Community Based Flood Early Warning and Dissemination System

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Geographically, Bangladesh is situated at the tip of a funnel, through which huge amount of water discharged in monsoon.

95% water come from upstream river of India.
Bangladesh

The top 5 floods in terms of inundated area occurred in last 20 years in 60 years of history.

24% of the country inundated in a normal flood,

the highest flood inundates 67% in 1998

Area of flooding

People affected (Yearly av.)

Reasons to severe consequences

Source: BWDB, FFWC
PRESENT EARLY WARNING DISSEMINATION SYSTEM

Flood forecasting warning center (FFWC)

DDM

Districts

Upazila

Union

Village and Households

National & Other stakeholders

Limitation

Lead time

Dissemination at all level

Interpretation

Relation to local context

Interpretations for the likely damages

Existing warning system

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CBDRR programme: Piloting flood EWS in Jamalpur district

Enabled community people to take action to protect their lives and assets

Community people received flood early warning message in a timely manner

- Conduct coordination meeting between CDMC-CDRT, UDMC and WDB of Jamalpur
- Establishment of community based flood early warning system
- Linkage between FFWC, BDRCS and community on EWS

Outcome

Output

Activities

FFWC information
Trained & equipped volunteers
Community Information centre
Institution
Gauge station
Major Input

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Jamalpur district: Piloting Area
Community Preferences

People want a “direct or parallel mode” of early warning information sharing up to the union levels instead of district only.

In terms of dissemination mode, people from the household level have repeatedly talked about “verbal/audible systems” using cell phones, megaphones, door-to-milking as well as various community based billboards and information sharing points.

In terms of institutional engagement, people have talked about finding new modalities to make the UPs, UDMCs,
- local NGOs,
- social institutions (such as schools, haat-bazar committees etc.) engage in regular early warning and preparedness
Flow of Information and Dissemination process at local level

1. **Flow of info. at administrative level**
   - FFWC → DDM
   - Website

2. **Coordination**
   - Email/sms

3. **Dissemination process**
   - Miking from the mosque
   - Megaphoning
   - Warning Flag
   - Drum/CI sheet
   - Information Board
   - Micro-group meeting
   - Learning & feedback

4. **Action**
   - Preparedness at all level

5. **Evaluation**

**Community preferences**

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**Step 1:** Pre assessment to identify the point for gauge station at local level

**Step 2:** Install flood marker in the community

**Step 3:** Identify the danger level of water which could effect the Community’s lives & livelihoods (Participatory process)

**Step 4:** Correlate the Ginjirum river point with base stations (FFWC information) in terms of water level increases-decr.

**Step 5:** Strengthen the CBFEWS

Example: 1 m increase of water level (Bahdurabad) is equal to 1 hand increase at G river point

- ½ hand (23 cm)
- 1 hand (46 cm)
- More than 1 hand

Use the Flag as a message for increasing / decreasing

DDM Info
Kulkandi: + 25 cm for next 24 hours, 50 cm for next 3 days
Strengthen the CBFEWS

- Contextualize national EW message into local context
- Involve UDMC and UzDMC
- Establish a local volunteer group
- Capacity building of Volunteer and DMC member
- Use the Flag as a message for increasing / decreasing
- Identify the local media for dissemination
- Prepare a dissemination plan
- Raising awareness at household, community and institutional level

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SETTING LOCAL FLOOD REFERENCING SYSTEM

Process of identifying the danger level of water which could affect lives and livelihood (Participatory process)

Installation of flood marker, information board and flag hoisting procedure
Orientation on community based EW for UzDMC and UDMC

Capacity building of DMC, community members and school students

Training on how to extract the flood forecasting information from FFWC website and its interpretation for school students and Comu. members

EXPERIMENTAL 5 Days Forecast (24, 48, 72, 96 & 120 Hrs) Supported by CDIP-II

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<th>FFWC</th>
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Awareness raising on EW dissemination and preparedness

Forecast based Emergency meeting at Union Parishad as part of Mockdrill

Community Organizer facilitating the courtyard session on Flood EW using flipchart

As part of mockdrill, Using Flag to disseminate message

Awareness raising session with school students on DRR (flood early warning)
Water Level Status

- Normal Level: more than 50 cm below Danger Level
- Warning Level: below Danger Level within 50 cm
- Flood: At and above Danger Level up to 1 m
- Sever Flood: More than 1 m above Danger Level

Station Name: Chilmari
River Name: Brahmaputra
Division: Rangpur
District: Kurigram
Upazilla: Chilmari
Union: Chilmari

Water Level: 19.64 mPWD
Highest Water Level: 25.07 mPWD
Danger Level: 24.00 mPWD

Experimental 5 Days Forecast (24, 48, 72, 96 & 120 Hrs)
Supported by CDMP-II

### Table

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<th>Station</th>
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<th>Today 15-10 (m)</th>
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Challenges Faced

- Lack of Coordination mechanism between UDMC and UzDMC
- Lack of capacity in terms of infrastructural facilities
- Literacy rate of remote area is very low
- Information on flood forecasting is available 5 hours after the experimental data collected
Way Forward

- Coordination meeting with various organizations to avoid duplication of effort in the same area.
- Evaluation of the system after next monsoon and integrating the feedback after evaluation.
- Replicate the EW system in other flood-prone areas including Sirajganj and Pabna districts.
Thanks for your attention