

Piloting Anticipatory Action for Cold Wave in Northern District in Bangladesh

Background:

Bangladesh has been facing mild-moderate-severe cold waves, held in January and February approximately every two years, especially in the Northern part with an average 12 to 4 degrees of Celsius. Considering the tropical country these extreme weather events often have severe impacts hindering the health and livelihood status of the most vulnerable people. Fog and winter rain reduce crops yields so that the income people earn from these also declined. Cold waves can also have significant health impacts, contributing to acute respiratory infection, fever, pneumonia, asthma, coughs and skin diseases, especially among the elderly and children. But cold waves are not overlooked hazards, as a pioneer INGO Save the Children Bangladesh Country Office is piloting an Anticipatory Action project focused on the Cold Wave aiming to mitigate health hazards and protect the livelihoods of vulnerable families. With the technical support from START FOREWARN and RIMES, SC implemented the project through MJSKS in two sub-districts in the Northern part of Bangladesh from 15 December 2022.



Winter Kits Distribution, Bazra Union, Ulipur, Kurigram

Categorization of Cold Wave

According to Bangladesh Meteorological Department are ;

Mild cold wave (when minimum temperature lies between 8-10°C),

Moderate cold wave (when minimum temperature lies 6-8°C)

Severe cold Wave (when minimum temperature goes below than 6

Severe cold wave (when minimum temperature goes 6°C) respectively.

Cold Wave Vulnerability and Impact in Northern Districts:

Increased fire incidents due to people warming themselves with a fire source. Medical facilities are not always available to people, union health complex does not have the capacity to treat the surge of people affected by cold and the clinics in the locality are not open 24-hour. Fog decreases transportation options for people, affecting livelihoods and other aspects of life. The key impacts are as follows:

- Increased cold-related disease like as cold fever especially for elderly and children.
- Hindrance in transportation and communication at local level.
- Daily laborers became unemployed.
- Increased market price of daily commodities, especially food items.
- Damaged the overall crop production.
- Children are increasingly affected by cold & cough, influenza, diarrhoea, and pneumonia ,persons living with the disabling condition including pain, stroke, arthritis, etc.

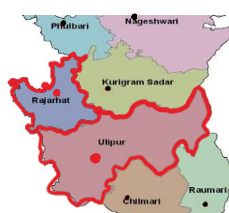
District: **Kurigram**

Upazilla **Rajarhat, Ulipur**

Implementing partner: **MJSKS**

Duration: **3 months**

Total Reach: **Direct : 1500 HH Indirect : 200000**



● Rajarhat Upazila

● Ulipur Upazila



District: Kurigram

Expected Result

Children and communities in very high-risk areas will have improved knowledge, attitude and practice on cold related preventative measures that contribute to reduction of health impacts.



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Trigger and Threshold:

The proposed CW anticipatory action will follow the existing START Fund/FOREWARN protocol – laying out the triggers/threshold along with past year's SC CW response.

Option 1: The forecasted temperature (From ECMWF and WRF model) before 7 days shows the minimum temperature goes below 8degree c and persists for at least 2 days at any district) ;

Option 2: If the forecasted temperature (From ECMWF and WRF before 7 days shows equal or below 12°C or below and has a difference for Max and Min temperature of 6°C or less.

Option 3: If the forecasted temperature before 7 days shows the Minimum temperature goes 6°C or below 6°C at the location of any district

Lead Time:

Forewarn Expert Group advised to consider both 7 days and 5 days forecasts to be considered. Therefore, the project has considered 7 days for readiness trigger and 5 days for activation trigger.

Forecast monitoring mechanism:

- Daily monitor from Bangladesh Meteorological Department web portal;
- Analyzed forecast with the local context based on socio-economic and geographical vulnerabilities referred from previous records;
- In addition, local forecast and community consultation also analyze some other parameters which really indicate to activate readiness triggered to reduce people's sufferings;

Early Actions Designing in CWAA project:

Usually, people render to a negative coping mechanism like selling their assets, Seasonal migration due to lack of livelihood options, or asking for donations from the local rich/govt. people, change in diet to cope with reduced earnings and the increased market price of daily necessities. Proposed early actions have been considered with the discussion of Start Fund Members, exposures vulnerability and existing coping capability and impact as well as a 5-day lead-time.



Figure :Forewarn Early Action Framework

Activities were undertaken Pre-Readiness period:

During the pre-readiness period project completed an Inception workshop with District Disaster Management Committees, coordination and collaboration with the Start fund. Forewarn, RIMES to understand and monitor the Coldwave forecast and participated in National Winter monsoon forum, capacity buildings of local community health workers (CHCW) on Cold related impact to health for children and families and continue analysis of the Forewarn CW AA model.

Activities were undertaken Readiness period in readiness trigger (01-7 Jan 2023)

According to the national forecast and analysis from START/FOREWARN & RIMES, the project activated the "Readiness Trigger" on 01-7January 2023 for executed some early actions as below-

- Health awareness messages were developed and disseminated through 40 Coat yard sessions.
- The sessions were facilitated by local government Health Assistants who already received formal training/orientation on prevention messages of CW-related diseases by SC doctors and Upazila-level health professionals.
- Health risk mitigation messages were displayed by festoon, banner, and leaflet to the targeted audience, local health clinics.
- 300 sets of child-friendly winter kits were distributed to each of the 300 families.
- Two batch training/orientation was conducted to local farmers to protect their crops/assets from the next cold spell

Challenges & Learnings:

- False/accuracy of the forecast, fluctuating temperature, and interpretation of modeling.
- Meteorological weather observation stations are not available at-risk all districts in Bangladesh which in turn limits the anticipatory actions that can be taken in vulnerable locations to provide localized forecast.
- Only temperature was considering when establishing triggers and thresholds for cold waves. Additional chilling factors like wind speed and direction, Rainfall, population density, the difference between min and maximum temperature and fog should also be considered to determine how significant the impact will be.

Recommendation: A comprehensive analysis considering the localized forecast and threshold along with humanitarian situation analysis.



Farmers Orientation facilitated by Upazilla Agriculture Extension Officer, Kurigram



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