is noted. While DRM project has continued to support ISCG to incorporate DRR as a crosscutting theme in the Joint Response Plan (JRP) 2019 and 2020, this has been further stepped up with disaster risk management being recognized by ISCG as an important thematic area within the Rohingya crisis response. Joint Response Plan 2021 includes a separate section on DRM to guide the humanitarian stakeholders in designing and implementing DRM projects in the camps and host communities.

The Project encountered several challenges during implementation of the project activities. Initial launch and subsequent implementation was slowed down due to the several unfolding critical events i.e. political context, cyclone Fani (April 2019) and cyclone Bulbul (November 2019), heavy monsoon rain from July to September 2019, and local inter-communal violence. In March 2020, with the onset of COVID-19 pandemic, Project footprint in the field had to be reduced which slowed down the planned project activities. Following the Project impact assessment (due to COVID19 pandemic), part of the Project was reprogrammed, in close consultation with SDC Management, and project duration extended from June to Oct 2020 which enabled the Project to complete all the planned activities.

Project financial delivery is **CHF 1,210,999** achieving 100 percent delivery made possible with the time extension and reprogramming of the Project activities given the context.

Background

Cox's Bazar is one of the most disaster-prone district in Bangladesh and is highly exposed to natural hazards and extreme weather impacts including cyclones, landslides, flash floods, storm surges and extreme temperatures. The district has been exposed to frequent cyclones in the recent years such as Bulbul (2019), Mora (2017), Roanu (2016) and Komen (2015). Cox's Bazar district also remains amongst the poorest districts in Bangladesh and has long struggled with food security, livelihood opportunities, insufficient water and sanitation facilities, weak infrastructure, poor health and education indicators.

Following the influx of Rohingya refugees in 2017, the Swiss Agency for Development and Cooperation (SDC) recognized the severity of the refugee crisis and its impact on the host

communities at an early stage and started providing humanitarian aid in Cox's Bazar district. While conditions in the refugee camps have improved as a result of the joint action of international and national stakeholders, a combined analysis of political, social, economic, and environmental realities suggested that tackling the refugee crisis, its consequences for host communities, and its impact on the environment combined with a high risk of natural disasters required a professional response.

Thus, the Disaster Risk Management project in Cox's Bazar District was designed to reduce the seasonal weather and disaster vulnerability of at-risk Rohingya and Bangladeshi host communities in Cox's Bazar through effective multi-hazard risk management. The main expected outcomes for SDC financed components of the project include:

- Government, development, and humanitarian stakeholders have access to improved forecasting information and multi-hazard risk maps to support planning and decision-making;
- Most-vulnerable Rohingya and Bangladeshi host communities reduce and manage landslide, flash flood, and cyclone risk; and
- Government duty-bearers, key humanitarian stakeholders, and first response agencies manage residual risk through risk-informed planning and first response.

In March 2020, with the spread of COVID-19 pandemic in Bangladesh, upon request of the District Administration and prior approval of SDC, the DRM project re-programmed part of the project activities/budget and implemented disability-inclusive COVID-19 emergency response in Cox's Bazar.

The following sections describe progress made towards achieving the above-planned outcomes from November 2018 to October 2020.

Beneficiaries

The project **under result 1** collaborated with the Regional Integrated Multi-Hazard early Warning System (RIMES) and Bangladesh Meteorological Department (BMD) for advancing localized weather forecasting and early warning in Cox's Bazar district. Through this partnership, the project developed localized weather forecasts, outlook products, and a weather dissemination portal which significantly benefited the government, UN agencies, and the humanitarian stakeholders in Cox's Bazar. RIMES conducted several targeted professional trainings for BMD staff, Local Government officials and humanitarian stakeholders benefitting over 170 officials involved in disaster risk management. The project collaborated with Columbia University/NASA to enhance the landslide susceptibility model for Rohingya camps. Also collaborated with the Norwegian Geotechnical Institute (NGI) and Geological Survey of Bangladesh (GSB) for installing, monitoring of rain and weather instruments in the Rohingya camps.

The project **under result 2** coordinated with ISCG, Government institutions, UN agencies, and I/NGOs for providing technical DRR advisory, risk mapping & modeling, and weather outlook products. UNDP jointly with the REACH co-chaired the Natural Hazard Technical Working Group of ISCG providing technical advisory and coordination support for risk analysis, mapping, and modeling for key humanitarian stakeholders. During 2019 and 2020, the DRM project served as key DRR

advisory unit and provided targeted inputs as requested by the ISCG sectors (CWCWG, SMSD, EPRWG, and Shelter).

Under result 3, the project has generated a risk and vulnerability report for Cox's Bazar district and organized several knowledge exchange workshops on natural hazards and extreme weathers. Cyclone and monsoon lessons learned workshops were organized where over 12 stakeholders organizations from Government and humanitarian community benefited from the discussions and learning events.

The project **under result 4** completed 15 Community Risk Assessment (CRA) and Risk Reduction Action Plans (RRAPs) covering the 15 most vulnerable Unions under Teknaf, Ukhia, Moheshkhali, Pekua and Kutubdia upazila. While, partner Danish Refugee Council (DRC) implemented 71 small-scale mitigation schemes in 55 Majhi bocks under 8E and 8W camps which directly benefited 48,553 Rohingya refugees by reducing landslides and flash floods risks in their camps. A total of 1,575 refugees benefited from cash for work opportunities as well as skill enhancement through construction of 71 small-scale structural mitigation schemes. **Under result 5**



Photo 1: A woman and her child washing hands at Teknaf Upazila Complex cash and hygiene kit distributio point

the project implemented disability-inclusive COVID-19 response covering all local government institutions in Cox's Bazar district (DC Office, 8 UNO Offices, 4 Municipalities, and 71 Union Parishad Offices). The project installed 422 handwashing units including 84 units dedicated to people with disabilities. As of October 29, 2020, a total of 149,209 people (109,008 men; 31,290 women; 5,488 children; and 3,423 people with disabilities) benefited from the handwashing stations at DC Office and 8 UNO Offices (monitored by the CPP volunteers). A total of 50 Cyclone Preparedness Programme (CPP) volunteers were engaged on a daily basis to support DC office (10 CPP volunteer) and 5 CPP volunteers in each of the 8 UNO Offices supporting the COVID19 response efforts. In addition, 3,000 most vulnerable households have received cash for food and hygiene package.

The project **under result 6** trained a total of 149 government duty-bearers on the application of risk information and forecasting for planning purposes. Over 280 humanitarian staff participated in the orientation sessions on seasonal and extreme weather and disaster risk in Cox's Bazar. A total of 208 CPP volunteers benefited from the landslide response training. **Under result 7** the project partnered with the Fire Service Civil Defense (FSCD) and trained 70 Government first response agency staff from FSCD, Ansar, and VDP on landslide search and rescue.

Progress Overview

Output 1: Government, development, and humanitarian stakeholders have access to improved forecasting information and multi-hazard risk maps to support planning and decision-making

The DRM project has been positioned as a key technical unit providing DRM advisory services to the District and Local authorities, ISCG and other non-government stakeholders. This technical assistance enabled better preparedness supported by simplified and localized weather forecasting and early warning and post event lesson learning. The project supported preparedness during monsoon 2019 and 2020 and recent cyclone Amphan in May 2020. The rain gauges and weather instruments have supported the ISCG and key humanitarian organizations to monitor monsoon rainfall and weather situations in the areas around the camps and send alerts when high-intensity rainfall is significantly increasing risk of flooding and landslides. This access to realtime rainfall data and past trend analysis has informed contingency planning and preparedness and has been utilized specifically by ISCG sectors (Site Management Site Development; Emergency Preparedness and Response; Shelter). UNDP jointly with the REACH co-chairs the Natural Hazard Technical Working Group of ISCG. This forum brings together all actors who are involved in the technical analysis of hazards and related data management and facilitates harmonization of information analysis to come up with a common consensus. Considering the effectiveness of the forum, the ISCG has extended the NatHaz TWG by one more year, upto August 2021 ([LINK](#)).

“Localised weather forecasting and early warning allowed to assess the danger in real time, and to inform the humanitarian community. I believe we made a significant step forward in terms of preparedness. Some lessons learned for sure, but it was a massive progress.” Emergency Preparedness & Response WG Coordinator/ISCG
21 May 2020

One of the key result under this Output is the capacity development of BMD which includes provision of equipment, technical trainings and learning/client feedback opportunities. Besides, UNDP’s partnership with BMD and RIMES through this project has served as an important resource for the humanitarian stakeholders to access training, weather data, and joint learning events. In a recent client survey conducted in October 2020, over 80 percent of the respondents from the Government and humanitarian agencies reported number of trusted weather forecast, risk assessments, seasonal outlook products has increased in the past one year ([LINK](#)).

Recognizing DRR coordination gap outside the refugee camps, UNDP initiated coordination of key DRR stakeholders since early 2019. The DRR stakeholder coordination mechanism has been recently institutionalized and brought under the Government leadership further strengthening coordination among Government and non-government DRR stakeholders. Over 30 DRR organisations participate in this forum. Lately, ISCG sector i.e Communicating with Communities Working Group has begun utilizing this DRR Stakeholder platform for its communications and community engagement initiatives to make the effort inclusive of host communities (JRP 2021).

The DRM project has supported ISCG to incorporate DRR as a crosscutting theme in the Joint Response Plan (JRP) 2019 and 2020 and provided the needed guidance to the ISCG sectors (CWC, SMSD, EPR, Shelter). For 2021, this has been further strengthened with ISCG recognizing disaster risk management as an important issue within the Rohingya crisis response and the JRP 2021 has included a separate section on DRM to guide the humanitarian stakeholders in designing and implementing DRM projects in the camps and host communities. The ISCG has also prioritized development of a comprehensive DRM framework with measurable indicators during 2021 to guide all DRR stakeholders in Cox’s Bazar. The DRM project has been closely involved and has assisted ISCG in advancing DRR within the realm of the Rohingya crisis response and facilitating coherent DRR efforts among the stakeholders working within the camps and in the host communities.

The below tables provide quantitative report on the improved access to forecasting information, risk assessment and seasonal outlook products and services by the Government and humanitarian agencies in Cox’s Bazar.

Output 1/Indicator 1:

Indicator	Baseline	Target	Progress value (October 2020)
% of government and humanitarian agencies reporting increase in number of trusted forecasts, risk assessment and seasonal outlook products	0	80%	85.71%
<p>Progress against the indicator: The project launched an online survey in October 2020 to measure this indicator. A total of 21 respondents from Government and humanitarian agencies completed the online survey. Key analysis: 85.71% of respondents reported that the number of the trusted forecast, risk assessment, and seasonal outlook products has increased in the last 12 months. (Annex 1.1: Raw data Client Survey October 2020)</p>			

Table 1: Client feedback on the access and use of listed forecasts, risk assessment, and seasonal outlook products provided by DRM Project

Access to weather forecast, risk assessment and seasonal outlook products/services	Client Response (%)
Our agency/organization/sector has received weather forecasting, monsoon alerts, and updates	71.43
Our agency/organization/sector has received monthly and seasonal weather outlook	71.43
Our agency/organization/sector has used any mapping, modeling, and products of Natural Hazards Task Force and UNDP	71.43
Our agency/organization/sector has participated in the orientations, workshops, or training jointly organized by UNDP, RIMES, and BMD	66.67
Our agency/organization/sector received weather forecasting and bulletin during the cyclone and monsoon period	66.67
Our agency/organization/sector received and used UNDP’s rainfall and weather instrument data	61.90

Our agency/organization/sector has utilized UNDP technical advice provided during larger meetings (sector meeting, EPWG, HoSOG, ISCG workshops, NatHaz WG, etc.)	61.90
UNDP has provided tailored products for our agency, organization, or sector (reports, studies, technical inputs, etc.)	57.14
Our agency/organization/sector has utilized UNDP's supported cyclone contingency plan	33.33
Our agency/organization/sector has utilized UNDP's supported Community Risk Assessment	33.33
Our agency/organization/sector has utilized UNDP's supported Disaster Management Plan	33.33
UNDP has provided one on one support to our team/team members (meetings, coaching, etc)	23.81
Other (please specify)	4.76

RESULT 1: IMPROVED WEATHER FORECASTING AND LANDSLIDE MODELLING FOR COX'S BAZAR

Result 01/Indicator 1.1

Indicator	Baseline	Target	Progress value (October 2020)
Availability of high-resolution short-range forecast product for Rohingya camp areas and seasonal forecast products centered on Cox's Bazar	No existing high-resolution forecast products for the Rohingya camp area; no seasonal forecast for Cox's Bazar.	Available high-resolution weather forecast product (9 km x 9 km) centered on key camp areas; Seasonal forecasts centered on Cox's Bazar district issued.	A server has been installed in BMD which enabled a high resolution (up to 9km) forecast product. Seasonal outlook available (one month and three month range).
<p>Progress report on indicator: A server has been installed in BMD which enabled high resolution (up to 9km) forecast as compared to 18km resolution in the past. Accordingly, RIMES developed an integrated weather dissemination portal which has been integrated into the BMD website (link https://instant.rimes.int) and also developed and disseminated monthly and seasonal forecast outlook products with key stakeholders (monthly and seasonal outlook can be accessed here https://instant.rimes.int/seasonal_forecast).</p>			

Improved weather forecasting for Cox's Bazar: There were no localized weather forecasting and seasonal outlook products available previously for Cox's Bazar district. Considering, UNDP in partnership with RIMES and BMD has developed localized weather forecasting for Cox's Bazar. UNDP has entered into a formal partnership with RIMES through signing a Letter of Agreement in October 2019. To identify the current gaps in weather services and capacity building needs in Cox's Bazar, UNDP jointly with RIMES and BMD organized a consultation workshop with key stakeholders in December 2019. Accordingly, RIMES and BMD organized several focus group discussions and consultation meetings with humanitarian stakeholders in January 2020.



Photo 2: Inception workshop on forecast application, December 2019

A server has been installed in BMD which enabled high resolution (up to 9km) forecast for Cox's Bazar as compared to 18km resolution in the past. The project developed and disseminated several monthly and seasonal weather forecasting with key stakeholders. During cyclone Amphan, regular weather forecasting and bulletin were shared with key humanitarian stakeholders. The project developed an integrated forecast dissemination portal "INSTANT" (<https://instant.rimes.int>) in May 2020 using numerical weather modelling which provides Upazila level short-range 5-day weather forecast for Cox's Bazar. The portal is integrated into the BMD website and publicly available (to access please visit the BMD website www.bmd.gov.bd and then open the regional forecast tab on the left side).

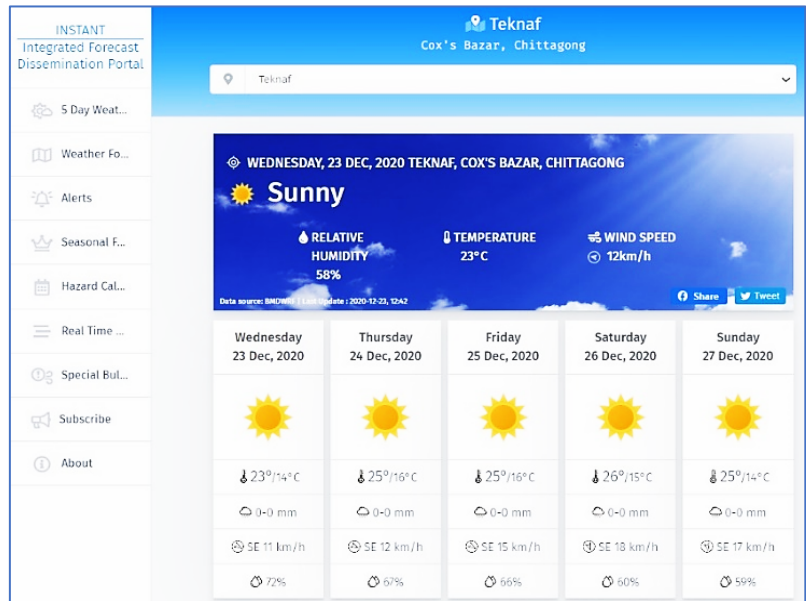


Figure 1: Localized forecast dissemination portal dashboard

RIMES jointly with BMD organized several capacity building training and orientation sessions for BMD staff, Government officials, and humanitarian stakeholders on forecast applications, interpretations, and products, listed below:

Training	Date	Participants
Capacity building for government and humanitarian stakeholders	9th October 2019	22 (1 female, 21 male)
Natural Hazard Training for CiC support staff	9 -11 December 2019 17-19 December 2019 27-29 January 2020	71 (2 female, 69 male)
Training for BMD staff on NWP Data Processing and Preparation	21 January 2020	24 (4 female, 20 male)
Workshop on Forecast Application for disaster management professionals and humanitarian workers	30 January 2020	30 (7 female, 23 male)
Virtual orientation on INSTANT(Integrated Forecast Dissemination Portal) for humanitarian professionals	6 August 2020	30 (6 female, 24 male)
Semi-Virtual Training on Forecast Interpretation for Humanitarian Agencies	28 October 2020	30 (5 female, 25 male)
Semi-Virtual Training on Forecast Interpretation for Government Officials	29 October 2020	41 (4 female, 37 male)
Semi-Virtual Training on Forecast Customization System(FOCUS) for BMD Professionals	30 October 2020	18 (2 female, 16 male)

Landslide susceptibility & dynamic hazard models: UNDP, in collaboration with the NASA/COMPAS project, developed several landslide susceptibility & dynamic hazard models for Rohingya camps. The COMPAS landslide project worked with three major methodologies, firstly it developed a landslide susceptibility map from Earth Observe (EO) data, secondly, it incorporates satellite-based precipitation to estimate landslide hazard in near-real-time, and lastly, it estimates the exposure of infrastructure or population to this hazard. A capacity building training workshop was organized by NASA and Columbia University COMPASS project for the humanitarian stakeholders in August 2019 benefiting 20 officials (6 female and 14 male). The landslide models are publicly available since the end of 2019 (published through NatHaz Summary report and other websites) and used by different SMSD and Shelter sector stakeholders ([NASA Landslide Model](#)).

Installation and monitoring of rain gauges and weather instruments jointly with GSB and NGI: UNDP in partnership with Geological Survey of Bangladesh (GSB), Norwegian Geotechnical Institute (NGI), and UNHCR, has installed rain gauges and weather instruments in the Rohingya refugee sites in Cox's Bazar. Besides, In the past, GSB and NGI installed four automated rain gauges in Chittagong, Cox's Bazar town, and Teknaf town. The rain gauges and weather instruments have been supporting the ISCG and key humanitarians to monitor the rainfall and weather situations in the areas around the camps and send alerts when high-intensity rainfall is significantly increasing the risk of landslides. Together with incident reports compiled by the ISCG Site Management sector, the rainfall gauge data has been enabling the humanitarian actors to gain a better understanding of how vulnerable the camp and settlement areas are to a rainfall-triggered landslide. Until now, several lessons learned reports are informed by the rainfall and weather data, and ISCG is regularly using rainfall data and DRM project analytical assistance for their monsoon preparedness and reporting ([ISCG monsoon reports with incidents and rainfall data](#); [Shelter report](#))

RESULT 2: PRE-SEASONAL ANALYSIS INFORMS PLANNING FOR CYCLONE AND MONSOON SEASONS IN COX'S BAZAR

Result 2/Indicator 2.1:

Indicator	Baseline	Target	Progress value (October 2020)
Pre-cyclone/monsoon season situation assessments produced by Disaster Risk TWIG and provided to ISCG and Deputy Commissioner	No evidence-based cyclone impact scenario available for the Rohingya camps and host communities for preparedness planning	Evidence-based cyclone impact scenarios for the Rohingya camps and host communities for category 1 and 4 cyclone available to ISCG for preparedness planning	Evidence-based cyclone impact scenarios for the Rohingya camps and host communities for category 1 and 4 cyclone available to ISCG for preparedness planning
Progress report on indicator: The cyclone disaster impact model is available and shared with ISCG, EPRWG, UNRCO, and relevant stakeholders in April 2020 to support the contingency planning of the Rohingya refugees and the host communities (LINK).			

DRR technical advisory and coordination support: Recognizing DRR coordination gap outside the refugee camps, UNDP initiated coordination of key DRR stakeholders since early 2019. The forum brings together all DRR stakeholders in Cox's Bazar district outside the camps to share, prioritize and coordinate DRR efforts. Recently in early 2020, this forum has been institutionalized bringing it under the leadership of DC Office Cox's Bazar.

UNDP jointly with the REACH co-chairs ISCG/NatHaz Technical Working Group comprising of key humanitarian stakeholders engaged in natural hazard assessments, mapping and modelling. The NatHaz TWG generated risk mapping, modeling, and products (including Flood modelling map, Landslide susceptibility map, Storm surge hazard map, Standing water analysis map, Weather instruments database, Storm surge, and coastal flooding modeling, Hydrodynamic map, etc.) which are available in the humanitarian response repository ([LINK](#)). Humanitarian stakeholders especially the EPRWG, the SMSD, the Shelter, and the WASH sector are using these products. Detailed flood risk maps for all camps are used by response agencies working in the camps and also incorporated in the ISCG Site Improvement Catalogue ([LINK](#)).

The project provided continuous support to the ISCG by reviewing the sectoral contingency plans. DRM Project supported the translation of the ISCG Cyclone Contingency Plan - June 2019, and ISCG Monsoon Response Plan 2019 into Bangla and handed it over to ISCG and EPRWG. DRM Project maintained close collaboration with ISCG providing DRR advisory support and technical inputs into the JRP 2019, 2020 and 2021. The Project provided DRR technical support to the SMSD sector, particularly for sector documentation, SMSD monsoon preparedness strategy and checklist. UNDP also supported the design of SMSD sector 4W (Who is doing What, Where, and When) on non-structural DRR activities.

UNDP/DRM Project supported the Government, ISCG, and BDRCS with IFRC to organize and facilitate several stakeholders lessons learned workshop on monsoon and cyclone preparedness and response in Cox's Bazar since 2018.

DRM Project participated in the UNDRR Regional Consultative Workshop "Scaling up DRR in Humanitarian and Development Contexts in Asia-Pacific" in December 2019 and provided inputs through an in-depth interview and documentation to incorporate DRR lessons learned from the Rohingya crisis response. UNDP along with a collaborative research working group, consisting of specialist staff from IFRC (American Red Cross, BDRCS), IOM/NPM, REACH, Translators without Borders (TWB), and UNHCR, carried out DRR Knowledge Attitude Practice (KAP) survey in the refugee camps and host communities in Teknaf and Ukhia Upazila. The full report was published in September 2020 and widely disseminated among the DRR stakeholders ([LINK](#)).

Cyclone Disaster Impact Model for Cox's Bazar: UNDP, with support from consultancy firm Tonkin + Taylor developed the tropical cyclone disaster impact Modelling (DIM), simulating the impacts of two (2) scenarios on the populations of the Rohingya refugee camps and the surrounding host communities. The first scenario was a Category 1 cyclone incident with a high tide, representing the most probable severe weather event. The second scenario considered a Category 4 cyclone occurring during a king tide, representing a much higher impact event. Disaster impacts have been modeled under each impact scenario, using a risk assessment approach to understand the exposure and vulnerability of both the Rohingya refugees and the host communities. The cyclone DIM estimates the impacts on population and buildings from wind and coastal inundation associated with a cyclone for both the Rohingya refugees and the host communities in Cox's Bazar. The cyclone DIM is available and was shared with ISCG, EPRWG, and UNRCO in April 2020 to support the contingency planning of the Rohingya refugees and the host communities. The DIM is particularly valuable for Cox's Bazar district outside the refugee camps as first time such a detailed data and analysis is available for host communities ([LINK](#)).

Wind Assessment for Rohingya camps: UNDP contracted consultancy firm Sander & Partners to conduct wind assessment and modelling for Rohingya camps. A wind modeling for the Rohingya camps in Ukhia and Teknaf was completed in November 2019, looking closely at three cases of wind hazards – cyclone, monsoon wind, and pre-monsoon wind. The wind assessment product released in March 2020, is currently being used by key humanitarian stakeholders in the camps. The product, mapping, and results of wind assessment has been supporting emergency preparedness and early action measures, helping to prioritize the vulnerable camps and populations, supporting evidence-based site planning ([LINK](#)).

Semi-Virtual Training on Forecast Interpretation for Humanitarian Workers: To assist in the decision-making by humanitarian stakeholders based on localized weather forecast an INSTANT portal has been developed by RIMES in collaboration with BMD. This was followed by training workshop on 29th October 2020 at Long Beach Hotel, Cox's Bazar for the humanitarian workers. A total of 30 participants (5 female, 25 male) attended the training. Some participants from IRC, ISCG, FAO, UNDP, Save the Children, IFRC, IOM, UNHCR, UNICEF, and CwC WG participated physically and others attended virtually through zoom.

RESULT 3: ENHANCED KNOWLEDGE BASE ON EXTREME WEATHER AND DISASTER RISK SCENARIO FOR COX'S BAZAR DISTRICT

Result 3/Indicator 3.1

Indicator	Baseline	Target	Progress value (October 2020)
List of vulnerable communities and location map for Cox's Bazar district (vulnerability study)	No "List of vulnerable communities and location map" for Cox's Bazar district	List of vulnerable communities and location map for Cox's Bazar district available	A list of vulnerable communities and a location map for Cox's Bazar district has been prepared.
Progress report on the indicator: A comprehensive report on vulnerable community and location maps has been prepared. The study conducted Upazila wise hazard, exposure, vulnerability and risk mapping for Cox's Bazar. This study has considered children, elderly people, extremely poor households, indigenous people, and people with disabilities as the representative vulnerable community in Cox's Bazar district. Additionally, it focused on the spatial distribution of the people brought under the Social Safety Net Program of the Government. <i>(See the vulnerability study report for details - Annex 1.3.1)</i>			

Vulnerability Study: To prepare a comprehensive report on the list of vulnerable communities and location map in Cox's Bazar District, UNDP hired a national consultant in February 2020. The purpose of the activity is to support the Deputy Commissioner's Office to develop their report on at-risk communities and locations in the district, which can be shared with non-government stakeholders to prioritize and guide DRR interventions. However, due to COVID-19 restriction and lockdown, the field-level data collection and mapping activities were delayed. Finally, the consultant conducted field visit and data collection in August 2020 and submitted the final report in October 2020. The study was conducted using mixed methods of literature review, statistical data, qualitative data collected by KII, and field observation. The study conducted Upazila wise hazard, exposure, vulnerability, and risk mapping for Cox's Bazar ([LINK](#)).

Knowledge exchange workshop on natural hazards and extreme weathers: UNDP organized four thematic knowledge exchange workshops: the first knowledge exchange workshop on Landslide and Flash Flood Risk Mitigation in August 2019; the second workshop on Hazard and Risk in November 2019; the third workshop on Forecast Application for Disaster Risk Management in December 2019, and the fourth workshop on Hydro-Meteorological Hazards in February 2020. These knowledge exchange workshops provided forum for the humanitarian actors, DC's Office, RRRC, national research institutions, and academics to share research results and discuss emerging issues in Cox's Bazar District.

Output 2: Most-vulnerable Rohingya and Bangladeshi communities are supported to reducing and managing landslide, flash flood, cyclone, and pandemic risk

The project supported the most vulnerable Rohingya and Bangladeshi communities to reduce and manage landslide, flash flood, and cyclone disaster risks through community-based disaster risk reduction initiatives. The project conducted Community Risk Assessments (CRA) and Risk Reduction Action Plans (RRAP) for the 15 most vulnerable unions under Teknaf, Ukhia, Moheskhalia, Pekua and Kutubdia upazila. These community risk assessment processes enabled the local authorities (UNO, PIO, upazila and union DMCs) to become aware of local communities' perception of risks, concerns and risk mitigation actions to be taken. The CRAs and RRAPs are available with the local authorities and are being utilized by Local Government and NGOs implementing DRR projects in these unions.

UNDP with funding from Japan recently implemented the CRA/RRAPs in two unions under Moheskhali upazila reducing risks of the vulnerable communities.

To strengthen DMCs' capacity for disaster risk management and emergency preparedness, DRM project also developed Disaster Management Plans and updated Contingency Plans for the 7 Rohingya hosting Unions and Teknaf and Ukhia Upazila. The Contingency Plan was followed by simulation exercise for the 7 unions and 2 Upazila (Ukhia and Teknaf) ensuring readiness of the DMC members to respond to major disaster events.

Cox's Bazar district is also highly vulnerable to flash flood and landslides. DRM project in partnership with the Danish Refugee Council (DRC) conducted risk assessment in Camp 8E and 8W (vulnerable camps as per IOM/NPM site profile) and implemented 71 small-scale DRR mitigation schemes which directly benefited by reducing risk of flooding and landslides as well as cash for work opportunities for the refugees living in these camps. Such small scale DRR mitigation interventions by DRM Project and other Site Management Agencies have contributed significantly to stabilizing the vulnerable camp sites. ([LINK](#)) Supplementing the flood and landslide mitigation activities, DRM project also trained 208 frontline CPP volunteers on landslide and flashflood risk and preparedness.

In March 2020, with the onset of COVID19 pandemic in Cox's Bazar, DRM re-programmed part of the project activities and implemented disability-inclusive COVID-19 response comprising of handwashing station construction; COVID19 awareness; COVID19 preventions supplies such as



Photo 3: Inauguration of Handwashing station at DC Office by DC and ADC General



Photo 4: CPP volunteers in CXB Sadar working for COVID-19 preventive measures wearing PPE supported by DRM Project

PPEs, soap, hand sanitizer etc and deployment of CPP volunteers in DC Office and 8 UNO Offices . A total of 422 handwashing units (including 84 units dedicated to persons with disabilities) were installed in partnership with DC Office and Local Government covering all 8 upazila, 71 unions and 4 municipalities benefitting over 149,209 people (109,008 men, 21,290 women, 5,488 children and 3,423 persons with disabilities). In addition, 3000 most vulnerable households benefited from the cash for food assistance (BDT 3500/household) and hygiene kit. This substantive COVID19 response made possible through the generous funding from the DRM Project donors formed an important input to the ISCG and Government's overall response ([JRP 2020 Mid-Term Review Report, page 16, 17, 22](#))

In October 2020, DRM Project in collaboration with DC Office and ISCG organized a “stakeholder workshop on COVID19 lessons learned” providing opportunity for Government (DC and UNO Offices) and ISCG sectors (WASH, Health, GBV sub-sector) and UNDP projects to share progress, challenges and lessons learned.

Output 2/Indicator 1:

Indicator	Baseline	Target	Progress value
Number of men and women directly benefiting from successfully implemented disaster risk reduction interventions	0	132,000 men 56,000 women	132,132 men 56,719 women
Progress report on the indicator: A total of 188,851 people (132,132 men and 56,719 women) benefitted from risk reduction interventions. Among them a total of 48,553 Rohingya refugees (25,429 women and 23,124 men enhanced their capacity to face shocks and stresses through different community-based disaster risk reduction interventions, while a total of 149,209 people (109,008 men; 31,290 women; 5,488 children; and 3,423 persons with disabilities) benefited from handwashing stations at the DC Office and 8 UNO Offices. (LINK)			

RESULT 4: LANDSLIDE AND FLASH FLOOD RISK IS REDUCED IN MOST-VULNERABLE COMMUNITIES.

Result 4/Indicator 4.1

Indicator	Baseline	Target	Progress value (Oct 2020)
Number of vulnerable households in the camps whose risks are minimized through DRR interventions	0	11,000 households	11,204 households
Progress report on indicator: An estimated 48,553 Rohingya refugees (11,204 households – based on IOM NPM) living in 55 Majhi bocks under 8E and 8W camps have been directly benefited from the landslides and flash floods small-scale mitigation schemes carried out by DRC. The DRC engaged a total of 1,575 individual workers for 16 days (695 in 8E camp, 880 in 8W camp) through the Cash CfW modality to construct these 71 landslide and flash flood small-scale structural mitigation schemes. (LINK) .			

Community risk assessment: UNDP supported 15 Union Disaster Management Committees (UDMCs) to conduct the Community Risk Assessment (CRA) and Risk Reduction Action Plan (RRAP) under Teknaf, Ukhia, Moheshkhali, Kutubdia, and Pekua upazila. To conduct the CRA and RRAP, The most vulnerable unions were identified with the support from Cox’s Bazar Relief and Rehabilitation Office (DRRO). The government approved community risk assessment guidelines, and related tools were followed. A total of 456 UDMC members and local communities directly participated in the community risk assessment and risk reduction action planning processes. Participants were introduced to and used different participator CRA techniques and tools (including transect walk, social mapping, hazard mapping, hazard Venn diagram, livelihood seasonal calendar, hazard seasonal calendar, FGDs, and KIIs, etc.) for assessing hazards, vulnerabilities, risks; and preparing coping strategies and a risk reduction action plan. The CRA reports are handed over to the respective Union Disaster Management Committees. The CRAs have also been used by NGOs and UN Agencies planning DRR interventions in these Upazila.

Risk reduction and awareness campaign activities: The project contracted ESDO (a local NGO) in March 2020 to implement the landslide and flashflood risk reduction activities in Bangladeshi communities. After contracting, the ESDO prepared awareness materials and organized the National Disaster Preparedness Day (NDPD) observation/celebration on 10 March 2020 along with District and Upazila administration, where a total 1,229 participants (306 participants in Cox’s Bazar, 306 participants in Moheshkhali, 309 participants in Kutubdia, and 272 participants in Pekua) participated. Following this, the COVID19 pandemic hit Bangladesh including Cox’s Bazar. Due to COVID19 impacts, the planned implementation of landslide and flashflood risk reduction and all other field level activities had to be postponed. Considering the situation, upon discussion and approval from donors, the project team reprogrammed the landslide and flashflood risk reduction activities under the ESDO contract into the disability-inclusive COVID19 response.

Training for volunteers: UNDP hired a consultant to develop the training module and conduct training on “Building capacity of volunteers on recognizing landslide risk and taking action for preparedness”. The project provided the mentioned training to a total of 208 CPP volunteers from 25th August to 2nd September 2020.

Support to disaster risk management in the Rohingya refugee camps: Support was provided to

the Site Management Agencies through Danish Refugee Council in two camps for small-scale landslide and flash flood mitigation activities. UNDP formalized partnership with Danish Refugee Council (DRC) to implement small-scale structural mitigation schemes in the camps. The project was implemented in 9 blocks (55 majhi blocks) of camp 8E & camp 8W which has significantly improved the living condition and vulnerability of 48,553 people. A total of 71 civil engineering structural interventions (34 in 8E, 37 in 8W) were constructed which contributed to the reduction of severity of the landslide and local flash flood in these camps. The project engaged a total of 1,575 individual workers (695 in 8E, 880 in 8W), out of which 1,481 were male and 94 female through the Cash for Work modality. The mitigation activities included construction of brick stair with handle, brick drain, brick access road, bamboo bridge, soil retention wall. [\(LINK\)](#)



Photo 5: Risk mitigation activities in the Rohingya refugee camps

RESULT 5: COVID-19 RISK IS REDUCED THROUGH PREVENTION MEASURES IN 71 UNIONS AND 4 MUNICIPALITIES

Result 5/Indicator 5.1, 5.2 and 5.3:

Indicator	Baseline	Target	Progress value (October 2020)
Indicator 5.1: Number of handwashing units installed and operational	0	75	84 handwashing stations installed and operational
Progress report on indicator: 84 handwashing stations (total 422 units including 84 units dedicated to persons with disabilities) have been installed and are operational in DC Office, 8 UNO Offices, 4 Municipalities, and 71 Union Parishad Offices. (LINK)			
Indicator 5.2: Number of men and women benefiting from COVID-19 prevention measures	0	40,000 men 35,000 women	109,008 men 31,290 women
Progress report on the indicator: As of October 29, 2020, a total of 149,209 people (109,008 men 31,290 women, Children- 5,488, PWD- 3,423) have benefited from the handwashing stations at DC Office and 8 UNO Offices, monitored by the CPP volunteers. 3000 households received cash for food support and hygiene kits support. Note: It was not possible to track the beneficiaries of handwashing stations in 71 Unions and 4 Municipalities, and therefore not included in this indicator.			
Indicator 5.3: Number of people with disabilities benefiting from inclusive COVID-19 prevention measures	0	3,750	3,423 (handwashing stations) 373,800 (radio Naf)
Progress report on the indicator: As of 29 October 2020, a total of 3,423 persons with disabilities have benefited from handwashing stations in DC Office and 8 UNO Offices (HWs in 71 Unions and 4 Municipalities are not included in this indicator). In addition over 373,800 people (40% of total population in Teknaf and Ukhia) have accessed Radio PSA targeted for persons with visual impairment.			

Disability inclusive COVID19 response: UNDP has implemented disability-inclusive COVID19 response since mid-March 2020 with aims to respond and mitigate the threats posed by the COVID19 pandemic in Cox's Bazar and strengthen district disaster management capacity for public health preparedness. The response progress ([LINK](#)) is given below -

- **Construction of Hand Washing Stations (HWS):** 84 disability-inclusive handwashing stations (total 422 units built including 84 units dedicated to persons with disabilities) have been installed and are operational in DC Office, 8 UNO Offices, 4 Municipalities, and 71 Union Parishad Offices.
- **COVID-19 Prevention Supplies:** 10 non-body contact thermometers; 15,850 pieces of masks; 20,250 pairs of gloves; 3400 bottles of Hexisol (250ml each); 28,125 soap bars; 3031 full sets of Personal Protective Equipment (PPE) for frontline CPP volunteers and 15 aprons have been distributed.

- **Volunteer Deployment:** 10 CPP volunteers deployed daily at DC Office, and 5 volunteers daily at each of the 8 UNO Offices to support local government COVID-19 response initiatives from April to October 2020.
- **COVID-19 Recovery Package:** DRM project provided COVID-19 recovery package to 3,000 most vulnerable households in Teknaf, Ukhiya, and Cox’s Sadar Upazila. The package includes cash for one month’s food basket (BDT 3500/household) and a hygiene package (in-kind) for personal and household hygiene. The hygiene package includes Bucket, Mug, Face Mask, Bleaching Powder, Wash Soap, Lifeboy/Dettol soap. This assistance is aimed at supporting the most vulnerable households to recover from the impact of lockdown and related income loss.



Photo 6: Hygiene kits distributed to 3000 families



“I had no income for the past four months as there is no work here. Now at least I can feed my children with this money.”

Pramita Barua, Cash for Food recipient, Ukhiya Upazila

Photo 7: Cash for Food assistance recipient at the distribution point, Ukhiya upazila

- **COVID-19 Awareness Materials:** 10,000 posters; 20,000 handwashing leaflets; 7,600 stickers disseminated; 84 billboards installed at handwashing stations; 568 miscellaneous visibility and communication materials distributed; Broadcasting of Radio Public Service Announcement (PSA) through Radio Naf 99.2 FM in Bangla and Rohingya language targeting people with visual impairment from June to September 2020.



Photo 8: CPP Volunteers helping Cox's Bazar Sadar UNO Office with COVID-19 prevention measures

- **Video Documentary:** The project produced a video documentary on the disability-inclusive COVID-19 response organized by the UNDP DRM project ([LINK](#)).
- **Webinar on COVID-19 Response and Lessons Learned:** On 14 October 2020, an online Seminar/Webinar on “COVID-19 Response and Lessons Learned in Cox's Bazar District” was held to share lessons learned by the organizations in Cox's Bazar responding to COVID19. A total of 73 participants (14 Female, 59 male) from the District Administration, Department of Disaster Management (DDM), UN agencies, Inter Sector Coordination Group (ISCG, International and National NGOs participated in the Webinar. This interactive discussion provided the organizations to discuss challenges, lessons and recommendations in addressing COVID19 pandemic. ([LINK](#)).

Output 3: Government duty-bearers, key humanitarian stakeholders, and first response agencies have the knowledge and skills needed to manage residual risk through risk-informed planning and first response

DRM project prioritized capacity development of Government and non-government DRR stakeholders working in Cox's Bazar with the aim to improve overall capacity and knowledge to reduce disaster risks and strengthen response preparedness. During 2019 and 2020, the project organized several targeted training programmes for the local government, camp administrative officials, and humanitarian stakeholders to be better informed about the different dimensions of disaster risk and vulnerability. The training included: risk-informed development training for local government officials; natural hazard training for Camp In Charge (CiC) support staff; capacity building workshop for ISCG staffs; training on flash flood and landslide risk and preparedness for frontline CPP volunteers; orientation on integrated weather forecasting for ISCG and humanitarian

stakeholders; and semi-virtual training on forecast interpretation for humanitarian stakeholders. All these trainings contributed to improve the knowledge and skills of government, humanitarian stakeholders to manage residual risks in the context.

UNDP also partnered with FSCD to support capacity development initiatives for first response agencies. A total of 20 participants from FSCD received training of trainers (ToT) on Land Slide search and rescue. The FSCD master trainers who received ToT on landslide search and rescue have conducted the same training for additional 50 FSCD, Ansar, and VDP volunteers.

Output 3/ Indicator 1:

Indicator	Baseline	Target	Progress value (October 2020)
% of GoB training participants demonstrating increase in understanding of risk information application at end of training	0	90%	92%
<p>Progress report on the indicator: UNDP conducted different training on risk information and disaster risk management topics. In these training sessions, 92% of participants demonstrated increase in understanding of the given training compared to the pre-test.</p> <p><i>(Please see the attached report on the beginning/end tests of training- Annex 3.6.1)</i></p>			

RESULT 6: LOCAL GOVERNMENT, CAMP ADMINISTRATING OFFICIALS AND HUMANITARIAN STAKEHOLDERS ARE BETTER INFORMED ABOUT THE DIMENSIONS OF DISASTER RISK AND VULNERABILITY IN THEIR AREA OF RESPONSIBILITY.

Result 6/ Indicator 6.1 and 6.2:

Indicator	Baseline	Target	Progress value (October 2020)
Indicator 6.1: Number of government duty-bearers trained in application of risk information and forecasting for planning purposes	0	100	149 (14 female, 135 male)
<p>Progress report on indicator: A total 149 government duty-bearers received training on the application of risk information and forecasting for planning purposes. Among 56 government staff (11 female, 45 male) received risk-informed development training, 71 CiC support staff (2 female, 69 male) received Natural Hazard Training and 22 government officials (1 female, 21 male) participated workshop on weather forecast, BMD services and applying forecast information.</p>			
Indicator 6.2: Number of participants at orientation sessions for humanitarian staff on seasonal and extreme weather and disaster risk in Cox’s Bazar	0	250	288 (86 female, 202 male)
<p>Progress report on indicator: A total 288 humanitarian staffs participated in the orientation sessions on seasonal and extreme weather and disaster risk in Cox’s Bazar. Among 20 ISCG staff (6 female, 14 male) participated workshop on use of weather and climate information in Rohingya crisis, 208 CPP volunteers (69 female, 139 male) received training on flash flood and landslide risk and preparedness, 30 humanitarian officials (6 female, 24 male) received virtual orientation on integrated weather forecasting, and 30 humanitarian workers (5 female, 25 male) participated Semi-Virtual Training on Forecast Interpretation.</p>			

Natural Hazard Training for CiC support staff: UNDP in collaboration with UNHCR and IOM completed 3 batches of joint capacity building training on Natural Hazard DRR for 71 Camp-in-Charge (CiC) support staffs. This particular training was designed and developed by the UNDP led NatHaz Technical Working Group with the support of Site Management Sector and ISCG to ensure that Camp-in-Charge support staff in the Rohingya camps are familiar with key concepts of disaster risk management, understand the major hazards and risk drivers in the camp setting, and know where to find and use ISCG hazard maps., UNDP with the NatHaz TWG conducted training needs assessment in August 2019 and developed the natural hazards training curriculum in September 2019. By January 2020, UNDP in collaboration with UNHCR and IOM completed 3 batches of 3-day training for 71 CiC support staff. Same training has been requested by ISCG/SMSD sector for 2021 targeting the new CiCs that have joined recently.

Risk-informed development training for government staff: UNDP hired a consultant and developed the risk-informed development training module in May 2020. This module covers diverse topics related risk-informed development, including key DRR concepts, national and global DRR policy frameworks, risk-

informed development concept and how it applies to development planning, critical risk products and how to read and use these products, risk assessment and DRR mainstreaming into different development sectors. Two batches of training were held for Teknaf and Moheshkhali Upazila Disaster Management Committee (UzDMC) on 19 September 2020 at Training Auditorium of Upazila Parishad, Teknaf



Photo 9: Training on Disaster Risk-Informed Development Planning at Ukhia Upazila

and on 31 October 2020 in Moheshkhali. A total of 56 (11 female, 45 male) UzDMC members benefited from the training. This training has enabled UzDMC members to integrated risk reduction in the local development planning process.

Capacity building workshop jointly with Bangladesh Meteorological Department for government and humanitarians: UNDP organized a capacity building workshop jointly with BMD on 9th October 2019. Its aim was to enhance the understanding of the District DMC members, humanitarian stakeholders, and DRR practitioners in Cox’s Bazar on the Bangladesh Meteorological Department (BMD) weather forecasting capacities and the weather information products. The orientation was designed and facilitated by the BMD. A total of 22 government and humanitarian staff participated in the orientation, which increased their understanding of how to use and apply existing

risk and forecast information for planning and their understanding of how to use and apply existing risk and forecast information for planning and response.

Learning opportunities and materials: UNDP in collaboration with the NatHaz Working Group, the COMPASS project, and the partner RIMES developed several DRM awareness materials and learning opportunities, including key DRM terminologies, landslide definition, and classification, use of risk and forecast information, briefing note on depressions and cyclone, rainfall lessons learned note, cyclone, and seasonal forecasts in the context of Cox's Bazar. Until now, a total of 335 government and humanitarian workers (71 CiC support staff, 208 CPP volunteers, and 56 government staff) received these DRM materials with an orientation session.

Joint capacity building workshop with NASA and Columbia University COMPASS project for humanitarians: UNDP jointly with NASA and Columbia University COMPASS project organized capacity building workshop on the 'Use of Weather and Climate Information in the Rohingya Response: Lessons from the July 2019 Rains' in August 2019, followed by a field visit. A total of 20 ISCG and humanitarian staffs involved in Rohingya response participated in this orientation. The workshop report was shared with all the stakeholders and made available on the UNDP and other websites.

Training of volunteers recognizing flash flood and landslide risk and taking action for preparedness:

UNDP hired a consultant to develop training module and conducted training on recognizing flash flood and landslide risk and taking action for preparedness. From 25th August to 2nd September UNDP in collaboration with Cox's Bazar District Administration, organized 8 batches of training. The aim was to orient and educate CPP volunteers on the preparedness for flash flood and rainfall-induced landslides in the Upzilla and Unions of Cox's Bazar District. A total of 208 CPP volunteers received the training.



Photo 10: CPP Volunteers training on Landslide and Flash Flood Risk and Preparedness Workshop

RESULT 7: LOCAL FIRST RESPONSE AGENCIES KNOW HOW TO SAFELY CONDUCT SEARCH AND RESCUE OPERATIONS IN HILL TERRAIN

Indicator 7.1

Indicator	Baseline	Target	Progress value (October 2020)
Number of GoB first response agency staff trained on landslide search and rescue	0	80	70 (14 female, 56 male)
Progress report on indicator: A total number of 70 GoB first response agency staff from FSCD, Ansar, and VDP were trained on landslide search and rescue. Due to maintaining social distancing in the COVID-19 situation, only 70 participants could be reached with the training compared to the target 80.			

Capacity Building on Landslide Search and Rescue: First response agencies carry search and rescue operations during any disaster situation for saving lives and disaster impacts. In the Rohingya context, landslides remain a major hazard and hence such a practical training on search and rescue is necessary. UNDP signed a letter of agreement with Fire Service and Civil Defense (FSCD) in January 2020 to support capacity development initiatives for first response agencies including FSCD, Ansar, and VDP. The FSCD curriculum on landslide search and rescue was updated and the FSCD conducted five-day training of trainers (ToT) for the 20 participants. The FSCD master trainers who received ToT on landslide search and rescue conducted the same training for additional 50 FSCD, Ansar, and VDP staff (3 day training) during 19-24 September 2020. The training has equipped FSCD, Ansar and VDP staff with flash flood and landslide search and rescue operations skills to assist their respective communities as per the Standing Orders on Disaster.

Training	Date	Participants
Risk-informed development training for government staff in Teknaf	19 September 2020	24 (6 female, 18 male)
Risk-informed development training for government staff in Moheshkhali	31 October 2020	32 (5 female, 27 male)
Training of volunteers recognizing flash flood and landslide risk and taking action for preparedness	25 August to 02 September 2020	208 (69 female, 139 male)
Training of trainers (ToT) for FSCD members	23-27 August, 2020	20 (0 female, 20 male)
Training on landslide search and rescue for FSCD, Ansar, and VDP	19-24 September 2020	50 (14 female, 36 male)



Photo 3: Training on landslide search and rescue for FSCD, Ansar, and VDP

Mainstreaming Gender Equality and Empowerment of Women

The project at the inception stage developed Gender Action Plan ensuring gender issues are effectively identified and addressed across the project activities. Some of the highlights of the gender mainstreaming efforts are reflected below.

- Result 1,2,3: Gender sensitive simulation exercise, debriefing sessions, and visual materials developed and implemented.
- Result 2,3: Cyclone and Monsoon lessons learned stakeholder workshop incorporate gender concerns in the learning.
- Result 4: Cash for work schemes under the DRR mitigation project in the Rohingya camps prioritized women beneficiaries.
- Result 5: Separate handwashing stations for men and women have been installed at DC Office, 8 UNO Offices, 71 unions and 4 municipalities in Cox's Bazar district.
- Result 5: Women headed poor households were prioritized for COVID-19 hygiene and cash for food assistance. Guidance on process and beneficiary selection provided to partner NGOs for COVID19 recovery package ([LINK](#)).
- Result 5: Lessons on gender based violence was also shared during the COVID19 lessons learned workshop in Cox's Bazar.
- Result 6, 7: All training modules incorporated gender issues in the design and implementation of the training programme. Despite these efforts, challenges remain in ensuring gender parity in the training participation due to disparity in the baseline (existing number of female officials vs male).

Challenges encountered during Project implementation and actions taken

Initial launch and subsequent implementation of the project was slowed down due to the several unfolding critical events i.e. political context, cyclone Fan (April 2019) and cyclone Bulbul (November 2019), heavy monsoon rain from July to September 2019, and local inter-communal violence. However, with stabilization of the situation in the camps and host communities, project implementation stepped up with rapid contracting of NGOs, consultants/experts, and formalizing partnerships with organizations.

By end of March 2020, with the onset of COVID-19 pandemic, the Government of Bangladesh declared lockdown and restriction of movements and gathering to prevent the spread of the deadly COVID-19. The COVID-19 pandemic and subsequent lockdown imposed by the Government stalled all field level activities other than the critical COVID-19 response activities supported by the local government. The project footprint in the field was reduced for both DRM project staff as well as the partner NGOs contracted to implement the activities. The DRM team has conducted needs and impact assessment and reprogrammed the selected project activities into COVID-19 response in consultation with the donors (SDC and ECHO). The team also secured no-cost project extension from the donors from June to Oct 2020 which enabled the Project team to complete all the planned activities.

The project maintained and followed the UNDSS security protocols and advisories during the implementation of the activities in Cox's Bazar District and all field activities, in particular Teknaf, during the various security incidents and political unrest. The team has also monitored severe weather alerts and early warning for cyclone and monsoon that occurred in 2019 and 2020. COVID19 protocol released by UN was fully adhered ensuring safety and security of DRM staff.

Lessons Learned

Lessons have been learned during implementation of the project. Some of the key lessons are presented below.

- **Strong partnership with Government institutions** (DC Office, UNO Offices, DMCs, BMD, GSB) resulted in successful implementation, Government ownership and institutionalization of the project interventions. This also enabled rapid delivery of handwashing stations across all 8 upazila, 71 unions and 4 municipalities. However, all elements of sustainability to be agreed and budget should be allocated for operational continuity [[HWS lessons learned LINK](#)].
- **Project partnership with BMD** had multiple benefits – besides access to localized weather forecasting, past weather data for better preparedness, it provided a platform for all humanitarian stakeholders particularly ISCG to interact with BMD and RIMES officials and understand BMD's existing capacities and services.

- **COVID-19** provided challenges as well as opportunities (addressed needs of most affected communities; strengthened partnerships with DC office and UNO offices; demonstrated rapid delivery capacity).
- **Lockdown and movement restriction** was a significant impediment for delivery and monitoring of COVID-19 response actions in the field. There is need to explore use of appropriate technology to address this in future.
- **Engaging respective Union Parishad** during distribution facilitated smooth distribution of cash and hygiene materials. UP officials helped to verify beneficiaries when there was an issue. UP support was also valuable in managing the crowd and disseminating safety information.
- **Deployment of CPP volunteers** to support District Administration and UNO offices was found to be most effective for COVID-19 prevention. The CPP volunteers were also utilized for monsoon early warning.
- DRM Project prioritized **disability inclusion** in its COVID-19 response and recovery activities (posters, radio programme, handwashing facilities, cash assistance etc). Close partnership was developed with Age and Disability Working Group and WHO for COVID-19 awareness programme. The disability inclusion provided high visibility of Project activities among the local authorities and donors and much appreciated by the target beneficiaries. (Case Study [LINK](#))



“I have just washed my hand here and I am very excited to see this facility. Nowhere except this place I have found such opportunity for people like me.”

Shamsul Alam,
Rajapalong Union,
Cox’s Bazar district

Photo 4: Disability inclusive Handwashing Station at Ukhia UNO Office

- Embedded staff within the DC office and UNO office in Teknaf and Ukhia provided a good entry point for DRM project to advance its project objectives. Moving forward, TOR to be adjusted to reflect emerging priorities and further enhance effectiveness of this DRM team outreach in key Government Offices.

Conclusion

During the past two years, DRM Project has gained confidence of the DRR stakeholders, ISCG and Government authorities who continue to draw on DRM team's advisory services on DRR issues in the host communities and refugee camps. A shift in understanding and approach to DRR has been noted. While DRM project has continued to support ISCG to incorporate DRR as a crosscutting theme in the Joint Response Plan (JRP) 2019 and 2020, this has been further stepped up in 2020 with disaster risk management being recognized by ISCG as an important thematic area within the Rohingya crisis response. Joint Response Plan 2021 includes a separate section on DRM to guide the humanitarian stakeholders in designing and implementing DRM projects in the camps and host communities. The ISCG has also prioritized development of a comprehensive DRM framework with measurable indicators during 2021 to guide all DRR stakeholders in Cox's Bazar. The DRM project has been closely involved and has assisted ISCG in advancing DRR within the realm of the Rohingya crisis response and facilitating coherent DRR efforts among the stakeholders working within the camps and in the host communities.

UNDP's strong partnership with District Authorities, Local Government and DRR institutions enabled DRM Project to successfully achieve its planned results. Some of the high impact interventions of the project include: i) DRR technical advisory to the Government, DRR institutions and ISCG sectors resulting in improved preparedness; ii) Government and non-government stakeholder joint learning and knowledge exchange opportunities which improved Government-humanitarian coordination resulting in a more effective disaster risk management; iii) Advocacy and inclusion of persons with disabilities in DRR interventions and collaboration with Age and Disability Working Group; iv) Improved coordination, harmonization of efforts and information sharing by DRR stakeholders in the host communities. These efforts such as - DRR Stakeholder coordination platform, partnership with Government institutions; are being utilized by ISCG sectors and humanitarian community in expanding and enhancing humanitarian-development nexus and reflected in the Joint Response Plan 2021. As the current phase of DRM project comes to an end, there is opportunity to advance further some of the good practices and results to ensure continuity of the investments made so far, long-term capacity development of DRR institutions and that most vulnerable communities are adequately supported.

Another potential opportunity for next phase of DRM project includes DRR technical support to the District Development Planning (DDP) process with risk and vulnerability analysis and prioritization of DRR projects and investments. Interestingly, disaster risk management is as one of the top three community-identified priorities as per the Phase I DDP community consultations - Priority 1 being Communications and Road; Priority 2 Disaster Management; and Priority 3 Health (Ref. District Development Plan for Cox's Bazar, Phase I Executive Summary Report). The recently completed 15 Community Risk Assessment (CRAs) and Risk Reduction Action Plans (RRAPs) undertaken in Teknaf, Ukhia, Maheskhali, Kutubdia and Pekua upazila under the current DRM project funded by SDC and

ECHO will serve as useful basis for the DDP-DRR project prioritization and investment plan. These CRAs could be also expanded to cover other vulnerable Unions and municipalities under the next phase of DRM project.

The Natural Hazard Technical Working Group co-chaired by UNDP and REACH served as a key technical forum to advise on hazard and extreme weather/disaster risk to harmonize the information analysis to come up with a common consensus. Consisting of GIS and natural hazard and disaster risk reduction technical specialists, the NatHazTWG supported data management, joint analysis and knowledge sharing, minimise duplication of work in the humanitarian response and contributed to higher quality analyses. Considering the benefits from the NatHaz TWG and need to continue the services, ISCG has extended the timeframe of this TWG for another year. Moving forward, in 2021 and beyond, there is critical need to expand these NatHaz services to also cover rest of Cox's Bazar district.

Financial Status

A summary of the Project financial delivery is provided below. Please refer Annex 2 for further information on result-wise budget and expenditures.

Result Area	Allocated Budget (USD)	Expenditure (USD)
Risk Assessment and Analysis	235,532	242,613.6
Community Based Disaster Risk Reduction and COVID19 Response	673,940	678,496.7
Capacity Development for Residual Risk Management	72,000	76,448.8
Communications and Reporting	17,800	11,735.3
Project Management and Operations	141,919.8	148,281.7
GMS (8%)	89,696	73,310.4
TOTAL (USD)	1,230,887.6	1,230,886.5
TOTAL (CHF)	1,211,000	1,210,999

Annex

Annex 1: Communications Report

Annex 2: Financial Report

Other supporting documents and photographs are available here

<https://www.dropbox.com/sh/z5bw1m7nupfncni/AACYNH0cqhiHJ86OLqD25lds?dl=0>