



ঘূর্ণিঝড় প্রস্তুতি কর্মসূচি (সিপিপি)

CYCLONE PREPAREDNESS PROGRAMME (CPP)

গণপ্রজাতন্ত্রী বাংলাদেশ সরকার ও বাংলাদেশ রেড ক্রিসেন্ট সোসাইটি-এর যৌথ কর্মসূচি
A Joint Programme of Government of Bangladesh and Bangladesh Red Crescent Society



Extreme Weather and Disaster Preparedness
in Cox's Bazar Humanitarian Response

Cyclone Preparedness Lessons Learnt 2019 and 2020



Enhancing disaster preparedness for effective response



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This report is a joint product of Bangladesh Red Crescent Society, American Red Cross, International Federation of Red Cross and Red Crescent Societies and United Nations Development Programme.

The findings, interpretations, lessons learnt, and conclusions expressed in this publication do not necessarily reflect the views of the boards of Bangladesh Red Crescent Society, International Federation of Red Cross and Red Crescent Societies, American Red Cross or United Nations Development Programme. The narrative of the report is based on review of documents and reflections of interviewed government and non-governmental disaster management stakeholders involved in the Cox's Bazar humanitarian response.

In reference to the Rohingya in Bangladesh, the Government of Bangladesh refers to the Rohingya as "Forcibly Displaced Myanmar Nationals". The UN system refers to this population as Rohingya refugees, in line with the applicable international framework. The Red Cross and Red Crescent Movement uses the term 'displaced person from Rakhine' or 'people from Rakhine' in referring to the Rohingya in Bangladesh, as an element in maintaining Red Cross and Red Crescent (RCRC) Movement operational access to provide vital humanitarian assistance to those in need on either side of the border.

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Cover Photo: CPP camp volunteers are performing a cyclone early warning drill in camp settlement. (Photo credit: United Nations Office for Disaster Risk Reduction-UNDRR)

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ACRONYMS

AFD	Armed Forces Division
BMD	Bangladesh Meteorological Department
BDRCS	Bangladesh Red Crescent Society
COVID-19	Coronavirus Disease 2019
CPP	Cyclone Preparedness Programme
CWC	Communication with Communities
DC	Deputy Commissioner
DDMC	District Disaster Management Committee
DMC	Disaster Management Committee
DRR	Disaster Risk Reduction
EOC	Emergency Operation Centre/Emergency Control Room
EPWG	ISCG Emergency Preparedness Working Group (active 2019)
EPRWG	ISCG Emergency Preparedness Response Working Group (active 2020)
ETS	Emergency Telecommunications Sector
HOSOG	Heads of Sub-Office Group
IEC	Information, Education and Communication
IFRC	International Federation of Red Cross and Red Crescent Societies
IOM	International Organization for Migration
ISCG	Inter-Sectoral Working Group
JRP	Joint Response Plan
KAP	Knowledge Attitude Practice
MoDMR	Ministry of Disaster Management and Relief
NGO	Non-Governmental Organization
RCRC	Red Cross and Red Crescent
RRRC	Refugee Relief and Repatriation Commissioner
SMS	Site Management Support
SMSD	Site Management and Site Development
SOD	Standing Orders on Disaster
SOP	Standard Operating Procedure
UN	United Nations
UNDP	United Nations Development Programme
UNICEF	United Nations Children's Fund
UNO	Upazila Nirbahi Officer
UNHCR	United Nations High Commissioner for Refugees
UN WOMEN	United Nations Entity for Gender Equality and the Empowerment of Women
VHF	Very High Frequency
WASH	Water, Sanitation and Hygiene



INTRODUCTION

The influx of Rohingya refugees into Cox's Bazar, Bangladesh, triggered by violence in the Rakhine in August 2017, has been recognized as uniquely rapid, large, and resulting in some of the largest, most disaster-vulnerable refugee camps in the world.

One of the most disaster-prone countries in the world, Bangladesh each year experiences a high degree of seasonal variety, including the southwest monsoon and two cyclone seasons. 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 particularly exposed to the impacts of depressions and tropical cyclones. This prompted the Cyclone Preparedness Programme (CPP) - a joint early warning initiative of Ministry of Disaster Management and Relief (MoDMR) of the Government of Bangladesh and Bangladesh Red Crescent Society (BDRCS) - to expand its operations into the Rohingya refugee camps from 2018 with Red Cross Red Crescent Movement, UN, and NGO support.

Although no cyclone has made landfall on the south-eastern coast of Bangladesh since the influx of the Rohingya, several large depressions and tropical cyclones have formed and made landfall in the Bay of Bengal and made landfall in India and south-west Bangladesh. While the cyclones made landfall towards the west of the Bay and their centres (area of the storm with highest impact) stayed away from the Chattogram coast, the CPP and its stakeholders have learned a number of lessons from cyclone events and collaboration in 2019 and the first half of 2020.

The present Cyclone Early Warning and Preparedness Lessons Learnt report aims to capture and analyse knowledge acquired by the stakeholders in the CPP expansion in the Rohingya refugee camps during 2019 and the first half of 2020. The report has been produced jointly by Bangladesh Red Crescent Society (BDRCS), the International Federation of Red Cross and Red Crescent Societies (IFRC), American Red Cross and UNDP. It follows up on the report "Cyclone Preparedness Lessons Learnt 2018", which was conducted by the same partners and UNDP. It is based on document review, participatory observation, discussions, and interviews with the ISCG secretariat, sector coordinators and their teams, government officials, and staff from UN agencies, Red Cross and Red Crescent Societies, and NGOs.

Recommendations to the CPP stakeholders are presented at the end of the report, and have been organized by the four elements of efficient, people-centred early warning:

1. Disaster risk knowledge based on the systematic collection of data and disaster risk assessments.
2. Detection, monitoring, analysis and forecasting of the hazards and possible consequences.
3. Dissemination and communication, by an official source, of authoritative, timely, accurate and actionable warnings and associated information on likelihood and impact.
4. Preparedness at all levels to respond to the warnings received.

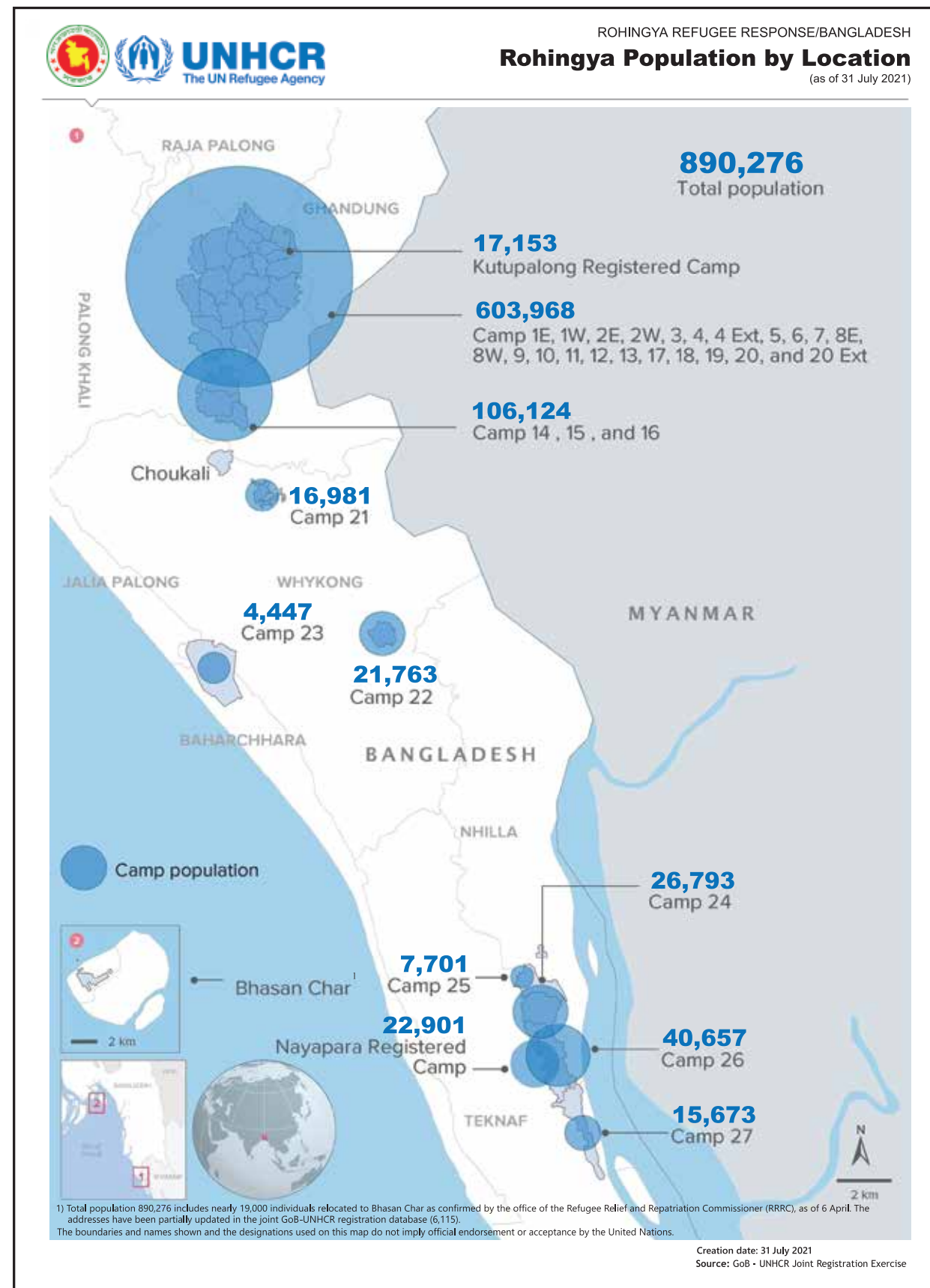


Figure 1: Cox's Bazar refugee population (GoB UNHCR Population map, July 2021)



METHODOLOGY

Scope of the Lessons Learnt Exercise

The report primarily covers lessons learnt from the expansion and capacity enhancement of the Cyclone Preparedness Programme in the Rohingya camps and host communities, as well as other Red Cross and Red Crescent Movement involvements in the broader ISCG-led cyclone preparedness efforts. It covers the period January 2019 to June 2020, with a focus on cyclone-related activities but drawing on monsoon and pandemic-related experiences so far as well.

The exercise has not delved in-depth in the lessons learnt by the ISCG sectors, nor into the disaster management lessons learnt in the wider district in this period. Interested readers are kindly directed to the ISCG after action reviews for Cyclones Fani, Bulbul, and Amphan, as well as the UNDP lessons learnt reports on use of climate and risk information in the humanitarian response (2019), the 2019 Teknaf rains and district disaster management lessons learnt.

Approach

The 2019/2020 lessons learnt exercise has been conducted primarily for the purpose of identifying lessons learnt and actionable recommendations for the CPP stakeholders in Cox's Bazar: secondarily, for the purpose of documenting learning of value to actors working on early warning and disaster preparedness in other refugee and displacement contexts.

The exercise builds on the findings of previous lessons learnt exercises and extensive document review including government documents, humanitarian after action reviews, and RCRC Movement documentation. The written primary and secondary sources reviewed during this exercise are listed below and referenced where appropriate throughout the document.

In addition to document review, a total of 23 RCRC Movement, UN, I/NGO, and Government official key informants were interviewed between June and August 2020 – see Appendices 2-4. The purpose of these interviews was to check the continued relevance of the desk review findings, and triangulate data for analysis. Due to the ongoing Coronavirus Disease 2019 (COVID-19), it was not possible to conduct interviews or group discussions with refugees or members of the host communities for the exercise.

NB on terminology: in this report, “household shelter” denotes the refugees’ own camp domiciles (humanitarian meaning of shelter); “cyclone shelter” denotes robust, public facilities where the public can safely stay during a cyclone (DRR meaning of shelter).

1. Government of Bangladesh District Disaster Management Plan for Cox's Bazar (2019)	Available from the Office of the District Relief and Rehabilitation Officer, Cox's Bazar
2. Government of Bangladesh Upazila Disaster Management Plan for Ukhiya (2019)	Available from the Office of the Upazila Nirbahi Officer, Ukhiya
3. Government of Bangladesh Upazila Disaster Management Plan for Teknaf (2019)	Available from the Office of the Upazila Nirbahi Officer, Teknaf
4. CPP guidance on Cyclone preparedness messages on early warning & flags for camps	Available on Shongjog
5. CPP presentation Cyclone Preparedness Campaign – Host and Camp Settlements 2019	Disseminated to CwC Working Group members via e-mail in 2019.
6. BDRCS, CPP, American Red Cross and Translators without Borders. CPP -Early Warning communication. Update, lessons learned and next steps.	Presented to EPWG members August 5 th 2018, disseminated to EPWG members August 8 th 2018.
7. ISCG Emergency Preparedness Working Group/ Emergency Preparedness and Response Working Group (EPWG/EPRWG) agendas and minutes for 2019-2020	Disseminated to EPWG/EPRWG members via e-mail in 2019 and 2020
8. All 2019 and 2020 published editions of the ISCG Monsoon Response Plan	Disseminated to EPWG/EPRWG members via e-mail in 2019 and 2020, most recent edition available on HR.info
9. ISCG Cyclone Response Plan (November 2018)	Disseminated to EPWG members via e-mail in 2019
10. ISCG 72 Hour Response Plan (May 2019)	Available on HR.info
11. ISCG Cyclone Fani Lessons Learnt Report May 2019	Disseminated to EPWG members via e-mail in 2019
12. ISCG Cyclone Bulbul After Action Review December 2019	Disseminated to EPWG members via e-mail in 2019
13. ISCG Cyclone Amphan After Action Review June 2020	Disseminated to EPWRG members via e-mail in 2020
14. ISCG EPWG Teknaf SIMEX Debrief	Disseminated to EPWG members via e-mail in 2019
15. ISCG EPWG Simulation Exercise – 25 September – KBE – Debriefing	Disseminated to EPWG members via e-mail in 2019
16. ISCG COVID updates	https://www.humanitarianresponse.info/en/operations/bangladesh
17. ISCG Joint Response Plan 2019	Available on HR.info
18. ISCG Joint Response Plan Mid-Term Review 2019	Available on HR.info

19. ISCG Joint Response Plan 2020	Available on HR.info
20. ISCG 2020 COVID-19 Response Plan – Addendum to Joint Response Plan 2020	https://www.humanitarianresponse.info/sites/www.humanitarianresponse.info/files/documents/files/covid-19_addendum_rohingya_refugee_response_020720_2.pdf
21. SMSD Sector's debrief with Camp Managers on Cyclone Bulbul preparedness	Disseminated to EPWG members via e-mail in 2019
22. CwC Working Group Communication Strategy for Cyclone Preparedness May 2020	Available on HR.info
23. CwC Working Group Debriefing and Evaluation Workshop on Cyclone Preparedness Campaign 30 May 2019 Final Report	https://fscluster.org/sites/default/files/documents/final_report_cwc_debriefing_and_evaluation_workshop_on_cyclone_preparedn.pdf
24. Workshop Report, Cyclone Preparedness Stakeholder Workshop March 2019	Available on HR.info
25. Workshop Report, Cyclone Preparedness Stakeholder Workshop Sept 2019	Available from BDRCS, CPP, American Red Cross, IFRC and UNDP.
26. ACAPS-NPM Analysis Hub's Thematic Report: IMPACT OF THE MONSOON & COVID-19 CONTAINMENT MEASURES.	Available on HR.info
27. BDRCS, CPP, American Red Cross, IFRC and UNDP Cyclone Preparedness Lessons Learnt report 2018	Available on Reliefweb
28. BDRCS, CPP, American Red Cross, IFRC, Translators without Borders, IOM, UNHCR, UNDP - Voices from the Vulnerable Communities: Disaster Risk Management KAP Survey.	October 2020. Available from BDRCS, CPP, American Red Cross, IFRC and UNDP.
29. IOM NPM SMSD DAILY INCIDENT REPORT Survey Analysis: April-November 2019	Available on HR.info
30. IOM NPM SMSD Site Management Category 1 Incident Assessment and Reporting Survey Analysis: May-November 2018	Available on HR.info
31. UNDP Monsoon Lessons Learnt report 2018	Available on Reliefweb
32. UNDP September 2019 Teknaf rains: Lessons Learnt	Available on HR.info
33. UNDP Disaster Management in Cox's Bazar Lessons Learnt Report	Available from UNDP and Cox's Bazar District Administration.
34. BDRCS, CPP, IFRC & American Red Cross documents related to cyclone early warning incidents 2019-2020	Shared by the BDRCS, CPP, IFRC & American Red Cross.



BACKGROUND AND RISK CONTEXT

Due to persecution and violence in Myanmar's Rakhine state, over 700,000 Rohingya sought shelter in Cox's Bazar, Bangladesh in the months following 25th August, 2017. Three years later, 860,000 refugees still reside in camps in the south of Cox's Bazar district. While providing protection to these refugees, the scale of the crisis is such that Bangladesh cannot be expected to singlehandedly meet the most acute needs of these people.

Coordination of international support to the Government of Bangladesh-led response is managed by a UNHCR-appointed Senior Coordinator. The Senior Coordinator chairs the Inter-Sector Coordination Group (ISCG), with operational partners coordinated under thematic sectors co-chaired by designated UN agencies and NGOs. An inter-agency secretariat supports the Senior Coordinator and the coordination structure. Humanitarian assistance from the IFRC and the Red Cross and Red Crescent Partner National Societies is organised under the BDRCS-led Population Movement Operation, while the ICRC works with BDRCS within its specialised mandate. RCRC Movement engagement in the refugee camps includes health, shelter/NFI, food security, DRR, and water and sanitation (WASH) activities. RCRC partners therefore engage in the relevant ISCG sectors, in addition to implementing activities in the host community.

Ranked as the thirteen most at-risk country from disasters in the 2020 World Risk Index¹, managing disasters risk has been a major area of focus for the Government of Bangladesh since independence. Weather in the Bay of Bengal creates conditions conducive to the formation of depressions and cyclonic storms between April and July, and September and December every year. The mass fatalities associated with 1970 and 1991 cyclones, as well as the recurrent large-scale monsoon flooding of the Ganges delta system criss-crossing central and northern Bangladesh, are globally known. Investments in disaster risk reduction – including early warning, awareness raising, construction of coastal embankment and cyclone shelters, and public health management of post-event diarrhoea – have decreased disaster mortality in the past four decades by a hundredfold in the time period from the 1970s to 2010.

Cox's Bazar district is in Chattogram division, a particularly disaster-prone area of Bangladesh. The district is highly exposed not only to the high winds and storm surges of cyclonic storms making landfall on the Chattogram coast, but also to the monsoon rains, summer storms and bad weather caused by depressions in the Bay. On 30th July, 2015, Tropical Storm Komen came ashore at Chattogram with heavy rains and winds up to 90 km/hr, leading to 7 deaths in Bangladesh². On 21st May, 2016, Tropical Storm Roanu crossed the coast near Chattogram with 100 km/hr winds. 27 people died, mainly by drowning as the storm surge over-topped embankments³. On 30th May, 2017, Cyclone Mora made landfall in Chattogram, affecting four districts including Cox's Bazar.

¹ <https://reliefweb.int/sites/reliefweb.int/files/resources/WorldRiskReport-2020.pdf>

² See <https://reliefweb.int/sites/reliefweb.int/files/resources/MDRBD015dref.pdf>

³ See <https://reliefweb.int/report/bangladesh/bangladesh-cyclone-roanu-humanitarian-coordination-task-team-hcct-situation-report>

⁴ See <https://reliefweb.int/report/bangladesh/bangladesh-tropical-cyclone-mora-information-bulletin-no-1>

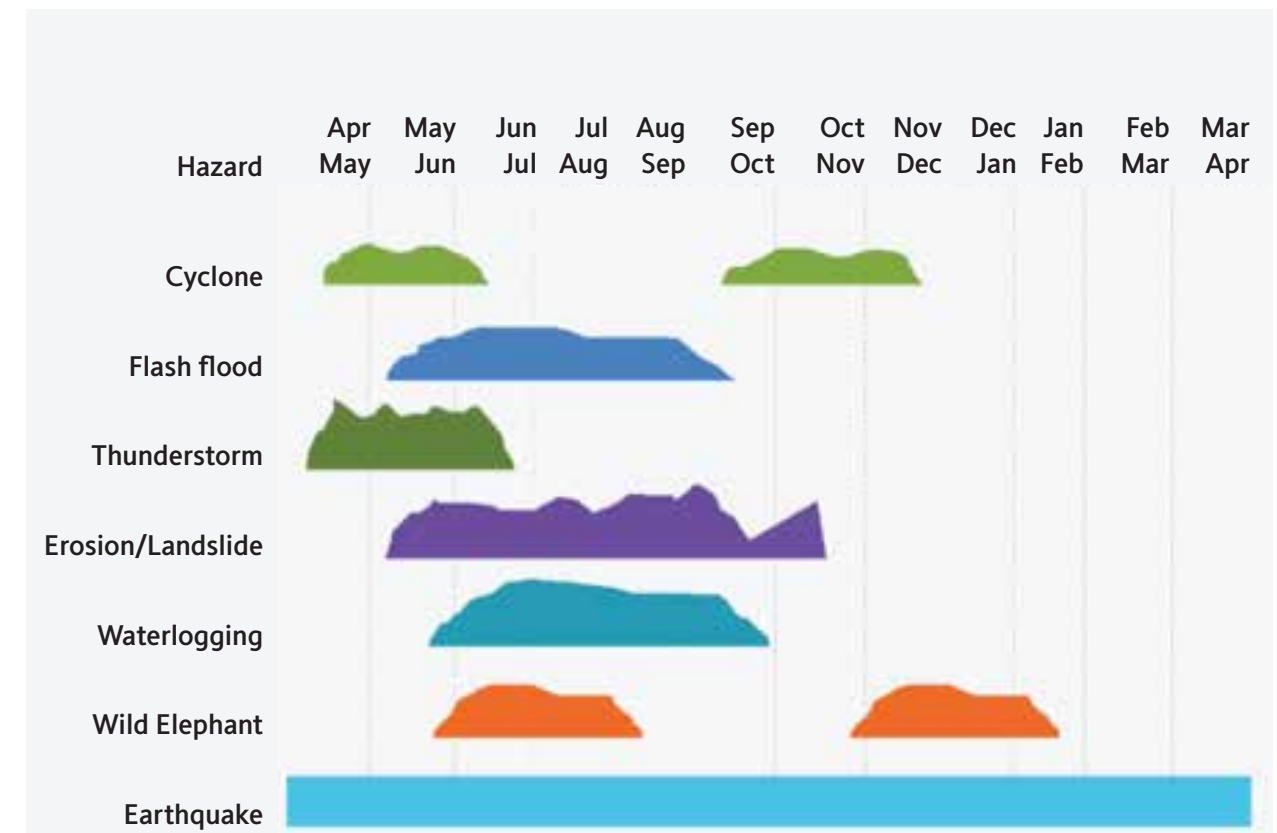


Figure 2: Cox's Bazar hazard calendar (Cox's Bazar Disaster Management Plan, 2014)

Historically, cyclone mortality in Bangladesh has primarily been caused by storm surges – seawater inundating the shore and coastal areas due to storm winds, wave fetch and pressure drop. Most, but not all, of the Rohingya refugee camps are located inland, shielded from the shoreline by hills up to 100 meter above sea level. While the Kutupalong camps in Ukhiya upazila (sub-district) are not exposed to storm surge or inundation risk, most of the camps in Teknaf upazila are separated from the eastern river Naf only by a narrow coastal plain and embankments along the river. Damage or overflow of these embankments may cause flooding of the eastern Teknaf camps, as happened in September 2019, when nearly 6,000 families were affected by flooding. Camp 23, on the western coast of the Teknaf peninsula, is at direct risk of storm surge.

Cyclones are also associated with sustained winds ranging from 62 to over 200 km/hr. While wind intensity generally decreases upon landfall, even minor cyclones such as Mora have been known to cause damage and fatalities in areas located further inland than the refugee camps. The 34 refugee camps and surrounding areas suffered extensive deforestation in 2017 and 2018. While reforestation has commenced, these trees are still small. In the absence of large trees, camps are more exposed to the strong wind. While the risk related to falling or flying tree branches is reduced, the bamboo and plastic building stock in the camp is fragile. The Nor'wester storms that occur before and during the summer cyclone season often cause significant damage to camp dwellings and community facilities. Together with the high population density, the fragility of the built environment in the camps generates a higher risk of injury and death due to shelter collapse or flying debris, compared to other coastal towns.

Unlike most of Bangladesh, Cox's Bazar is hilly and due to hill-cutting and deforestation, the camp areas are vulnerable to soil erosion, landslides, and flash floods when it rains. Heavy rainfall impacts in the camps include disruption of road access and navigability, shelter and asset loss, and additional barriers for refugees to access services and distribution points. Similar impacts can be anticipated in the case of a depression or cyclonic storm making landfall on the Chattogram coast.



ABOUT THE CYCLONE PREPAREDNESS PROGRAMME

Following the cyclone of 1970, which killed an estimated 1 million people, the Cyclone Preparedness Programme (CPP) was established as a joint initiative of Ministry of Disaster Management and Relief (MoDMR) of the Government of Bangladesh and Bangladesh Red Crescent Society (BDRCS), with the support of IFRC and approved by then Prime Minister Honourable Sheikh Mujibur Rahman. Covering 13 coastal districts with a network of over 76,000 community volunteers, the CPP is one of the largest preparedness programs in the world. Presently organized in units of 20 people, CPP volunteers provide cyclone early warning so that coastal communities can take early action to reduce loss of lives and property. As detailed in the Standing Orders on Disaster (SOD), which outlines the responsibilities and activities of official disaster management duty-bearers, the mandate of the CPP is:

1. Cyclone early warning,
2. Emergency management of 4,000+ Department of Disaster Management evacuation centres (based on situation, the number of evacuation centres increase to accommodate evacuees),
3. Search and rescue and first aid,
4. Coordination with government agencies at all levels,
5. Continued training of CPP volunteers and expansion, and
6. Conducting cyclone awareness activities through “mock drill” exercises in communities.

Bangladesh Meteorological Department (BMD) is responsible for issuing early warnings, which are disseminated by the CPP control room to its zonal offices in the coastal districts. These send alerts to CPP team leaders through CPP upazila offices. Team leaders are then responsible for mobilizing the volunteers to disseminate standardized messages and take early action with their communities to protect lives and assets. Throughout the coastal belt of Bangladesh, the CPP radio communications system helps cascade the early warning messages down through this structure to the community level, where warning flags are raised, and warning messages and advice are disseminated by mouth and microphone.

At the request of the Ministry of Disaster Management and Relief, the CPP began its expansion into the Rohingya refugee camps in February 2018. Thanks to the collaboration among UN agencies, NGOs who provide Site Management Support (SMS), and the office of the Refugee Relief and Repatriation Commissioner (RRRC), the CPP currently covers all 34 camps with 3,400 Rohingya camp volunteers organized in 20-person units. The CPP camp volunteers are trained on basic disaster management and preparedness including early warning and first aid and receive additional emergency response training from the SMS agency and other actors working in their camp. When early warning signals are issued by the BMD, the zonal officer sends the alert not only to the CPP units in the host community, but also to 8 CPP camp supervisors. The CPP camp supervisors pass on the message to 170 CPP camp unit leaders via the 34 camp focal points, triggering warning dissemination in the camps, including flag-raising when appropriate. The messages used in the camps have been adapted for the camp context from the national standard - please see next page for an overview of warning levels in the camps and the rest of Bangladesh.

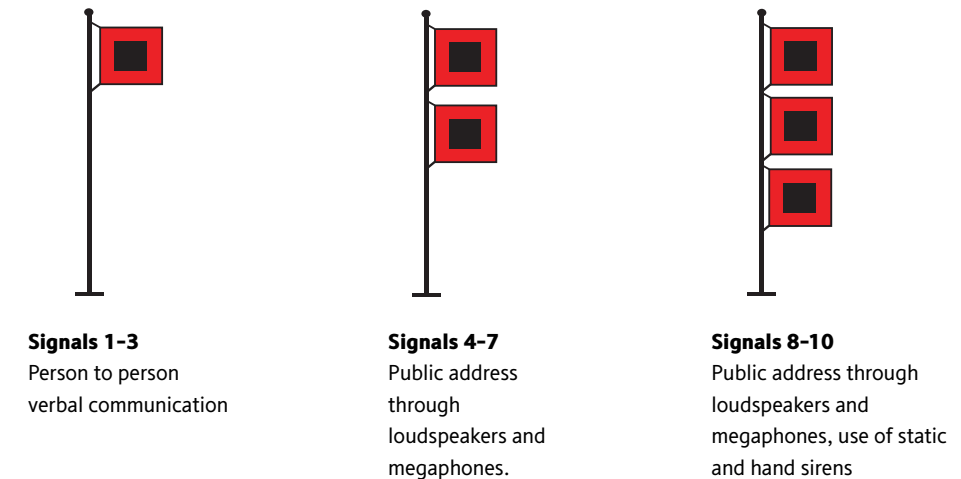


Figure 3: CPP Cyclone Early Warning System up to November 2018 as per Standing Orders on Disaster (SOD) (old system)

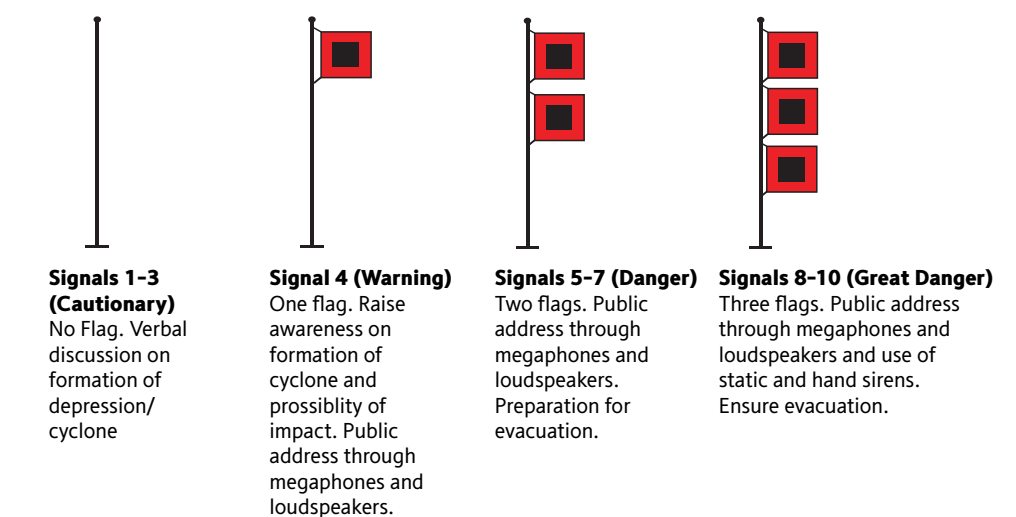


Figure 4: CPP Cyclone Early Warning System since November 2018 as per revised Standing Orders on Disaster (SOD) (new system)



2019 AND 2020 CYCLONE PREPAREDNESS AND EVENTS

Disasters and extreme weather were on the humanitarian agenda from the very beginning of 2019. A Monsoon Lessons Learnt [report](#) for the Rohingya refugee response was released in late January 2019. The first significant rainfall event of 2019 took place on 6th March, when 50 cm of rain fell in one night. Daily Incident reporting was suspended until 21st April, when it was restarted by the SMSD sector.

Following a break of 4 months, the Emergency Preparedness and Response Task Force was reformed in the first week of March 2019 as the Emergency Preparedness Working Group (EPWG) under a new ToR, with the support of an ISCG Emergency Preparedness Advisor. The purpose for reforming the EPWG was to follow up on recommendations from the OCHA-supported cyclone preparedness review from October as well as the findings of the 2018 lessons learning exercise. These included strengthening initial response planning including phasing, communications, and access control; strengthening health, protection and communications system; clarify planning for district-wide response with the HCTT; utilize a preparedness tracker; update the contingency plans with clear and realistic SOPs; ensure correlation between agency/NGO/PNS plans and ISCG plans; strengthen and clarify coordination with government counterparts at upazila level; scale up CwC efforts. Key priorities for 2019 included reviewing the ISCG Cyclone Contingency Plan, sector plans and camp plans, ensure stronger engagement with the humanitarian agencies, tracking preparedness actions, develop a framework and SOPs for cyclone response decision-making, organize simulation exercises and drills to test the plans, and update and review all maps and datasets.

A two-day cyclone and monsoon preparedness stakeholder workshop was organized on the 12th and 13th March 2019, launching the report on the 2018 [cyclone lessons learnt](#). Chaired by the Senior Secretary of MoDMR, the workshop gathered 230 participants from local government, the office of the RRRC, the UN, INGOs, and the RCRC Movement. Proceedings from the workshop – including a call to establish Camp Disaster Management Committees – were recorded in the [workshop report](#).

Recognizing the need to test preparedness for response and identify gaps in the cyclone preparedness plans, a simulation exercise was considered high priority for 2019, to the extent of being included in the results framework for the 2019 Joint Response Plan (JRP). Originally scheduled for April 2020, the exercise was needed to inform a revision of the cyclone contingency plan. A simulation exercise planning conference was scheduled for 10th and 11th March 2019. A regional inter-agency support mission scheduled for the end of March to help organize the simulation exercise. Due to cyclone Idai and cyclone Kenneth in Mozambique, this mission was cancelled as regional offices had to concentrate on meeting surge needs for the Mozambique response. This led to postponement of the simulation exercise date to after Eid al Adha (mid-August 2019). As government policy and staffing changes shifted significantly following the 25th August gathering of Rohingya on the two-year anniversary of the exodus from Myanmar, the plans for a large-scale simulation exercise were put on hold indefinitely.

The first cyclone early warning of 2019 happened on 1st May, when signal 4 was issued in response to the north-eastward movement of cyclone Fani along the Indian coastline, triggering one early warning flag to be raised in the camps. Moving slowly up the Bay, the depression that later became cyclone Fani first came on the radar of the humanitarian community on 24th April due to a cautionary e-mail from the ISCG. As the depression deepened into a cyclonic storm and moved slowly northwards, a total of 46 Special Weather Bulletins were issued between 25th April and 4th May, when the cyclone made landfall in Odisha, India.

Due to the slow movement of cyclone Fani in parallel with the Indian coastline, the window of time between detection of the cyclone and landfall gave time for substantive revisions of the ISCG cyclone contingency plan and extensive discussions with the government. As there was no ISCG Senior Coordinator in place at the time, the IOM head of sub-office was named focal point for cyclone preparedness by the Senior Executive Group and met with the Armed Forces Division, DC and RRRC to discuss response and options for evacuation. A core group of EPWG members from ISCG, UNHCR, IOM and WFP staff made extensive revisions to the ISCG Cyclone Response Plan, resulting in the “ISCG 72-Hour Response Plan”. The plan was circulated for comments among the HOSOs and EPWG members on 30th April and presented to the office of the RRRC in a meeting including HOSOs and sector coordinators on 2nd May. A humanitarian town hall with updates on the cyclone, a refresher on the early warning signals, and orientation on the 72-Hour Response Plan was held on 2nd May.

Following cyclone Fani, several issues for follow-up were identified during the 8th May After Action Review. The 72-hour contingency plan and the ISCG Monsoon Response Plan were both further revised by the ISCG, UNHCR, IOM, WFP, and UNICEF, with final versions published online on 17th July, 2019. In addition, a weather and warning dissemination protocol was developed by ISCG, UNDP and OCHA, and presented and agreed by the Emergency Task Force in June 2018.

The 2019 south-western monsoon reached Bangladesh on 17th June and encompassed two major rainfall episodes and the second cyclone early warning event of 2019. During the 2019 monsoon, two major rainfall episodes affected the camps: one in the first two weeks of July, and a second in the second week of September. Lessons learnt reports were produced on [the use of climate, forecast and risk information during the July monsoon event](#) as well as [as impact and response during the September monsoon event](#). In addition, a cyclone early warning event took place in the first week of August, when the deep depression “BOB03” formed in the north-western Bay of Bengal. The depression triggered issuing of a Special Weather Bulletin and signal 3 on 8th August. In line with the revised CPP guidelines, no flags were raised in the camps and no cyclone winds took place there.

At the very end of the monsoon season, a second cyclone preparedness workshop took place on 18th October 2019. Gathering approximately 150 people from the MoDMR, local government, the office of the RRRC, the Armed Forces Division, the UN, I/NGO community and RCRC movement, the workshop was chaired by the Senior Secretary of MoDMR. The workshop included updates on the expansion of the CPP within the Rohingya refugee camps, a presentation on the revised ISCG 72-Hours Response Plan, an orientation on Emergency Telecommunications challenges and the cyclone awareness campaigns, and a discussion on lines of communication between the Camp in Charges and union/upazila Disaster Management Committees.

The third cyclone early warning of 2019 was issued in response to a depression in the Bay of Bengal on 5th November. Following the formation of the depression, signal 3 was triggered on 7th November and signal 4 on 8th November as cyclone Bulbul formed. The sequence of a total of ten Special Weather Bulletins ended on 10th November, when cyclone Bulbul made landfall in south-west part of Bangladesh.

While there was a slight lull in preparedness activities during the winter and spring seasons, there were no significant gaps. In the second week of December, a small-scale humanitarian simulation exercise took place in Teknaf, as did an EPWG After Action Review of Cyclone Bulbul. Daily Incident reporting continued throughout the dry season. Due to turnover in the position of Emergency Preparedness Advisor, there was a temporary gap in EPWG meetings from mid-December till late January 2020. The group resumed - as the Emergency Preparedness and Response Working Group (EPRWG) - once the new Emergency Preparedness Coordinator joined in late January 2020.

By the end of February 2020, the spread of COVID-19 triggered significant concerns among the response stakeholders, recognising that local conditions would make both the host community and the Rohingya vulnerable to the spread of the disease. By the time WHO characterized the outbreak as a pandemic on 11th March 2020, it was also recognised that the usual life-saving measures for cyclone – community early warning and close-quarters sheltering – could contribute to disease spread if measures were not taken. Capacity enhancement activities on hygiene promotion were initiated for the CPP camp volunteers. By late March, lockdown orders in Bangladesh and beyond prompted significant scaling down of regular activities in the refugee camps and coordination as stakeholders reoriented towards COVID-19 preventative measures, reviewed duty station staffing.

The COVID-19-related suspension of many activities within the camps prompted concerns about preparedness for the cyclone and monsoon seasons, while also increasing the importance of refugee volunteers within their community. Following an 8th April circular from the office of the RRRRC ordering downscaling of humanitarian activities to critical services and assistance only, the range of activities and humanitarian staff allowed in the camps were significantly reduced. Distributions, health-related activities, and the provision of emergency response to natural hazard incidents and fire were explicitly still allowed; however, CPP preparedness activities, camp preparedness planning, and site improvement activities mitigating monsoon risks were not included in the list of permitted activities. Resumption of CPP activities was, however, successfully negotiated with the office of the RRRRC by the BDRCS, while UN agencies were able to introduce new logistics and community engagement initiatives.

The first cyclone early warning of 2020 was issued in response to Cyclone Amphan. Following the formation of a low pressure on 13th May, signal 1 was triggered on 15th May, followed by signal 2 on 16th May, signal 4 on 17th May, signal 6 on 18th May, and signal 9 on 20th May. The sequence of 38 special weather bulletins was concluded after Cyclone Amphan made landfall in south-west Bangladesh on 20th May. Signal 9 triggered three flags to be raised in the camp, and 2,439 household shelters were reported damaged to the Site Management and Site Development sector between 19th and 21st May.



LESSONS LEARNT – CROSS-CUTTING ISSUES

Following analysis of the documents and interviews, the below lessons learnt from the beginning of 2019 and 2020 were identified. For lessons learnt related to COVID-19, please see page 39.



Understanding and Mitigating Natural Hazards and Risk in Refugee Response

The Rohingya refugee camps remain highly vulnerable to the impacts of tropical depressions and cyclones, including high winds and flooding. Despite significant investment in site development and shelter upgrading in 2019, the refugees remain highly vulnerable to rain, wind, and storm impacts. As shown by the SMSD Daily Incident records, 10,127 families were affected by these hazards in 2019⁵. In 2020, this figure increased alarmingly, with 22,823 households affected by hazards between 1st May and 31st July alone, as refugees endured a particularly bad monsoon after COVID-19 containment measures had halted most household shelter and camp infrastructure repair/upgrade activities during spring 2020⁶. An important lesson learnt in 2019 is that inundation risk in Teknaf is more complex than originally assumed: the September rains showed that a confluence of upstream rain and tidal conditions could be enough to cause severe river water intrusion and flooding in the camps clustered around Nayapara⁷. COVID-19 risk and associated measures to reduce transmission – including suspension of most humanitarian activities in the camps – has added an additional complexity to the risk scenario. As the number of people affected by shelter damage between May and July more than doubled in 2020 compared to 2019, it is clear that shelters have become even more vulnerable in 2020 following COVID-19-related suspension of shelter upgrade and tie-down kit distribution⁸.

The Rohingya people consider temporary relocation as the most important life-saving cyclone risk reduction strategy. Preparedness “to take vulnerable people to safer places including communal shelters in the camps” was named as one of three most important cyclone preparedness actions by refugees in the 2019/2020 DRR Knowledge, Attitude and Practice (KAP) survey for the camps and host communities. The other two most important preparedness actions named were storing valuables and food safely and assigning household members specific tasks⁹. This is consistent with risk reduction strategies commonly used in Rakhine: after safe storage of household papers, respondents in the 2015 Northern Rakhine State DRR KAP survey reported identification of an evacuation point as the second most important household disaster preparedness action¹⁰. Prioritizing temporary relocation is also in line with refugee practice¹¹ during the monsoon, when affected households often temporarily relocate to a neighbour or to community structures which have been reinforced for monsoon sheltering.

However, temporary relocation within the camps cannot meaningfully reduce risks associated with cyclonic wind. The primary mitigation tactic against trauma from flying objects is to take shelter in buildings made from brick, concrete, and steel materials, be it a designated cyclone shelter, public building, or a private home. While household shelters and community facilities were upgraded in 2018 and 2019, most were upgraded only within the approved bamboo/tarpaulin/earthwork parameters for structures within the Rohingya camps. A small number of concrete/brick facilities have been constructed within the camp in the past two years, primarily medical facilities and CiC offices.

⁵ See “SMSD DAILY INCIDENT REPORT Survey Analysis: April–November 2019, IOM NPM, 2020.

⁶ See “IOM NPM SMSD Site Management Category 1 Incident Assessment and Reporting Survey Analysis: May–November 2018”, August 2020.

⁷ See “September 2019 Teknaf Rains: Lessons Learnt”, UNDP, 2019.

⁸ See “IOM NPM SMSD Site Management Category 1 Incident Assessment and Reporting Survey Analysis: May–November 2018”, August 2020.

⁹ See «Voices from the Vulnerable Communities: Disaster Risk Management KAP Survey”. IFRC, IOM, REACH, Translators Without Borders, UNDP and UNHCR, 2020.

¹⁰ See «A Study on Knowledge Attitude and Practices for Disaster Risk Reduction in Northern Rakhine State”. REACH, 2015.

¹¹ See «September 2019 Teknaf Rains: Lessons Learnt”, UNDP, 2019.

However, these facilities do not have the capacity to shelter a significant portion of the camp population. They are, moreover, not designed for sheltering- many have corrugated iron roofs vulnerable to winds. Their function may also preclude sheltering - medical facilities will need to be held ready for response in the aftermath; plans for the CiC offices during a cyclone are not known, but there have been indications that government staff may be prepositioned there. In the case of the Shamlapur CiC office - in the only camp vulnerable to storm surge - the office cannot be used as a cyclone shelter due to its proximity to the shore, one-story design, and corrugated iron roof.

Some actors have assumed that an agreement to evacuate all or some of the refugees to host community shelters may be reached if a cyclone is imminent – but Ukhiya and Teknaf cyclone shelter capacity is not large enough to provide shelter for all the refugees and host community members. The possibility of evacuating refugees to buildings outside the camp has been discussed repeatedly (with discussions about camp 23 having advanced the most) and not explicitly rejected by the government. No concrete plans have been published, but the periodic resurgence of the topic has led some humanitarian actors to assume that in an imminent landfall situation, an agreement might be reached. Logistical and COVID-19 transmission prevention issues aside, the current cyclone shelter capacity in the area around the camps does not appear sufficient to enable such a solution. The Disaster Management Plans of Ukhiya and Teknaf show that local cyclone shelter capacity in Ukhiya upazila is 18,165 people while capacity in Teknaf upazila is 62,368 people. As the host community populations of Ukhiya and Teknaf are respectively 207,379 and 264,389 people, there is not adequate capacity to shelter even the whole host community population, let alone the refugee population.

It has been necessary to provide CPP camp volunteers with additional guidance clarifying that communal structures are not safe and that there is no plan for evacuation. As evacuation to safe, communal space is the primary cyclone risk reduction strategy both in the Rakhine and in the majority of Bangladesh, expectations that this would take place exist. To clarify, the CwC Working Group developed additional guidance, instructing volunteers not to use terms such as “safe havens” or “cyclone-resistant structures” to describe camp communal spaces/buildings and to honestly answer that there is no plan for evacuation if asked. See the next page for the full guidance.

Content	Signal 1-3 No Flag: Cautionary stage	Signal 4 One Flag: Warning Stage	Signal 5-7 Two Flags: Danger	Signal 8-10 Three Flags: Great Danger
Do's	No message dissemination to avoid panic among people.	Megaphone will be used to disseminate early warning messages.	<ul style="list-style-type: none"> • Megaphone will be used to disseminate danger level early warning messages. • Do give accurate information and respond that it is better to stay in the shelter, if you are asked if there is any safe haven or evacuation point. 	<ul style="list-style-type: none"> • Sirens and Megaphone will be used to disseminate great danger level warning messages. • Do give accurate information and respond that it is better to stay in the shelter, if you are asked if there is any safe haven or evacuation point. • Mention that there is a response plan on providing support post cyclone if you are asked.
Don'ts	<ul style="list-style-type: none"> • In person communication • Use of Megaphone • Use of Hand siren • Use of any PA system 	<ul style="list-style-type: none"> • In person communication • Use of Hand siren • Do encourage to have shelters tied down but do mention that this will not make shelters cyclone proof. 	<ul style="list-style-type: none"> • In person communication • Use of Hand siren • Referring anyone to “safe-havens” or concrete structures since overcrowding can lead to more damage. This is especially discouraged during COVID-19 global pandemic. 	<ul style="list-style-type: none"> • In person communication. • Referring anyone to “safe-havens” or concrete structures since overcrowding can lead to more damage. This is especially discouraged during COVID-19 global pandemic. • Do not respond with “I do not know” or “yes” if you are asked about relocations outside of the camp. It is important to provide correct information, do respond that there is currently no plan to relocate outside of the camps.

Figure 5. “Do's and don'ts for CPP trained volunteers”, developed by the CwC Working Group in May 2021. [source: Communication and Community Engagement Strategy: Cyclone Preparedness, Awareness and Community Engagement in COVID-19 pandemic situation 20 May, 2021]

¹² See e.g., the CwC Working Group Debriefing and Evaluation Workshop on Cyclone Preparedness Campaign, 2019: “Communication for host and Rohingya communities should be aligned, and host community should be informed about how the Rohingya's will be instructed e.g., they may be sent to host community shelters at the eleventh hour”.
¹³ See Ukhiya Upazila Disaster Management Plan (2019) and Teknaf Upazila Disaster Management Plan (2019). Figures taken from English translation of Bangla original, both available from UNO.
¹⁴ Ibid.



Use of Weather Information by Humanitarian Actors

As cyclones are recognised as a major threat to the safety and well-being of the refugees, weather information and forecasts are actively sought out and shared by humanitarian staff – but the quality and applicability of information is often not checked before being shared. Information about the present and near-future weather situation is of critical importance to all actors in Cox's Bazar and is eagerly sought out and shared by humanitarian staff working in the refugee response. Experience from cyclones Fani, Bulbul and Amphan, does, however, point to a problematic trend where information is shared without critical review of its source or applicability. This includes sharing of speculative articles via WhatsApp groups (see box 1) including the NGO Platform Security Group, but also references to unattributed forecasts, misinterpreted forecasts, or websites with unclear provenance (such as cyclone) in official coordination forums and e-mails.

Box 1 - Example of clickbait cyclone information article circulating among humanitarian staff in Cox's Bazar



The screenshot on the left shows a clickbait article that was circulating among humanitarian staff at the beginning of the 2020 cyclone season, warning of a strong cyclone Amphan - 19 days before the low pressure intensified and cyclone Amphan actually formed. Characteristics that make the article look legitimate includes reference to the Indian and Myanmar national meteorological services, reference to the likely name of the cyclone, historical information, and the similarity of the newspaper name to the more well-known Daily Bangladesh Pratidin.

Reading with a critical eye, however, reveals that the content is speculative and does not match the headline. The Indian and Myanmar meteorological services do not warn of a currently forming cyclone, but about the likelihood of cyclone formation. No reference to the Bangladesh Meteorological Department is made. The first two sentences of the article contradict each other: one stating the severity of the cyclone and one stating that the severity is not yet known. The name of the cyclone has been taken from the North Indian Ocean Storm Names List, which is a publicly available list of pre-scheduled storm names. The historical information is not from primary sources, but from Indian media and somewhat misleading regarding historical impacts on West Bengal.

Screen capture: <https://m.daily-bangladesh.com/english/Strong-cyclone-Umpun-forming-in-Bay/41228> (captured August 6 2020)

To reduce confusion regarding the cyclone forecast situation, the RCRC Movement has gradually assumed a cyclone Early Warning Focal Point role for the ISCG EPRWG. In response to the challenges noted above as well as CPP coordination needs, the RCRC Movement has played an increasingly proactive role in communicating changes in the depression and tropical cyclone situation to the ISCG. Based on lessons learnt in 2018, the RCRC Movement began sending notification to CPP stakeholders including the SMSD sector and the EPWG of changes in early warning status during the cyclone early warning incident in December 2018, to make sure all stakeholders had up-to-date information. Over the course of 2019 and 2020 the protocol for this information-sharing evolved from (a) notification of changes in early warning status (i.e., escalation from one signal to another) and attendant CPP actions, to (b) prior notice of likely changes in status, to (c) provision of forecasting and tracking information from trusted sources from depression formation and onwards. This evolution has happened in response to discussions in the EPWG/EPRWG and in ISCG After Action Reviews on communication protocols. It should be noted that the RCRC Movement is not the only actor who has supported ISCG on accessing information about the weather information – others include UNDP and WFP (through its automated A.D.A.M. system) – but RCRC has been the most consistent and most closely linked to BMD.

Establishing a localized weather forecasting and monitoring system was a significant step forward in terms of preparedness. It allowed us to assess the danger in real time and to inform the humanitarian community to take early actions. UNDP along with Geological Survey of Bangladesh (GSB) and Norwegian Geotechnical Institute (NGI) has placed five rain gauges and three weather gauges at the camps and host-communities. These rain gauges record rainfall in real-time and send landslide risk alerts to key stakeholders for carrying preparedness measures and early actions. Besides, there is huge demand among ISCG and other humanitarian actors for rainfall and weather data. Until now, several lessons learnt report informed the rainfall data, and ISCG is also regularly using rainfall data and analysis for their weekly monsoon preparedness and response updates. UNDP in partnership with RIMES (The Regional Integrated Multi-Hazard Early Warning System for Africa and Asia) and BMD has been working to advance localized weather forecasting for Cox's Bazar since October 2019. Since May 2020, UNDP, in collaboration with RIMES has been developing and disseminating monthly and seasonal weather forecasting for humanitarian stakeholders in Cox's Bazar. During cyclone Amphan 2020, several weather forecasting and bulletin were shared with key government and humanitarian stakeholders. Through this partnership, a localized forecast dissemination portal developed and is publicly available (<https://instant.rimes.int/>) since May 2020 and also integrated into the BMD weather forecasting website (to access please visit BMD website www.bmd.gov.bd and then open the regional forecast tab on the left side). UNDP, jointly with RIMES, organized several orientations and training on forecast interpretation for the government, first response agency and humanitarian stakeholders. The partnership with RIMES/BMD remained very beneficial for advancing localized weather forecasting for Cox's Bazar.

Forecast and weather information alone is of limited utility to the humanitarian actors if not accompanied by information about activation of coordination and response protocols and any new decisions made in response to developments in the weather situation. While weather forecasts and BMD information forwarded by email provide critical operational information for agency decision making, this information alone is not enough. Agencies and sector coordinators participating in ISCG-coordinated forums throughout 2019 and 2020 stressed the need for reliable and timely communication on (a) whether alternate coordination modalities have been activated or not, (b) whether withdrawal from the field is recommended, (c) whether sectoral preparatory/anticipatory actions should commence, and (d) whether any new decisions have been made by the HOSOG or together with government¹⁵. On the basis on feedback after cyclone Fani, communication protocols were developed outlining what information and anticipatory action-related advice should accompany dissemination of weather information¹⁶. However, these protocols have never been fully implemented.

¹⁵ See "ISCG Cyclone Fani Lessons Learnt Report May 2019", "September 2019 Teknaf Rains: Lessons Learnt", "ISCG Cyclone Bulbul After Action Review December 2019" and the "ISCG Cyclone Amphan After Action Review June 2020". Similar needs were documented in the report "Use of Climate and Risk Information in the Rohingya Refugee Response: Lessons from the July 2019 Rains", International Research Institute for Climate and Society (IRI) at Columbia University and NASA (as the COMPAS project) and UNDP, 2019.

¹⁶ See PowerPoint and minutes from the meeting of the ISCG EPWG on 2nd June 2019.



Early Warning Dissemination

More consistent engagement, training, drill, and inventory checks have helped to decrease response time for hoisting the early warning flags, but there is still room to improve. In response to lessons learnt in 2018, the RCRC Movement began monitoring the time it took units to hoist and lower the warning flags during an early warning event. Both this internal monitoring and interviews with external partners indicate that there has been a consistent reduction in lag time for flag hoisting across the camps: comparing the lead time from signal 4 being issued by BMD to the first early warning flag being raised in the camps, the camp average was reduced from 105 minutes during cyclone Bulbul to 69 minutes during cyclone Amphan. Variance between the different camps indicate that there is a need to continue close monitoring to sustain the general improvement and improve performance further in some locations. There is also a need to follow up on flag- lowering to communicate a timely all-clear, as the lead time from all clear to flags being lowered did not improve between cyclones Bulbul and Amphan. A number of practical issues (detailed in the paragraphs below) must also be addressed to make early warning dissemination more efficient and timelier.



Photo 1. CPP volunteers disseminating early warning in the Rohingya refugee camps during Cyclone Bulbul-2019. @BDRCS/ CPP/IFRC

Pre-seasonal inventory checks of the camp early warning and first aid equipment are necessary to ensure readiness to act. During cyclone Fani and Bulbul, it was found that in some camps, prepositioned CPP equipment such as flags, megaphones and batteries had either been damaged or moved from the original storage area. As a response, CPP and the RCRC Movement made plans to make pre-seasonal inventory checks in 2020. These did take place, but not until the cyclone season had started. This necessitated last-minute procurement of additional flags on the part of the RCRC Movement and has strengthened CPP commitment to implement pre-seasonal inventory checks.

The hilly terrain of the camps decreases the visibility radius of the cyclone early warning flags, requiring a higher number of flagpoles than in a regular Bangladeshi coastal village. While initial expansion of the CPP into the camps began with one unit and one flagpole per camp, the population density has required an increased number of units – and flagpoles. Unlike most coastal villages and towns in Bangladesh, the Rohingya refugee camps are on hilly land with steep slopes. While the first flagpoles were primarily set up close to CiC offices and on high ground, the visibility radius of each flag was small due to the hilly topography making it near impossible for people living in valley bottoms to see flags even one hill past their own. Following lessons learnt in 2019 and the findings of the 2019/2020 DRR KAP survey¹⁷ that roughly half of the refugees had never seen a cyclone early warning flag, the number of flagpoles has now been expanded to 10 per camp. Whether there is a need for additional flagpoles or whether the existing flagpoles could be placed better is under discussion.

Restricted mobile connectivity in and around the camps delays the relay of early warning signals to host community and camp CPP volunteers, as well as the subsequent early warning dissemination. While the Rohingya refugees themselves are not allowed to own SIM cards, host community volunteers and field staff working in the camp were, up to August 2019, able to reliably use mobile phones in and around the camps. When mobile network restrictions were introduced in and around the camps late August 2019, it had immediate and significant effects on the daily life of people living in the area as well as humanitarian operations. This also included the CPP, who were no longer able to easily cascade early warning messages to in-camp personnel such as host community CPP volunteers and SMS partners working in the CiC offices. This contributed to delays between issuance of early warning and hoisting of flags in the camp.

With the increased number of units, it has been necessary – but not uncomplicated – to introduce a layer of CPP focal points at camp level. The number of CPP camp volunteers and units has increased from 680 organized in 34 units at the beginning of 2019, to 3,400 volunteers organized in 170 units by mid-2020. During this expansion, it has become clear that there is a need for focal points at the camp level who could act as supervisors and coordinate the preparedness and dissemination activities of the units. To support this, a decision was made to engage 34 host community volunteers as focal points, 8 host community volunteers to act as supervisors, and 2 host community volunteers to act as liaisons to the Cox's Bazar CPP zonal office and the office of the RRRC. The primary role of the 34 focal points is to ensure regular engagement with the volunteers between early warning events according to activity plans developed by CPP and the RCRC Movement. Most of the focal points recruited had previously been deputized by the CPP to the CiCs in each camp, to provide general (non-CPP specific) support. While their pre-existing knowledge of the camps is an asset as CPP focal points, the change of roles has in some cases created confusion about what their current responsibilities are to CPP and to the CiCs. A booklet outlining the roles and responsibilities of all functions in the CPP structure in the camps – including the camp CPP volunteer's focal points, supervisors, and liaisons – is therefore being developed. It has also been noted that it is difficult for male focal points to engage female camp volunteers. Steps are therefore being taken to recruit an equal number of female camp focal points.

¹⁷ See «Voices from the Vulnerable Communities: Disaster Risk Management KAP Survey». IFRC, IOM, REACH, Translators Without Borders, UNDP and UNHCR. 2020.



Communication with and Accountability to the Community

CPP camp volunteers have become known and trusted emergency responders within their communities. Two and a half years into the expansion of the CPP in the Rohingya refugee camps, CPP camp volunteers have – both in their capacity as “orange vests” and as volunteers in other humanitarian structures – become known and trusted emergency responders within their communities. Due to COVID-19 and the reduced humanitarian footprint in the camps, their role in health related activities have expanded even further as they have been engaged in COVID-19 information activities. Considering (a) the known central role of community members in first response¹⁸, (b) the confluence of COVID-19 and cyclone risk, and (c) the anticipated time lag between landfall and arrival of support from the district level in the event of a cyclone, the camp CPP volunteers will face high expectations as well as needs in a cyclone aftermath.



Photo 2. June 24, 2018. Kutupalong, Cox's Bazar, Bangladesh. “My kids see what I'm doing to help families in the camp, and they are proud that I'm their father,” says Mohamed Saidik (center) with a smile. He has been teaching his children and his neighbours in Kutupalong—a camp for families who fled Rakhine state—about how to prepare for cyclones and other rough weather as monsoon season sets in. “I want the whole population to know more about disasters so they can protect themselves.” Mohamed is part of a volunteer team being trained on early warning systems, first aid, search-and-rescue, and other lifesaving skills by the Cyclone Preparedness Program—a joint effort between the American Red Cross, Bangladesh Red Crescent, IFRC, and the government of Bangladesh. Mohamed's wife, Arefa (also pictured), has also taken it upon herself to prepare her neighbours—especially women—for the wind, rain, and flooding that could inundate their camp at any moment. The couple walked twenty days—with their six children—from their home in Rakhine state, Myanmar to the border of Bangladesh. @American Red Cross

Pre-seasonal cyclone awareness-raising engaged both SMSD and CwC partners, who together can reach a large number of people if not restricted. Following up on practice and lessons learnt from 2018¹⁹, the CwC sector in collaboration with the RCRC Movement made substantial efforts to coordinate both in-camp and host-community awareness raising prior to the 2019 summer and autumn cyclone seasons, including provision of ToTs. This engaged a large number of UN, I/NGO and RCRC Movement partners, who mobilized their staffs and volunteers. During the spring 2019 campaign,

roughly 30 partners mobilized 3,600 volunteers and community mobilizers to reach more than 920,000 people, mainly within the camps²⁰. Due to restrictions on mass gatherings in the camps following the 25th August 2019, the number of people reached was significantly lower (approximately 170,000) during the autumn (Post monsoon) 2019 campaign.

Despite large-scale cyclone awareness-raising campaigns, the refugees still appear under-informed about the early warning system as well as emergency preparedness issues. The fact that refugees do not appear to have adequate access to information about camp cyclone preparedness was first noted from focus group discussions and materials reviewed for the 2018 cyclone preparedness lessons learnt exercise²¹. The most common questions were where to evacuate, how the early warning system worked, and how to access humanitarian relief and services. This information gap was again noted in the debrief report on the summer 2019 CwC cyclone awareness campaign: “There is a strong need for information on emergency preparedness, especially on evacuation plan and emergency/temporary shelter.”²² This problem still persisted at the end of 2020: while the 2019 MSNA found that 87% of camp population had received information about cyclone preparedness, the 2019/2020 KAP DRR survey found that only 36% of the refugees could correctly identify the meaning of flags 1, 2 and 3²³. Lack of knowledge about the early warning system seems particularly grave among refugee women, of whom only 37% had ever seen the cyclone warning flags before. The same KAP survey also found that refugees report a need for more information about what to do to protect their assets and prepare their family, where to go to be safe during a cyclone, and what services will be available.

Field staff are not comfortable during communicating the approved messages that refugees should stay in their own household shelter during a cyclone and have at times made up their own, incorrect answers regarding the availability of cyclone shelters. As noted above, the lack of evacuation options and robust cyclone shelters is a major cause of concern among humanitarian staff. Despite training of agency/NGO trainers on cyclone-related messaging in both 2018 and 2019 by the CwC actors, it was noted by CwC partners that this training was not broadly cascaded to the field levels²⁴. Possible reluctance among field staff regarding the messaging for the second and third flag – namely, that the recommended action is for refugees is to stay in one's own home²⁵ – was at times brought up as a risk in coordination forums. These concerns about humanitarian communication were found to have been borne out during cyclone Bulbul. As noted in the ISCG Cyclone Bulbul After-Action Review²⁶:

“There is a need for clear FAQs and requests for staff to strict to the script as a number of field staff were uncomfortable to tell refugees that there is nowhere safe for them to go due to absence of cyclone shelters and were making up responses.”

If correct, this is deeply concerning. Clear instructions on what to communicate is given in all CPP documents developed with the support of the CwC working group, including the “Cyclone preparedness messages on early warning & flags for camps” and the “Field discussion guide – cyclone early warning procedures” targeting humanitarian staff. Failure by field staff to follow this messaging guidance when communicating with the refugees can be seen as not only a sign of inadequate training, but also a danger signal that accountability to the refugees in terms of access to life-saving information is not taken seriously.

²⁰ See “CwC Working Group Debriefing and Evaluation Workshop on Cyclone Preparedness Campaign 30 May 2019 Final Report”. CwC. 2019.

²¹ See “Cyclone Lessons Learnt report 2018”, BDRCS, American Red Cross, IFRC and UNDP. 2019.

²² See “CwC Working Group Debriefing and Evaluation Workshop on Cyclone Preparedness Campaign 30 May 2019 Final Report”. CwC. 2019.

²³ See “Voices from the Vulnerable Communities: Disaster Risk Management KAP Survey”. IFRC, IOM, REACH, Translators Without Borders, UNDP and UNHCR.2020.

²⁴ See “CPP-Early Warning communication. Update, lessons learned and next steps”, TwB and American Red Cross. 2018.

²⁵ See “Cyclone preparedness messages on early warning & flags for camps”, CPP.

²⁶ See “ISCG Cyclone Bulbul After Action Review December 2019” ISCG. 2019.

¹⁸ See “World Disasters Report 2015”, IFRC.

¹⁹ See “Cyclone Preparedness Lessons Learnt report 2018”, BDRCS, American Red Cross, IFRC and UNDP. 2019.

Effective and accountable community engagement on cyclone risk, early warning and preparedness issues requires close coordination and quality assurance. Considering the above, CPP and the CwC actors have taken steps to improve the quality of community engagement on cyclone-related issues. This has included evaluations following the 2019 awareness campaigns. Capacity-building of volunteers to be able to answer in-depth questions from the community, as well as better monitoring and evaluation of efforts, has been recommended²⁷. Evaluations of both the summer and autumn campaigns identified the need to use more visual materials and adjust methods to better engage with women, the elderly, and children²⁸. Following cyclone Amphan, the CwC Working Group and other sectors also noted that there is a need to ensure that all sector coordinators are aware of agreed messaging and lead time for making changes. These measures, however, are not specific to the issue of cyclone risk communication; nor does their identification guarantee implementation. To support substantive and well-coordinated improvement in 2020, the CwC Working Group has therefore formed a Cyclone Preparedness Technical Working Group co-chaired by the Red Cross Red Crescent Movement and BBC Media Action and including representatives from SMSD, Shelter, WASH and CwC as well as the ISCG Emergency ERPWG.

Preparedness Planning and Coordination

A stronger agency role in the ERPWG and the close calls with cyclones Fani, Bulbul and Amphan provided impetus for inter-agency operational planning for cyclone response. Upon the reactivation of the EPWG in February 2019, the larger UN agencies took a more proactive role in the leadership of the group. This strengthened inter-agency dialogue on how to implement the response strategy outlined in the then-current ISCG Cyclone Response Plan. This dialogue accelerated during the long and uncertain lead-up before Cyclone Fani landfall, resulting in the extensive revision of elements of the ISCG Cyclone Response Plan into the ISCG Cyclone 72-Hour Response Plan. The 72-Hour Response Plan Contained SOPs and practical instructions for actions only mentioned in the previous version of the plan. This included SOPs for prepositioning and distributions of emergency response packages, re-establishing access, and needs assessment. Considering that contingency planning – within the humanitarian Emergency Response Preparedness approach (ERP – see box 2) – should include both an initial response strategy as well as an operational plan for responding, this represented a major step forward in terms of concretizing how specific actions should be implemented. Significantly, the revision introduced the concept of Humanitarian Coordination Centres (HCCs) at district and Upazila level, to be staffed by agency and sector coordination staff and including both RRRC and Bangladesh Red Crescent Society representatives. Cyclones Bulbul and Amphan also accelerated discussions on practical solutions for response, but these have not been formalized through revision of the plan.

Incomplete revision of the ISCG Cyclone Response Plan in 2019 has created information gaps regarding crucial aspects of camp cyclone preparedness. The revision of the 2018 ISCG Cyclone Response Plan into the 72-Hour Response Plan contributed significantly to operationalizing the arrangements that had previously only been outlined. However, the revision also removed several sections that were never updated as part of a wider revision. These included the introductory scenario and planning assumptions chapter, the early warning chapter, the evacuation/relocation chapter, the section on community response, and the section on civil-military coordination. Crucially for the CPP, there was also no longer a space to document mechanisms for early warning and related information-sharing, necessitating repeated briefings for non-RCRC humanitarian staff. In addition, there was no

updating of the pre-landfall (anticipatory) activities, which had been removed from the 72-Hour plan with its focus on immediate post-cyclone delivery. This contributed to confusion regarding what to do when early warning is issued, which has been a recurring challenge brought up by sectors throughout the last 18 months²⁹. For some of the pre-existing sections, such as the Cyclone Standard Operating Procedures and the phasing, more information was added during the revision, but the summaries removed. This made it difficult for new staff to get an initial overview of the overall response strategy before delving into operational specificities. Finally, the 72-Hour Response Plan was developed with a particular focus on leveraging the operational capacities of the largest agencies. While critical, this left I/NGOs confused about their role in the immediate cyclone response.³⁰

Inconsistent information management and staff turnover has continued to act as an impediment to progress in preparedness and contingency planning efforts. The climate and settlement pattern in the Cox's Bazar camps is unique, differing both from most refugee camp risk contexts globally and from Bangladeshi coastal towns. The way that cyclone early warning and response is coordinated, planned, and will be implemented differs from the way that the everyday refugee response is coordinated, planned, and implemented. Both new national and international humanitarian staff in Cox's Bazar must therefore acquire a lot of new knowledge order to effectively participate in preparedness planning and ensure readiness for response. Accessing information and planning documents is, however, difficult. While there is an Emergency Preparedness Working Group subsite on the HumanitarianResponse.info page for Cox's Bazar where the 72-Hour Response Plan and the Monsoon Response Plan 2019 can be found, other relevant documents around cyclone response planning – such as ERPWG minutes or the non-updated sections of the pre-May 2019 ISCG Cyclone Response Plan – are not available on this page. There is also a lack of a clear system for updating planning documents on a regular basis. Lack of robust information management exacerbated challenges related to frequent staff turnover. Key informants interviewed for the current lesson learnt exercises have confirmed that the staff turnover challenges identified in the 2018 Cyclone Preparedness Lessons Learnt Report have continued in 2019 and 2020. The need for frequent recaps of past decisions and attempts by new staff to renegotiate decisions were emphasized as particularly time-consuming and disruptive. One concrete example includes confusion during cyclone Amphan about the mutually agreed practice of the RCRC channelling early warning-related information from BMD to ISCG, which was first established during cyclone Fani.

Establishing and testing cyclone contingency plans at local level helped better cyclone preparedness and response. Establishing and implementing cyclone contingency funds at the local level can be a great step forward in terms of early action and response. UNDP developed a cyclone contingency plan for 7 Rohingya hosting Unions under Ukhiya and Teknaf Upazila in Cox's Bazar district in 2019. UNDP also supported these 7 Rohingya hosting Unions of Ukhiya and Teknaf Upazila to test their contingency plans through simulation exercises in 2020. These simulation exercises were conducted and acted by the respective DMC members. A district level lessons learnt and experience sharing workshop on the simulation exercises were also organized and finally the updated Contingency Plans were shared with the respective DMCs and key stakeholders. UNDP also established an Early Action and Response Contingency Fund for 7 Union DMCs and disbursed within the maximum limit of USD 5,000 per Union. The respective Union DMCs have been using these funds carrying out early actions (early warning, evacuation, relief items pre-positioning, transportation, etc.) before cyclones and providing immediate reliefs to vulnerable households. The local cyclone contingency plans and funds can be replicated to other vulnerable areas in Cox's Bazar district.

²⁹ See "ISCG Cyclone Fani Lessons Learnt Report May 2019", "September 2019 Teknaf Rains: Lessons Learnt", "ISCG Cyclone Bulbul After Action Review December 2019" and the "ISCG Cyclone Amphan After Action Review June 2020".

³⁰ See "ISCG Cyclone Fani Lessons Learnt Report May 2019".

²⁷ See "CwC WG Debriefing and Evaluation Workshop on Cyclone Preparedness Campaign 30 May 2019 Final Report."

²⁸ See *ibid* and "Cyclone Preparedness Campaign – Host and Camp Settlements October–November 2019", CPP. 2019.

Box 2 - The Emergency Response Preparedness (ERP) approach and its limitations in Cox's Bazar

The Emergency Response Preparedness (ERP) Approach was developed by the IASC Task Team on Preparedness and Resilience to enable the international humanitarian system to apply a proactive approach to emergency preparedness. The aim is to optimise the speed and volume of critical assistance delivered immediately after the onset of a humanitarian emergency, by outlining how the international humanitarian community can organize itself to support and complement national government action. It is designed to be led by the Resident/Humanitarian Coordinator and managed by the Humanitarian Country Team.

In Asia-Pacific, a regional modification of the ERP developed by the OCHA Regional Office, called RAPID, is in use, which is being incorporated into the revised global ERP guidance. The RAPID Approach covers the following key elements of regional preparedness and response:

- Places national response front and centre and articulates the role the international humanitarian community plays to augment Government preparedness and response.
- Creates linkages between disaster preparedness and response, and the resilience and development agendas by generating synergy with existing initiatives that Governments have committed to, such as the Sustainable Development Goals and the Sendai Framework for Disaster Risk Reduction.
- Places affected people at the centre of disaster risk reduction and response planning, with the aim of reducing the lead time required to reach them in the immediate aftermath of a natural disaster.
- Effectively uses country-specific risk profiles and vulnerability data to inform more context specific and appropriate responses in support of national efforts. Coupled with a robust analysis of the immediate needs that will have to be addressed after a disaster and supported by a strong focus on community engagement, this allows for the immediate delivery of assistance even while assessments are ongoing.

Application of the ERP approach in the Rohingya Refugee Response

In the first twelve months following the 2017 Rohingya influx, cyclone, and monsoon emergency response planning in the Rohingya refugee response was supported by OCHA staff deployed to the ISCG. All versions of the ISCG preparedness/response plans up to May 2019 addressed the key elements of the ERP approach, including situation and risk analysis, early warning system, operational delivery, and procedure for coordination with government counterparts. Some of these elements were removed during the revision that produced the 72-Hour Response Plan in 2019 (see page 25).

Limitations of the ERP approach in the Rohingya Refugee Response

The ERP approach is meant to enable humanitarian support to a national, government-led disaster response. As outlined in the UNDRR Words into Action Guide on Preparedness for Response, national preparedness for response rests on of (a) national strategic frameworks for disaster preparedness, (b) legal frameworks for disaster management, and (c) government response plans. In Bangladesh, these exist in the form of (a) the National Plan for Disaster Management, (b) the Standing Orders on Disaster (SoD), and (c) district, upazila, municipal and union level Disaster Management Plans as well as the legally required contingency plans of government bodies, the Armed Forces Division (AFD), and the BDRCS. The duties assigned by the SoD are operationalized in these plans.

However, despite the continuous operation of refugee camps in Cox's Bazar for decades, disaster risk management in these camps were not mentioned in any of the frameworks or operational plans valid at the time of the August 2017 influx (the NPDM 2016-2020, the SOD 2010 and the Cox's Bazar District Disaster Management Plan 2014). Although accountable to the Deputy Commissioner on matters related to disaster response in the camps, the disaster management duties of the RRRC and his office have not been defined in any publicly available documents. This left a disaster risk governance vacuum in the Rohingya refugee camps which delayed some aspects of ERP from the start, particularly establishment of mechanisms for coordination with district and local government.

More broadly, due to the rapid establishment of the refugee camps in previously unsettled areas, most basic infrastructure and services provided in the camp are provided by the Office of the RRRC, the AFD and the humanitarian community. While referral mechanisms to non-camp health services and in-camp police posts have been established, the broader network of public agencies that would respond to a disaster in other contexts are absent or not operating at sufficient scale. As mentioned above, disrupted mobile phone connectivity and cyclone shelters limit refugees from accessing information and safe shelter, essential elements of cyclone risk reduction.

The DRR and preparedness strategies – including mass casualty response planning, post-disaster traffic control, early warning dissemination, government capacity development for coordination, and evacuation – related to these issues are not generally humanitarian functions and fall outside the kind of planning that the ERP approach is designed to enable. The humanitarian community has nevertheless attempted to propose and establish solutions to fill the gaps.

Among these, efforts to establish early warning dissemination appear to have yielded the most tangible results, i.e., trained, and assigned volunteers and a tested and functioning coordination protocol. Comparing the CPP expansion to the other issues mentioned above, it is clear that the CPP expansion has benefited from the leadership of the MoDMR, the capacity of the RCRC Movement to pursue sustained dialogue with government and humanitarian partners at all levels, and a vision for long-term sustainability supported by national institutions including BDRCS. Building similar coalitions of government duty-bearers, development partners and local institutions around a shared understanding of the problem, mid-term capacity development and a localized solution may unlock other preparedness solutions in a way that humanitarian agencies alone will not be able to achieve.

ISCG, RCRC Movement, and government plans are broadly harmonized, but critical areas of ambiguity remain with regards to coordination of cyclone response. The revised ISCG 72-hour Response Plan was presented to the Office of the RRRC and the humanitarian actors immediately in May 2019. It was then published online in mid-July 2019. The Cox's Bazar District Administration updated the District Disaster Management Plan and developed its contingency plan at the same time. Field-level coordination is supported by the establishment of Camp Disaster Management Committees, a development encouraged by the MoDMR as early as March 2019 and implemented in some – if not all – camps. The 72-Hour Response Plan proposes that the Bangladesh Red Crescent should be part of both the Cox's Bazar- and field-level humanitarian HCCs. However, several areas of ambiguity or divergence between these plans remain:

- The upazila-level coordination mechanisms proposed by the humanitarian and government plans diverge significantly. The 72-Hours Response Plan assumes the presence of a RRRC representative in the upazila-level humanitarian HCCs, but the district and upazila Cyclone

³¹ See <https://www.humanitarianresponse.info/en/coordination/preparedness/erp-approach>

³² See https://www.preventionweb.net/files/53347_capstone.pdf

³³ See "Workshop Report, Cyclone Preparedness Stakeholder Workshop March 2019".

Contingency Plans designate the UNOs as focal points for coordination, with no reference to the HCC (see figure 5). Lack of clarity on which stakeholders are responsible for triggering and manning the HCC and coordinating with upazila government has also been noted³⁴.

- (b) As demonstrated by the lack of reference to the ISCG in the Cox's Bazar District Cyclone Contingency Plan (see figure 5), the expectations of the District Administration towards ISCG with regards to cyclone response and response coordination are unclear, despite previous dialogue on having a Joint Emergency Control Room³⁵. There is also a lack of humanitarian Standard Operating Procedures to ensure a coordinated response to the host communities, including operational plans for host community Joint Needs Assessment³⁶.
- (c) There is some unclarity about the cyclone response plans and field-level response coordination mechanisms of specific government actors, notably the AFD and the Office of the RRRRC³⁷.
- (d) The mandate, composition, and trigger points of various humanitarian coordination forums before and during a cyclone remain unclear, with practice during Cyclone Amphan diverging from the 72-Hour Response Plan. The humanitarian coordination forums for cyclone preparedness and response as of August 2020 appear to include EPRWG, the Cox's Bazar level HCC, field/upazila level HCCs, the Heads of Sub-Office Group (HOSOG) and the Emergency HOSOG (concept piloted spring 2020 but not yet formally established in the plans)³⁸.

Some of the anticipated operational challenges in a cyclone response have already been realized, prompting humanitarian stakeholders to act. Operational impacts of cyclone anticipated during the 2018 preparedness planning included mobile network disruption, limited access, security incidents due to social tension, government requests for host community support, difficulty in communicating between field and Cox's Bazar, and reduction of the humanitarian footprint in the camp itself before, during and after landfall³⁹. Restricted mobile connectivity in and around the camps was introduced in August 2019 due to government policy, making everyday operations in the camps more challenging and effectively cutting field staff off from coordination with the district level during the response to the 2019 Teknaf Floods⁴⁰. Following this, agencies paid increased attention to preparedness for radio use during response, making it a key aspect of the winter 2019 SIMEXes⁴¹. These rains also triggered support requests from the upazila. In 2020, COVID-19 has forced humanitarian agencies to minimize their field staff footprint at government request, led to government restrictions on road travel to the camps, and triggered security incidents. To maintain access and meet refugee and host community needs, humanitarian actors have increased their reliance on and investment in community and CPP volunteers, developed a QR code-based traffic control tool⁴², and increased their support to the host communities. These solutions can also be applied in a future cyclone response, and be incorporated into a more comprehensive revision of the Cyclone Preparedness Plan.



LESSONS LEARNT – CASE STUDIES

In addition to the lessons learnt specifically in the past 24 months, the document review and key informant interviews undertaken in the course of this exercise also uncovered longer-term lessons learnt on specific aspects of expanding the CPP early warning systems into the Rohingya refugee camps. Three case studies on these specific aspects are presented below.



Gender-sensitive early warning and empowering women volunteers

Unless they are gender-responsive, early warning systems may not be effective in providing understandable, timely, and actionable warning to all people at risk. As defined by the first Multi-Hazard Early Warning Conference⁴³, "...a people-centred multi-hazard early warning system empowers individuals and communities threatened by hazards to act in sufficient time and in an appropriate manner..." In this approach, local communities and most vulnerable groups are counted as key co-owners and end users of early warning systems. However, as pointed out in the Committee on the Elimination of Discrimination of Women's general recommendations on the gender aspects of DRR⁴⁴, early warning systems often fail to consider the accessibility needs of diverse groups of women – and that it is vital to ensure that early warning information is provided in an accessible manner and institutionalising women's leadership in preparedness and early warning.

Sociocultural norms hinder Rohingya women's access to risk knowledge, early warning, and participation in cyclone preparedness. Traditional cultural practices among the Rohingya, particularly purdah – seclusion – restrict Rohingya women from participating in public life including education, community women's groups, and volunteering schemes⁴⁵, limiting their opportunities to participate in and help lead cyclone preparedness activities. The same norms limit Rohingya women and girls' exposure to the Chittagonian dialect used in the vicinity of the camps, making them less likely than men to understand what's being said in a conversation with people from the host community or in a Bangladeshi news broadcast. From an early warning perspective, the expectation that Rohingya women should stay at home specifically limits their exposure to risk information, participation in risk education and communication activities and their likelihood of receiving early warning.

As a long-standing volunteer programme in conservative communities, the CPP has adapted in order to engage women as volunteers and reach women at risk. While distinct, Bangladeshi and Rohingya cultures share common religious and social touchstones that contribute to constraining women and girls' lives and exacerbating their socioeconomic vulnerability. This includes the practice of purdah. Although less strictly practiced in Bangladesh at present, purdah remains a barrier to women's participation in disaster management and discourages women and girls from going out to seek information or safe cyclone shelter⁴⁶. This has led to devastating gendered impacts of certain disasters; 90% of the 140,000 people who died during the 1991 Bangladesh Cyclone were women or girls⁴⁷.

³⁴ See "September 2019 Teknaf Rains: Lessons Learnt" and the "ISCG Cyclone Amphan After Action Review June 2020"; demonstrated by the lack of reference to the ISCG in the Ukhiya and Teknaf Upazila Cyclone Contingency Plans

³⁵ For more information, see "Cyclone Lessons Learnt report 2018", BDRCS, American Red Cross, IFRC and UNDP. 2019.

³⁶ See "September 2019 Teknaf Rains: Lessons Learnt" and the "ISCG Cyclone Amphan After Action Review June 2020".

³⁷ See "Workshop Report, Cyclone Preparedness Stakeholder Workshop Sept 2019"; the point is also demonstrated by the lack of information on RRRRC focal points in the Upazila level Cyclone Contingency Plans (see figure 6 – note that the facsimile in figure 6 gives the wrong designations for Mr Abu Hena Mostafa Kamal and Md Iman Hossain, whose actual designations are, respectively, BDRCS Secretary Cox's Bazar and BDRCS Unit Member, Teknaf).

³⁸ See "ISCG Cyclone Fani Lessons Learnt Report May 2019", "September 2019 Teknaf Rains: Lessons Learnt", "ISCG Cyclone Bulbul After Action Review December 2019" and the "ISCG Cyclone Amphan After Action Review June 2020".

³⁹ See "ISCG Cyclone Response Plan (November 2018)" and "Extreme Weather and Disaster Preparedness in the Rohingya Refugee Response: 2018 Cyclone Preparedness Lessons Learnt", American Red Cross, BDRCS, IFRC and UNDP. 2019.

⁴⁰ See "September 2019 Teknaf Rains: Lessons Learnt", UNDP. 2019.

⁴¹ See ISCG EPWG Teknaf SIMEX Debrief and ISCG EPWG Simulation Exercise – 25 September – KBE – Debriefing.

⁴² See <https://insight.wfp.org/saving-lives-with-humanitarian-access-project-6278b3b79a>.

⁴³ See "Multi-Hazard Early Warning Systems: A Checklist", WMO. 2018.

⁴⁴ See "General Recommendation No. 37 on Gender-related dimensions of disaster risk reduction in the context of climate change", CEDAW. 2018.

⁴⁵ See "Strengthening Gender Analysis", ACAPS. 2019.

⁴⁶ See "Bangladesh's Disaster Management Lessons Learnt 2005 – 2015", MoDMR. 2015.

⁴⁷ See "Gender differences in human loss and vulnerability in natural disasters: a case study from Bangladesh" in the Indian Journal of Gender Studies 2(2):171–193, Ikeda K. 1995.

After the 1991 cyclone it was recognised that particular efforts were needed to engage women volunteers – prompting requirements that all units should have a minimum of one third women volunteers. Accordingly, the unit teams were expanded to include two women volunteers in 1994 and another three women volunteers in 2006. Women volunteers are trained and assigned specific disaster management duties in the same way as male volunteers but are also assigned responsibility for providing help to other women.

The expansion of the CPP into the Rohingya refugee camps offered an opportunity to take a more gender-responsive approach to early warning dissemination from the start. When expanding the CPP into the camps, Government of Bangladesh and the BDRCS - recognising the disproportionate vulnerability of Rohingya women - built on experiences from engaging women as CPP volunteers in Bangladeshi communities. This helped ensure that lessons learnt were applied to the CPP structure established in the camps from the beginning, starting with training of an equal number of men and women trainers in 2018. When establishing the first camp CPP units in 2018, unit size was increased to 20 volunteers with equal numbers of men and women, rather than replicating the usual ratio of 15 volunteers per unit with one third women volunteers. The Prime Minister of Bangladesh, Sheikh Hasina, has recently requested recruitment of additional 5 female volunteers in all CPP Units throughout the country to achieve gender parity.

Training is not enough – women volunteers must be supported in their task by the community and the volunteer management structure. Despite efforts to be more gender-inclusive from the start, the CPP still faces challenges in reaching Rohingya women and engaging them as volunteers. The 2019/2020 DRR KAP survey found that women were less likely to have ever seen a cyclone early warning flag⁴⁹, despite five early warning events in the past 2.5 years. After Action Review also showed that a lower percentage of female volunteers mobilized for early warning dissemination during cyclone Amphan, making up only 20-25% of the total number of volunteers mobilized at each stage. Recognising these challenges, the CPP and RCRC Movement are therefore hiring 34 female CPP camp focal points from the host community to work alongside the 34 male focal points already in place, for the specific purpose of strengthening the gender-responsiveness of the CPP's operations in the camps.



Photo 3: CPP camp volunteers are in a mock drill, staging primary First Aid to wounded at Kutupalong camp. @BDRCS/PPP/IFRC



The collaborative approach

The expansion of the CPP in the Rohingya refugee camps has only been possible to accomplish due to collaboration within a broad coalition of government agencies, UN entities and non-governmental organizations. As noted in the guidance documents on the Strategic Approach to capacity development for implementing the Sendai Framework for disaster risk reduction⁴⁹, “the compressed timelines and response-focused mandates associated with post-disaster humanitarian work can inhibit opportunities to promote and/or support capacity development for disaster risk reduction.” In the Rohingya refugee response, the severity of monsoon and cyclone risks in the refugee camps is broadly recognised and has driven the inclusion of DRR within the work of the humanitarian sectors. This recognition has, however, largely supported preparedness mainstreaming in the different sectors’ traditional response, rather than assumption of responsibility for non-humanitarian cyclone preparedness functions. In the case of cyclone early warning in and around the Rohingya camps, however, a broad coalition of stakeholders have come together to enhance the capacity of the CPP:

- **Ministry of Disaster Management and Relief, including the CPP structure at national and district level:** providing strategic direction and oversight to the expansion process.
- **The District Administration and the Office of the RRRC:** facilitating operational coordination within the broader government disaster management system in the district, and within the camps.
- **RCRC Movement (e.g., BDRCS, IFRC, American Red Cross, German Red Cross):** providing high-quality, well-monitored core training for volunteers and capacity development for partners.
- **ISCG and sector coordinators:** coordinating humanitarian cyclone response preparedness.
- **SMS agencies and NGOs (e.g., IOM, UNHCR, Danish Refugee Council, ActionAid, and others):** identification of volunteers, practical support to in-camp activities, and performance monitoring.
- **CwC partners (e.g., BBC MA, Translators without Borders, Internews, WHO, IOM):** development and implementation of information, education, communication, and community engagement.
- **Humanitarian partners (e.g., UNICEF, UNHCR, MOAS):** providing non-core training and equipment to volunteers for multi-hazard preparedness, including for COVID-19, flooding, and landslides.
- **Development partners (e.g., UNDP, UN Women):** providing localized technical and/or coordination support to humanitarian and local government partners on early warning and preparedness issues.
- **Donors (e.g., USPRM, USAID, UKAID, Global Affairs Canada, ECHO):** providing predictable funding or technical deployments directly to CPP expansion or important supporting mechanisms such as the CwC Common Services Platform, the UNDP DRR Technical Advisory Unit, and sector coordination.

⁴⁸ See «Voices from the Vulnerable Communities: Disaster Risk Management KAP Survey”. IFRC, IOM, REACH, Translators Without Borders, UNDP and UNHCR. 2020.

⁴⁹ See «Strategic approach to capacity development for implementation of the Sendai Framework for Disaster Risk Reduction: a vision of risk-informed sustainable development by 2030”, UNDRR. 2018.

Frequent communication, shared vision and complementarity of efforts are vital. In some cases – such as with Translators without Borders, who supports the CPP use of Rohingya language – pre-existing agreements between the RCRC movement and other actors enabled rapid action through formal partnerships. However, many of the partnerships that support the CPP even now began simply with a shared understanding of the cyclone risk and willingness to take urgent action in 2018. That these partnerships remain stable despite formalization has been possible due to constructive communication between the RCRC Movement, ISCG, agencies and donors. The willingness of most partners to focus on a specific area of added value, rather than launching competing projects, has created a collaborative environment.

Government leadership and guidance has been critically important at every step of the way. Experience from Cyclone Mora in 2017 spurred early recognition at high levels of the MoDMR that the rapidly expanding refugee camp population are at high risk of impacts from cyclones making landfall nearby. This allowed the Government of Bangladesh and BDRCS to initiate dialogue with humanitarian partners on collaboration within the first six months of the crisis, and formally approve the establishment and training of CPP units consisting of Rohingya volunteers before the 2018 summer cyclone season. Initial discussion with ISCG and partners in February 2018 spurred subsequent cyclone preparedness stakeholder workshops jointly organized by government, BDRCS and ISCG every six months until the COVID-19 outbreak. These workshops allowed the CPP to regularly provide updates to key stakeholders and bring evolving issues up for discussion with decision-makers.

The willingness of humanitarian sectors, agencies, and partners to support the CPP enabled adaptation to the camp context and rapid establishment of units on the ground. At the beginning of 2018, the willingness of key sectors including protection, shelter, CwC and SMS, as well as long-term MoDMR partner UNDP, to work with the RCRC Movement to analyse the early warning context for the camp was crucial to ensure the right technical approach from the very beginning. From then and up to the present day, sustained SMSD sector engagement has allowed the CPP, SMS agencies IOM and UNHCR, and the SMS NGO partners to coordinate volunteer recruitment and training curricula, and jointly identify needs for improvement. Similarly, the CwC Working Group and CwC partners have since summer 2018 worked closely with the CPP to develop cyclone early warning-related materials and timely, concerted risk information and awareness activities. Without the willingness of these sectors to take on tasks more closely related to traditional DRR than humanitarian emergency response, expansion of the CPP would have been far more complicated and taken far longer.

In the absence of community representation in all Camp Disaster Management Committees, CPP provides the only all-camps structure for the community members to partner with government and humanitarians on cyclone preparedness issues. Bangladeshi local Disaster Management Committees include government, NGO, and community representatives, taking an all of society approach as recommended by the Sendai Framework for Disaster Risk Reduction. The composition of the new Camp Disaster Management Committees, however, largely tend toward only government and humanitarian members. While it makes sense to await government guidance on general community representation structures in the camps before formalizing community representation in camp disaster management committees, a participation gap persists in the meantime. At present, the CPP remains the only community disaster management structure present in all camps. It may be worth exploring how the CPP structure can be utilized to better enable the refugee communities to contribute to cyclone response preparedness processes at catchment area, upazila and district level.

Working together for collective action on disaster preparedness and readiness



Figure 6: A selection of partners contributing to the expansion and capacity enhancement of the CPP in the Rohingya refugee camps and the host communities.



Photo 4. COVID-19 situation halted planned capacity enhancement initiative at camps, however in new-normal situation following appropriate precautionary measures CPP camp volunteers are attending orientation/training organized by BDRCS/CPP in coordination with SMS and CiC. @BDRCS/CPP/IFRC

Multi-hazard early warning and preparedness in the context of COVID-19

The emergence and pandemic spread of COVID-19 in early 2020 made the disaster season risk scenario in the Rohingya refugee camps more complex. Spreading internationally from December 2019, COVID-19 transmits was recognised early on as transmitting more easily in crowded conditions where people were unable to keep physical distance from each other. These forced refugees seeking risk information, alternate shelter during storms and monsoon rains, and assistance when affected to weigh the risks related to the natural hazard versus the risks related to COVID-19 as a biological hazard.

The limitations placed on activities in the refugee camps due to COVID-19 containment measures significantly affected pre-seasonal cyclone and monsoon risk reduction activities. The April 8th circular from the office of the RRRC ordered downscaling of humanitarian activities to critical services and assistance only. Consequently, the range of activities and humanitarian staff allowed in the camps was significantly reduced. Distributions, health-related activities, and the provision of emergency response to natural hazard incidents and fire was explicitly still allowed; however, neither CPP preparedness activities, camp preparedness planning nor site improvement activities mitigating monsoon risks were included in the list of permitted activities. Resumption of CPP activities was successfully negotiated with the office of the RRRC by the BDRCS, but the reduction of the humanitarian presence in the camps meant that partner capacity to support pre-seasonal preparedness in the field was limited compared to previous years. The CPP was also unable to utilize its usual public awareness methods (such as mock drills), to avoid exacerbating transmission.

Deployment of CPP volunteers to support the District and Upazila Administration was found to be most effective for COVID-19 prevention. From April to December 2020, UNDP deployed a total of 50 CPP volunteers to the Deputy Commissioner (DC) office and 8 Upazila Nirbahi Officer (UNO) offices in Cox's Bazar to support local government COVID-19 response initiatives. CPP volunteers were looking after the handwashing facilities, assisting people in using hand sanitizer and masks, checking temperature, maintaining register, awareness raising etc. These CPP volunteers were also utilized for monsoon early warning. The local government and communities appreciated the deployment and service of CPP volunteers for COVID-19 prevention. The deployment of CPP volunteers can be further replicated.

With urgent community engagement needs arising due to COVID-19, CPP camp volunteers were recognised as trusted and effective conduits for community engagement. As humanitarian actors downscaled their presence in the camps, fewer field staff were available on the ground to support community engagement activities. In their absence, the CPP structure and the camp volunteers were recognised as an invaluable resource in community engagement on COVID-19. Consequently, CPP camp volunteers were provided training on key messages to the community on COVID-19 and how to protect themselves, helped relay needs back to humanitarians, and represented their communities in go-see visits to new health facilities.

The humanitarian community recognised a duty of care and collaborated to provide the CPP camp volunteers with personal protective equipment (PPE). Duty of care for CPP and disaster management volunteers has been a topic of interest to the RCRC Movement since early 2018, when camp cyclone preparedness stakeholders first convened to coordinate plans. In the context of COVID-19, the personal risk to CPP camp volunteers were recognised early on and PPE provided by UNICEF.

With activities limited and refugees staying at home due to fear of COVID-19 transmission, new channels for communicating awareness and early warning messages were used. During pre-seasonal awareness activities and the initial stages of an early warning event, the CPP method relies on volunteers being able to go out and disseminate early warning to and through community members in public spaces. This includes both verbal and visual (i.e., flag) communication. Because of COVID-19, fewer people were moving in public and those who were, were practicing physical distancing during the cyclone Amphan early warning event. To compensate, CPP worked with humanitarian actors in the Protection sector to mobilize imams in the camp to spread early warning information through mosque loudspeakers.



Photo 5. Handling multiple crisis is always challenging but CPP camp volunteers tried to overcome the pitfalls; CPP volunteers performed fire simulation at Camp 19 amid COVID-19 situation following appropriate precautionary measures. @BDRCS/ CPP/IFRC



RECOMMENDATIONS FOR ENHANCING CYCLONE EARLY WARNING AND PREPAREDNESS FOR RESPONSE IN THE ROHINGYA REFUGEE CAMPS AND HOST COMMUNITIES

Recommendations are grouped and presented in four groups corresponding to the four elements of end-to-end, people-centred early warning systems⁵⁰. The recommendations are directed towards government and non-government CPP stakeholders at national and Cox's Bazar district level.

Disaster Risk Knowledge

Strengthen decision-makers' understanding of the vulnerabilities of camp household shelters and community facilities in all CPP stakeholder organisations and ensure that planning assumptions regarding the refugees' location at landfall are aligned in all plans. Due to the difference between the camp cyclone risk scenario and that of Bangladeshi coastal settlements, stakeholders' opinions about the severity of cyclone-related wind risks and safety of camp structures differ considerably. To prevent loss of life or health, the humanitarian, development, and government stakeholders are strongly recommended to utilize internal capacities⁵¹ as well national academic partners to assess cyclone risks jointly and thoroughly to the camp population. This risk assessment should include assessment of risks related to the wind's effect on the building stock. Considering the semi-urban nature of the camps, the tools collected by the [Making Cities Resilient Campaign](#) could possibly be adapted for this purpose. On the basis of this assessment, the District Administration, the Office of the RRRC and the ISCG are recommended to include an aligned Situation Analysis and Risk Scenario for the Rohingya Refugee Camps in their cyclone contingency/response plans, as recommended for both [national preparedness for response](#) and the [humanitarian emergency response preparedness](#).

CPP stakeholders should urgently scale up training for field staff on how to communicate with refugees effectively and responsibly about cyclone risk and household preparedness actions. In the absence of access to cyclone shelters, actionable information is the most basic and important support that can be provided to the refugees, so they can make informed decisions during and after landfall. Failure to effectively cascade the cyclone-related training provided by the CwC sector has been known since 2018, and the 2019/2020 DRR KAP report shows gaps in refugees' knowledge on what to do at the third flag. Field staff deviating from the agreed messaging due to uncertainty and/or discomfort with the message further reduced refugees' access to correct information in 2019. Following the recommendations emerging from the 2019 all cyclone awareness campaigns, ToT and field training on cyclone-related community engagement should therefore be improved and focus on the skills necessary to answer questions clearly and in-depth. Training should address discomfort with the messaging. Provision of information about cyclone risk and which preparedness measures are or aren't in place needs to be understood as aspect of accountability to the refugees by all humanitarian staff.

The CPP should collaborate with the CwC Cyclone Preparedness Technical Working Group to formulate a well-monitored inter-agency cyclone risk and preparedness community engagement work plan. Reports of misinformation as well as documented gaps in awareness, indicate that there are critical knowledge gaps among refugees and humanitarians regarding the cyclone early warning system, cyclone risk reduction and response plans. These findings indicate that current awareness-raising efforts are not adequately scaled to ensure that all people living in the camps have access to correct and actionable information about cyclone risk and preparedness. A well-monitored collective community engagement plan is required to assure adequate coverage, as is agreement on key messages covering not only cyclone risk and early warning, but also what kind of response and relief refugees can anticipate. Regular KAP surveys with designs informed by a lesson learnt analysis of the 2019/2020 KAP enhanced and enhanced qualitative data collection will help evaluate the efficacy of community engagement efforts.

Detection, monitoring, analysis and forecasting of the hazards and possible consequence

The humanitarian stakeholders, including NGOs, should provide reminders to staff prior to the cyclone seasons about appropriate sources and information products regarding cyclone formation and forecasting. Experience from the last two years has shown that weather information is sometimes shared uncritically in Cox's Bazar, including "click-bait" articles and specialist information products that can be misinterpreted. There is a clear need – particularly in light of frequent staff turnover – to provide guidance to humanitarian staff on reliable sources and appropriate information products. A briefing note on [depressions and cyclones and forecasting information](#) was developed at the suggestion of the Cyclone Fani After-Action Review specifically for the purpose of periodic circulation. This briefing note should be updated to reflect the ISCG cyclone communication protocol and circulated before and at the beginning of each cyclone season. Existing RCRC Movement and UN agency partnerships with the BMD should be leveraged to develop training on critical reading of weather information. This kind of training should be targeted not just towards agency and NGO emergency focal points and new ISCG staff, but also UNDSS staff and the NGO Platform security WhatsApp group focal points.

CPP should counter mistrust in the early warning messages by continuing engagement after early warning events and collaborating with the CwC Working Group to develop messaging on why actual impacts may vary between events. Concerns have been raised that multiple cyclone early warning events – including hoisting of three flags during Cyclone Amphan – have now occurred in the camps without significant impacts, and that this might reduce the population's responsiveness to future early warnings. While additional, impact-based early warning messages could be added to the adapted early warning messages used in the camps, this is not a good solution for the camps as it would require retraining of volunteers, could compound existing confusion/reluctance among field workers regarding the messaging, and would require a more dynamic early warning dissemination structure as impact-related messaging could change rapidly. A more context-appropriate option is to communicate more clearly to the communities about the fact that since storm impacts are variable and at times unpredictable the flags are sometimes raised as a precaution. This communication should take place between and particularly after early warning events. The danger of disregarding warnings and varying impacts may also be incorporated into the mock drills CPP performs for public awareness as well as ToTs on community engagement around cyclone preparedness and early warning.

Warning dissemination and communication

Government and humanitarian CPP stakeholders should work together to strengthen channels for early warning communication in and around the camps, including volunteer and field staff access to and capacity for using specific technologies. The mobile network restrictions in and around the Rohingya refugee camp are significantly affecting the day-to-day life of both refugees and host community members as well as humanitarian operations. In the context of cyclone early warning, there is an urgent need to put in place reliable communication channels that ensure that early warning can be rapidly cascaded from the CPP Zonal Office to the community level. Some of this can be achieved by increasing the number of flagpoles in the camps and CPP units in the host communities, improving camp preparedness plans, and by utilizing relay volunteers (as the CPP used to do before cell phones were common). However, travel times between the most remote areas of the refugee camps, nearby host communities, and Cox's Bazar town have the potential to introduce significant delays, especially at times where CiCs or humanitarian staff with phones or VHF radios are not present in the camp to help compensate. Making VHF radio accessible in and around the camps could help speed the dissemination of early warnings when mobile coverage is down.

The RCRC Movement should work with CiCs, CPP focal points, CPP camp volunteers and SMS partners to build mutual respect and clarify volunteers' roles and responsibilities, including message dissemination, flag hoisting and flag lowering. While the timeliness of dissemination and flag hoisting/lowering has improved noticeably over the past two years, there is still scope to improve further. Some differences in understanding regarding the role of the CPP Camp Focal Points were reported. Considering the continued expansion of the number of CPP camp volunteers and the establishment of the Camp Focal Point role, it will be important to ensure that all camp-level CPP stakeholders understand who is trained to do what, and which tasks volunteers and focal points can and cannot be assigned to. Ensuring respect for the voluntary nature of their engagement must be emphasised. Working with male CiCs and CPP camp volunteers to empower women volunteers and the 34 additional female Camp Focal Points currently under recruitment should also be prioritized.

⁵⁰ World Meteorological Organization.

⁵¹ Such as the National Disaster Management Research and Training Institute, the ISCG Shelter sector and the ISCG Natural Hazards Task Force.

The CPP should request actors engaged in host community DRR activities to collaborate more closely with the CPP and Upazila/Union DMCs to raise host community awareness of cyclone risk and early warning, including how to stay safe in cyclone shelters under COVID-19 conditions. The 2019/2020 DRR KAP survey has revealed knowledge gaps among the Bangladeshi population with regards to household preparedness and the early warning system. The DRR Activities Mapping Database for Cox's Bazar⁵² indicates that at least twelve UN agencies and NGOs had ongoing DRR activities supporting IEC and institutional capacity development in Ukhiya and/or Teknaf at the end of 2019. Although some organisations may have changed their projects due to COVID-19, a collective effort by those who do remain has the potential to make a significant impact. Since coordination among non-government partners has been noted to contribute to pressure on DMCs in the district⁵³, the effort should be cohesive and in line with the priorities of the local DMC. The BDRCS could support the District DMC jointly with UNDP to coordinate UN/NGO support to host community cyclone awareness activities. In addition to traditional awareness activities of the CPP, the Ukhiya and Teknaf Upazila Disaster Management Plans suggest awareness rallies and marketplace discussions, activities in schools and madrasas, provision of trainings to imams, women's courtyard meetings, awareness-raising among local fishermen, preparation of ward-level contingency plans and projection of information videos in public places. These options were identified prior to COVID-19 and should be adapted in execution and content, including messaging related to preventing transmission in cyclone shelters.

To strengthen accountability and continuity, the protocol for information sharing from the CPP to ISCG through the RCRC Movement should be documented within the District Contingency Plan and the ISCG 72-Hour Response Plan. The current practice of the RCRC Movement sharing information from CPP to ISCG during the pre-alert/alert phase capitalizes on the RCRC Movement's stake in the Cyclone Preparedness Programme and close dialogue with government partners including the BMD. It ensures that the RRRRC, ISCG and SMSD sector coordinators are provided with up-to-date issues such as government/humanitarian coordination, relief to the host community, dead body management and traffic control on the major Cox's Bazar-to-camp roads in the aftermath of a cyclone.

Institutionalize and strengthen inter-operability of the CPP, the RCRC Movement, the RRRRC and the ISCG contingency/response plans, and create opportunities for staff and volunteers to exercise plans and drill for response together. The ISCG 72-hour response plan, the CPP camp structure and the RCRC Contingency Plan for the camps are largely complementary of each other, the leadership of the Office of the RRRRC within the camps, and the oversight of the Deputy Commissioner on disaster response issues. However, ambiguity and lack of clarity remains in several key areas, including humanitarian/ government coordination and needs assessment in the host communities. A joint, systematic examination of plans for inter-operability and a functional simulation exercise at Cox's Bazar level could help facilitate dialogue to close the gaps and significantly strengthen preparedness for a well-coordinated cyclone response. The RCRC Movement should, in particular, seek (a) clarification from the ISCG regarding expectations towards the Movement's participation in humanitarian response coordination mechanisms such as the HCC at Cox's Bazar and field level, and (b) the collaboration of SMS actors on pre-seasonal activities, inventory checks and drills.

Government, humanitarian, and development partners should intensify capacity development support for the office of the RRRRC, Camp Disaster Management Committees, and the Upazila Disaster Management Committees, to strengthen preparedness for cyclone response in and around the Rohingya refugee camps. The Office of the RRRRC - including the CiCs - and the Upazila Disaster Management Committees perform critical coordination functions. The MoDMR has, moreover, expressed high expectations towards the CiCs with regards to preventing loss of lives through committed leadership of Camp Disaster Management Committees. The humanitarian Capacity-Sharing Initiative and the Disaster Risk Management in Cox's Bazar Programme have both initiated capacity enhancement of respectively the RRRRC-led structure and Upazila Disaster Management Committees on DRR issues in 2019. These efforts can be built upon with training for upazila and camp Disaster Management Committee members, development of a contingency plan for the Office of the RRRRC, standardization of camp Disaster Management Committees with refugee community involvement, development of upazila-level coordination SOPs, and joint field exercises to test camp- and upazila-level contingency plans.

Special recommendation: Disaster risk reduction must be considered a critical humanitarian activity in at-risk refugee and displaced people's camps

When towns and cities come into being, they are born on the best, most productive, most protected, and most connected land. As they expand and fewer desirable areas are settled, their maps increasingly reflect socioeconomic inequalities within the community. The multi-hazard disaster risk scenario of the Rohingya refugee camps starkly illustrates how, in a context where land and space is at a premium, the only land available to shelter one of the world's most vulnerable populations is also some of the most high-risk.

While DRR has been a priority for all response stakeholders since the 2017 influx, this has not always triggered adequate funding or agreement on concrete solutions. When COVID-19 containment measures limited humanitarian activities, DRR activities were not included on the list of critical activities allowed to continue. This contributed to a disruption of cyclone season preparedness activities and a significant increase in the number of households affected by monsoon and weather.

The experience from Cox's Bazar demonstrates that **in refugee and displaced people's camps at high risk of disasters, disaster risk reduction must be considered a critical humanitarian activity.** If not, the costs are borne by the refugees and displaced people directly:

- If activities and research which increase understanding of hazards, vulnerabilities, and risks in areas hosting refugees and displaced people are not implemented in a timely way, humanitarian response can do inadvertent harm by increasing exposure, accelerating disaster risk drivers, and failing to engage with the people at risk.
- If risk governance is not put in place for refugee and displaced people's camps, the disaster risk management roles and responsibilities of government, humanitarians and other actors remain undefined, accountability unclear, and multi-stakeholder risk reduction un-institutionalized.
- If activities which reduce risk – such as household shelter upgrades, site improvements, risk education, early warning or landscape restoration – are not fully funded and implemented in a timely manner, it undermines the safety of the refugees and displaced people, their assets and the settlement, leading to direct negative impacts on health, well-being and resilience.
- If national duty-bearers and humanitarian do not prepare for response to extreme weather and disasters, these shocks can act as crisis multipliers by disrupting refugees and displaced people's access to life-saving aid, basic services, and safe shelter.

⁵² Compiled and circulated by UNDP on December 30th, 2019, available from UNDP Cox's Bazar Crisis Response Office.

⁵³ See "Disaster Risk Management in Cox's Bazar: District Disaster Management Lessons Learnt", UNDP, 2020.

Annex 1: ToR 2020 Cyclone Preparedness Lessons Learnt Exercise

Background

The size, hazard exposure, and vulnerability of the camps in Cox's Bazar has necessitated significant investment in disaster risk management measures. To increase understanding of the risk, enable development of a cohesive system of disaster management measures and compensate for staff turnover, stakeholders have nurtured a culture of lessons learning. This commitment has produced a number of lessons learnt reports, including the 2018 UNDP monsoon report, the UNDP/Bangladesh Red Crescent Society/American Red Cross/IFRC cyclone preparedness report, the 2018 and 2019 Category 1 incident analysis reports by IOM, and the ISCG event-specific after-action reports.

Building on the lessons captured in these and other public documents, as well as the internal documentation of the Red Cross and Red Crescent Movement, BDRCS, American Red Cross, IFRC and UNDP will now be conducting an additional round of lessons learnt interviews and produce a Cyclone Preparedness Lessons Learnt report for 2019 and the first half of 2020.

An integrated partner of the IFRC and partner to the BDRCS and the Ministry of Disaster Management and Relief, the American Red Cross supports the expansion of the Cyclone Preparedness Programme. Serving as technical advisor to ISCG on disaster risk reduction-related issues, UNDP maintains a Cox's Bazar-based DRR Technical Advisory Unit to support the humanitarian community in managing extreme weather and disaster risk.

Purpose

The present Cyclone Preparedness Lessons Learnt activity aims to capture the lessons learnt from capacity enhancement of the Cyclone Preparedness Programme in the Rohingya camps and host communities, including its linkages with the wider cycle preparedness structures of the Government of Bangladesh and the ISCG. It covers the period January 2019 to June 2020, and cyclone preparedness lessons learnt are contextualized against monsoon and pandemic-related experiences as well. The exercise will not delve in-depth into the lessons learnt by the ISCG or its sectors.

Methodology

The lessons learnt will be analysed through desk review and targeted interviews with CPP stakeholders. The draft report will be shared with the CPP before finalization. Interviews and drafting will be facilitated by a consultant with Cox's Bazar experience, hired by the American Red Cross. The consultant will work remotely, under the oversight of the American Red Cross, IFRC, and UNDP.

Key Informants

BDRCS, IFRC and other RC/RC staff, selected sector coordinators and ISCG staff, SMS and CwC partners.

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Annex 2: Internal and Government Official KII Guide

1. Could you please state your designation, how long you have been in Cox's Bazar, and your role in the natural disaster preparedness and response work of the CPP or Red Cross/Red Crescent Movement.
2. What was your experience of Cyclone Fani (April 2019)? What actions did your organization take, and what limitations (including information) did you face? Did you change any of your practices afterwards?
3. What was your experience of Cyclone Bulbul (November 2019)? What actions did you and your organization take, and what limitations (including information) did you face? Did you change any of your practices afterwards?
4. What was your experience of Cyclone Amphan (May 2020)? What actions did you and your organization take, and what limitations (including information) did you face? Did you change any of your practices afterwards?
5. How did the Cyclone Preparedness Programme camp volunteers perform during Cyclone Fani, Bulbul, and Amphan, in terms of effectively communicating early warning? What worked as planned and what can be improved?
6. In your opinion, how has the Red Cross Red Crescent collaboration with UN and government on the expansion of CPP worked this year? What improved compared to 2018 and what can still be improved further?
7. Are the cyclone preparedness plans and the CPP activities currently gender responsive? What can be done to improve further?
8. How has the disruption to cell phone service in and around the camp affected CPP expansion and cyclone preparedness and response in 2019 and 2020?
9. Did you participate in any of the disaster simulation exercises organized in autumn 2019, and what lessons learnt did you personally take away from these exercises? Have the collective lessons learnt been followed up on?
10. Risk reduction and preparedness for response to covid-19 is now a top priority. Do you see any implication from covid-19 on the RC/RC capacity to implement its cyclone preparedness plans? Do you see any lessons learnt so far in the covid-19 activities which can be applied to improve cyclone preparedness?
11. What do you think needs to be done differently to further improve cyclone preparedness in the camps in the coming years? What practices should be continued?
12. Is there something I have not asked you about, which you would like to highlight or stress in terms of lessons learnt from preparedness for cyclone and operations in the future?

Annex 3: External KII Guide

The present Cyclone Preparedness Lessons Learnt activity aims to capture the lessons learnt from capacity enhancement of the Cyclone Preparedness Programme in the Rohingya Refugee camp settlements and host communities, including its linkages with the wider cycle preparedness structures of the Government of Bangladesh and the ISCG.

The interview will start with a few questions about the CPP and the inter-agency collaboration supporting the expansion of the CPP in the camps. After that, I will ask some questions about the general cyclone preparedness and response operational conditions, to be able to contextualize findings.

1. Do you think the performance and capacity of the Cyclone Preparedness Programme camp volunteers has changed between the end of 2018 and today, in terms of effectively communicating early warning? What worked as planned and what can be improved?

(Subsequent prompt, if necessary: did you see any difference between Cyclone Fani, Cyclone Bulbul and Cyclone Amphan, in terms of effectively communicating early warning?)

2. The expansion of the Cyclone Preparedness Programme is a collaborative effort involving the government, the Red Cross Red Crescent movement, UN, and NGO partners. In your opinion, how has this collaboration worked in 2019 and 2020? What improved compared to 2018 and what can still be improved further?
3. How has the disruption to cell phone service in and around the camp affected disaster preparedness and response in 2019 and 2020?
4. Did you participate in any of the disaster simulation exercises organized in autumn 2019, and what lessons learnt did you personally take away from these exercises? Have the collective lessons learnt been followed up on?
5. Are the cyclone preparedness plans and structures currently gender responsive? What can be done to improve further?
6. What do you think needs to be done differently to further improve cyclone preparedness in the camps in the coming years? What practices should be continued?
7. Risk reduction and response to covid-19 is now a top priority. What have been the implications of covid-19 on preparedness activities? Do you see any lessons learnt so far in the covid-19 activities which can be applied to improve cyclone preparedness?
8. Is there something I have not asked you about, which you would like to highlight or stress in terms of lessons learnt from preparedness for cyclone and operations in the future?

Annex 4: KII, Cyclone preparedness lessons learnt 2019-2020

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Annex 5: CPP Poster, 2021



ঘূর্ণিঝড় প্রস্তুতি কর্মসূচি (সিপিপি)
CYCLONE PREPAREDNESS PROGRAMME (CPP)
A Joint Programme of Government of Bangladesh and Bangladesh Red Crescent Society



**EARLY WARNING AND
EARLY ACTION FOR
900,000+ REFUGEES
IN COX'S BAZAR CAMP
SETTLEMENTS**

3,400	2,600+	34	900,000+	2,000+
CPP camp volunteers training and equipping completed by 2019; refresher trainings on multi-hazard preparedness continuing	out of targeted 3,400 CPP camp volunteers received first aid trainings by 2020; balance trainings resumed following relaxation of the pandemic restrictions in 2021	camps with CPP camp volunteer units; all camps to have 5 CPP units with 20 members with equal female and male representation to implement national early warning system and first response	camp residents covered with coordinated early warning system by CPP and multi-hazard preparedness activities in coordination with RRRRC, ISCG, UNHCR, IOM, UNDP, UNICEF and all site management support agencies	new female CPP host community volunteers in Cox's Bazar to be trained and equipped to support millions of host community residents

Steps to Success

- A macro level multi-hazard preparedness and cyclone early warning system in all camp settlements made functional within camp administration and coordination system and existing national framework of CPP
- Multi-hazard preparedness activities and training by CPP, BDRCS, American Red Cross and IFRC for CPP Camp Volunteers continue in all 34 camp settlements with endorsement and directives of MoDMR and RRRRC and in close coordination with ISCG, UNHCR, IOM, UNDP and site management support agencies through engagement of partner agency staff with a good command of Rohingya dialect and working experience in the camp settlements
- Representatives from Bangladesh Red Crescent, American Red Cross, IFRC, UNHCR, IOM, Communities (CwC) working group and Translators Without Borders were involved to ensure quality of trainings in Rohingya language
- Training of Trainers on the national cyclone early warning early action were provided to communicators from several organizations in partnership with Communication with Communities (CwC) working group, BBC Media Action, Translators Without Borders, IOM, UNHCR and UNDP in order to replicate training for staff/volunteers and further cascading at community level
- All-encompassing Early Warning coordination mechanisms have been set up with MoDMR, RRRRC, Camp in-Charges, ISCG and site management support agencies to reduce miscommunication and information delays
- Multi-hazard Risk Reduction initiatives have been expanded in the camp settlements in coordination with CPP Camp Volunteer Units, RRRRC, ISCG, UNHCR, IOM, UNDP and site management support agencies



To ensure effective early warning messaging, the Ministry of Disaster Management and Relief made some changes in the system in November 2018. The Comprehensive DRR and Community Resilience Building program is training CPP camp volunteers on the revised early warning system.



Signals 1-3
No flag. Verbal discussion on possibility of depression/cyclone formation.

Signal 4
One flag. Raise awareness on formation of cyclone and possibility of impact. Public address through megaphones and loudspeakers.

Signals 5-7
Two flags. Public address through megaphones and loudspeakers.

Signals 8-10 *
Three flags. Public address through megaphones and loudspeakers and use of static and hand sirens.

* adjusted specifically for camp settlements

The Cyclone Preparedness Programme (CPP) is working with stakeholders in camp settlements for collective action



BANGLADESH RED CRESCENT SOCIETY DISASTER RISK REDUCTION AND RESPONSE MANDATE

Established in 1973, Bangladesh Red Crescent Society (BDRCS) has been working to prevent and alleviate human suffering through rendering humanitarian services with its 68 district branches across the country, in line with international humanitarian standards and the seven fundamental principles of the global Red Cross Red Crescent network. BDRCS has several national commitments to promote disaster preparedness and response in Bangladesh. BDRCS's national mandate as stated in the country's Standing Orders on Disaster is to complement the government's emergency response efforts, and disaster preparedness plans and programs.

The most well-known of these programs is the Cyclone Preparedness Programme (CPP), a joint program of the Ministry of Disaster Management and Relief of the Government of Bangladesh and BDRCS. The expansion of CPP within camp settlements is being supported through the Coastal Disaster Risk Reduction Program, supported by American Red Cross and International Federation of Red Cross and Red Crescent Societies (IFRC). The program focuses on enhancing institutional and community capacities for disaster readiness.

THE UNDP DISASTER RISK REDUCTION AND RECOVERY MANDATE

UNDP's mandate to conduct operational activities in disaster mitigation, prevention and preparedness was laid out by the United Nations General Assembly in 1997 and an additional mandate to ensure inter-agency recovery preparedness was added by the United Nations Emergency Relief Coordinator in 2006.

In Bangladesh, UNDP is a long-standing partner of the Government of Bangladesh in implementing comprehensive disaster management and recovery programming and chairs the standing national Early Recovery cluster with the Government and co-chairs the Shelter cluster with IFRC. Prior UNDP disaster risk management activities in Cox's Bazar include disaster preparedness planning, flash flood and cyclone risk reduction, community-based landslide risk management, and cyclone and flash flood shelter recovery. In the Rohingya Crisis response, UNDP serves as technical advisor on disaster risk, preparedness, and risk reduction to the ISCG and the humanitarian community. As part of its Cox's Bazar sub-office, UNDP maintains a Disaster Risk Technical Advisory Unit.

Acknowledgement

We express our sincere gratitude to the United States of America State Department's Bureau of Population, Refugees and Migration (PRM) for supporting the implementation of CPP engagements in the camps and allowing us to conduct lessons learnt study to continue the collective effort. We also acknowledge the contribution from our partners and colleagues who volunteered spending time with us in producing the lessons learnt report that will contribute to wider humanitarian response in Cox's Bazar.

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