



Comprehensive Disaster Management Programme (Component 5b)
Contract agreement no. BGD/01/004-CDMP/EC/5b/PC-1
**Support for a Disaster Management Information Network
(DMIN)**

**Report on Communication Ready
Certification:
A post evaluation of DMIN pilot field testing**

October, 2009
Bangkok, Thailand

Submitted to:

Comprehensive Disaster Management Programme (CDMP), Dhaka, Bangladesh

Submitted by:



in collaboration with



Table of Contents

Table of Contents	3
Contributors	3
Acronyms.....	4
1. Background.....	5
2. What is “Communication Ready Certification”?	5
3. Methodology	7
4. Findings and Lessons Learned from CRC Evaluation	8
Annex.....	15

Contributors

Report Prepared by

Atiq Kainan Ahmed (Senior Social Scientist & Senior Project Manager, ADPC). Email: atiqka@adpc.net
Moloy Chaki (Senior National Consultant), and
Md. Abu Syed (Technical Coordinator).

With inputs from the following project team

Md. Abu Syed (Technical Coordinator)
Golam Maainuddin (Project Officer)
Rabi Uzzaman (Project Officer)
Afroza Taznin (Research Officer)
Md. Aminur Rahman (Research Officer)

Expert Contribution by:

Mr Muhammad Saidur Rahman (from BDPC), Mr Saiful Islam (from FFWC), and AR Subbiah (ADPC).

Collaborating NGOs/agencies in the pilot areas

GUK (Gaibandha)
BDPC (Cox’sbazar and Sirajgonj)
MMS (Sirajgonj)
BDRCS (Kutubdia, Cox’sbazar)

Collaborating source agencies for respective hazards

FFWC/BWDB, BMD, CPP and CEGIS.

Special Collaborating support by:

Upazila Administration of Chowhali, Fulchari, Saghatta and Kutubdia.

Photo credit:

All pictures used in the report are taken from the DMIN pilot field testing and photographed by the project team.

Acronyms

ADPC	Asian Disaster Preparedness Center
AVD	Ansar and Village Defence
BCAS	Bangladesh Centre for Advanced Studies
BDRC	Bangladesh Red Crescent Society
BMD	Bangladesh Meteorological Department
BTV	Bangladesh Television
BWDB	Bangladesh Water Development Board
CDMP	Comprehensive Disaster Management Programme
CEGIS	Center for Environmental and Geographic Information Services
CFAB	Climate Forecast Applications in Bangladesh
CFIS	Community Flood Information Systems
CLIFMA	Community Level Information Flow Mapping Assessment
CPP	Cyclone Preparedness Programme
CRC	Communication Ready Certification
DAE	Department of Agriculture Extension
DC	Deputy Commissioners
DFID	Department for International Development
DMB	Disaster Management Bureau
DMC	Disaster Management Committees
DMIC	Disaster Management Information Centre
DMIN	Disaster Management Information Network
DRRO	District Relief and Rehabilitation Officer
EC	European Commission
EU	European Union
EW	Early Warning
FFWC	Flood Forecasting and Warning Centre
GoB	Government of Bangladesh
JMREMP	Jamuna-Meghna River Erosion Mitigation Project
MFI	Micro Finance Institutions
MoFDM	Ministry of Food and Disaster Management
NGO	Non Government Organization
PIO	Project Implementation Officer
RIMES	Regional Multi-Hazard Early Warning System (ADPC facilitated)
SMS	Short Messaging Service
SOD	Standing Orders on Disaster
SODM	Standing Order on Disaster Management
SWC	Storm Warning Center
UNDP	United Nations Development Programme
UNO	Upazila Nirbahi Officer
UP	Union Parishad
UDMC	Union Disaster Management Committee
UDMIC	union Disaster Management Information Centre
UzDMIC	Upazila Disaster Management Information Centre
UzDMC	Upazila Disaster Management Committee
VHF	Very High Frequency

1. Background

The Comprehensive Disaster Management Programme (CDMP) adopts a strategic institutional and programming approach to mitigate long-term risks and to strengthen the operational capacities of relevant institutions for responding to emergencies and disaster situations including actions to improve recovery from these events. Through the initiatives taken in the past, the Government of Bangladesh, Ministry of Food and Disaster Management (MoFDM), Disaster Management Bureau (DMB) and other relevant stakeholders have demonstrated significant commitment towards implementing a comprehensive disaster management strategy.

Under the component 5b of CDMP, the Asian Disaster Preparedness Center (ADPC) in collaboration with local partner Bangladesh Centre for Advance Studies (BCAS) has provided support to CDMP in establishing a Disaster Management Information Network (DMIN). The overall objective of this ADPC support project was to provide technical support to CDMP to “Design, test and demonstrate DMIN down to household level” (Contract agreement no. BGD/01/004-CDMP/EC/5b/PC-1).

In order to implement the project with above objectives, ADPC in active collaboration with the EC component of CDMP has developed a unique methodological framework and developed activities in a sequential manner in several steps. Such steps are: a) review of the existing network disaster management information link from source to destination; b) empirical mapping of community level information flow (particularly from Upazila down to household levels); c) Design hazard specific networks as part of the overall DMIN; d) Pilot testing and field level demonstration; e) final recommendation for making the DMIN operational in future. The present report titled “Report on Communication Ready Certification” is the last report with evaluation and observation of the various spheres of communication readiness for early warning dissemination that was exemplified in the pilot field testing upazilas and contributes towards final set of recommendations for making DMIN operational in future.

2. What is “Communication Ready Certification”?

The Communication Ready Certification (CRC) is a process of evaluation or status-check of a given community/area using a pre-defined set of criteria to understand the readiness of various steps of early warning communication for a specific hazard. The process has two parts, first it evaluates the status of the early warning communication of a given area/community (in our case the pilot upazilas and unions) and second, through a reality-check certify the system as a potential early warning “communication ready system” that means the area or community holds characteristics that has started to show elements of improvement for being a fully early warning communication ready system/community in future.

Under the DMIN pilot testing exercises, the Communication Ready Certification concept is used for evaluation of the pilot testing upazilas and unions and after the pilot testing is completed some set criteria are used to evaluate the process to see how the pilot tested areas perform when it is seen from this overall readiness lenses.

In this respect, the scope of such evaluation is set immediately after two mock drills respectively carried out: one for riverine flood areas in Chowhali upazila of Sirajgonj districts and another one for cyclone/storm surge in Kutubdia upazila of Cox’s Bazar districts.

The criteria for CRC evaluation was developed in an expert-discussion prior to the mock-drills.

The following unions and upazilas where the pilot testing was carried out were covered under the CRC evaluation.

Table 1. The respective union names from which the pilot communities are considered.

Hazard	District	Upazila	Union(s)
Riverine flood	Sirajgonj	Chowhali	Umarpur and Khaspukuria
	Gaibandha	Fulchuri	Gazaria
Cyclone/storm surge	Cox's bazar	Kutubdia	Ali Akbar Dail and Koyarbeel
Riverbank erosion	Gaibandha	Saghata	Ghuridaha

The piloted areas are shown in the following table and in the map below.

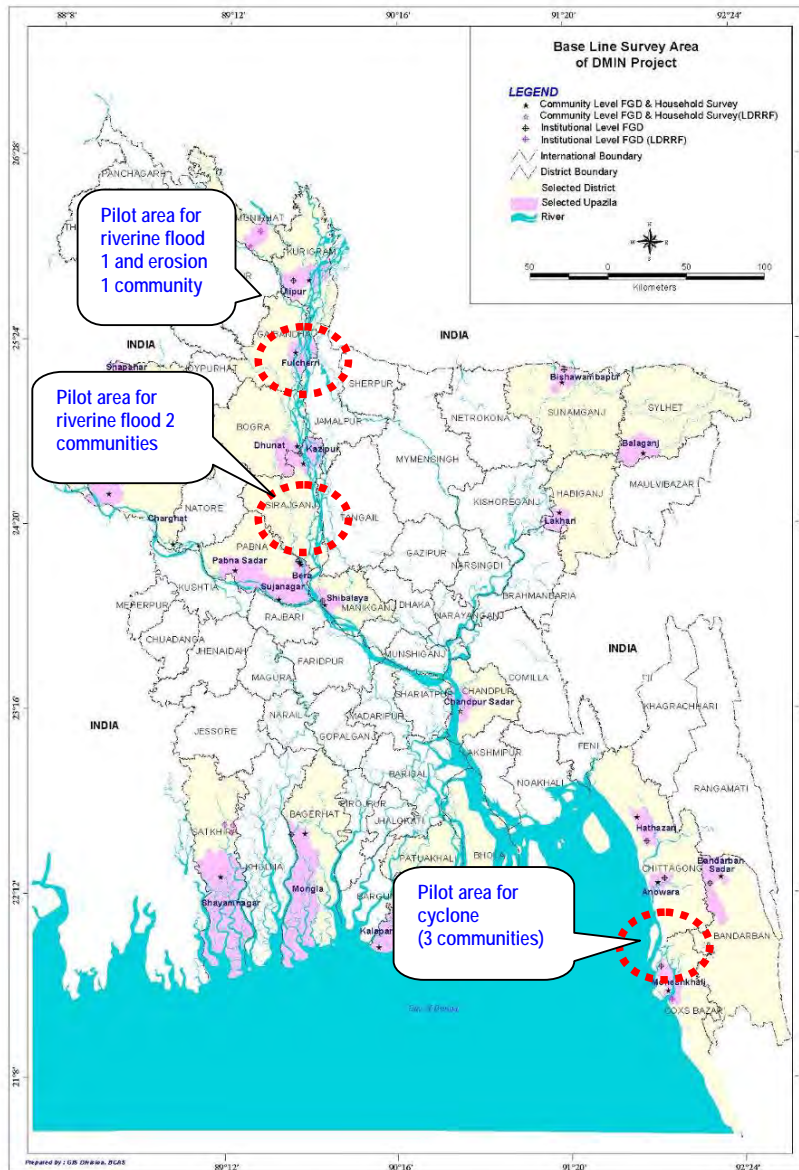


Figure 1. Map showing pilot field testing districts for three different hazards.

3. Methodology

Specific objectives of “Communication Ready Certification” exercise

The communication ready certification exercise is actually the last set of activities of the DMIN project and through evaluation attempts to find out answers of following few set of questions from the upazilas and unions where the DMIN pilot testing exercises were carried out. Such set of questions are:

- Whether the pilot communities are ready to receive early warning information from the sources (or available upper levels) and be able to disseminate the early warning the information to the household level?
- What type of early warning agents and volunteer groups are there to pass the information to the communities and households and maintain that in a sustainable manner?
- Are those early warning agents and volunteer groups having adequate capabilities or expertise to maintain the role assigned for early warning dissemination to the maximum proportion of the communities and households?
- Do the community and institutions have sufficient or adequate tools and communication equipments for early warning dissemination at community and household levels?
- Do people and communities have ownership over the piloted community based early warning systems?
- What are the lessons learned from the community that can be useful in general for maintaining a DMIN down from upazila to household level?

Criteria to evaluate communication Readiness

Keeping the above questions in mind a methodology was developed by the DMIN pilot testing team that would look into the various spheres of communication readiness using seven key criteria outlined in the table below along with what methodological tools used to evaluate in the process.

Table 2. Synoptic overview of CRC criteria and its description with tools used to evaluate.

SL #	Criteria	Description of the criteria	Tools used for evaluation
1	Existence of voluntary groups in the community	It is often seen that existence of voluntary groups in terms of DMCs or other forms of voluntary ground within the community is essential for community based early warning system as well as foundational for rapid dissemination of the early warning upto household level.	FGD, Interviews
2	Local referencing system is in place (Flood: flood marker/reference point; Cyclone: flag system)	Often from national level the early warning information available is of generic nature of relatively higher levels for the area. The local references and interpretations of those can be done through establishing local referencing points such as flood markers of dissemination points of flag hoisting for cyclone. This criterion is an essential element to make the early warning more specific and useful for respective communities.	FGD, Observation
3	Availability of basic early warning dissemination related communication equipments and logistics	It was seen that the availability of various types of early warning dissemination and public addressing systems are very important the last-mile communication systems. Such equipments are mikes, radios, wireless, dhol etc. Along this line the needed basic level of logistics including some sort of minimal	Interview, FGD

SL #	Criteria	Description of the criteria	Tools used for evaluation
		financial/resource availability for maintaining such public addressing is also a required element of readiness.	
4	Training and capacity building exercise of the volunteers and stakeholders	A regular training and capacity building exercise or refresher programs for volunteers and committees is an essential characteristic for a successful mobilization of a group in early warning dissemination.	Training sessions, FGD
5	Community interest and ownership for establishing early warning/forecasting	Interest and ownership of the community towards establishing and maintaining an effective local level/community based early warning systems is extremely important. This is particularly indicative of the sustainability of the system in a community.	FGD, Picture
6	Women participation in early warning communication and related activities	In rural communities, the participation is women in various phases of early warning system were found very crucial for linking the early warning upto household level. In this line this particular element of women participation in early warning communication and related activities was taken as a indicative criterion.	Interview, FGD, Picture
7	General populations' awareness and continued learning about the warning system	A central element of readiness of any community towards hazard preparedness and early warning is the general populations' awareness toward it. Higher the awareness level, higher the readiness level.	Observation, Mock-drill, FGD

4. Findings and Lessons Learned from CRC Evaluation

In this section, the findings and lessons learned from the CRC evaluation is reported described one by one on the CRC criteria. A hazard-wise summarized matrix of the evaluation result using high-medium-low status of respective criterion is also outlined in this section.

Existence of voluntary groups in the community

Prior to the pilot testing exercise, in general in all the pilot areas, it was found that the Upazila Disaster Management Committee (UzDMC) and Union Disaster Management Committee (UDMC) are formed. But in almost all the pilot areas in cyclone, riverine flood or riverbank erosion prone areas these are not fully functional. The UzDMCs are holding meetings with the support from PIO and the respective UNOs offices but the UDMCs are found to be very irregular and lacked a great deal of active functioning. In the cyclone/storm surge prone pilot areas it was a relatively better situation but still was not effective to its fullest potential. However, after the pilot testing through active interactions these groups are made more functional and the piloting team has found that through regular training and capacity building exercises these groups can be easily revitalized. In all the pilot upazilas the voluntary groups are revitalized by the pilot testing activities and effective consultation at



respective local levels. In the cyclone prone areas CPP has already well formed volunteer groups but demonstration mock drill gave them another chance to show their mobility in a more effectively at actual ground level.

Local referencing systems

For riverine flood areas the local referencing system using local flood markers were established effectively in active collaboration with the local people and local voluntary committees. UDMCs showed a great deal of interest. Both in Chowhali, Sirajgonj and in Fulchari, Gaibandha the local DMC representatives have taken leadership in establishing the local flood reference points relevant for their communities. The local referencing systems were established on the locally situated infra-structures and with active involvement with local participation.



In the cyclone prone areas, the locally understandable flag hoisting system introduced by CPP is strengthened and the practice is being reiterated.

In all the pilot upazilas, the practitioners and the officials are also quite interested to establish the locally useful flood or cyclone reference points. It was found that the local DMCs with their own assignment delineation can find out respective people to maintain some sort of local reference in the crisis months. For example, the local DMCs with the help of local NGOs, Ansar-VDP or haat bazaar committees are found interested to maintain the flood markers for few critical months when the flood related early warning information is quite needed for their respective communities.

Training and capacity building

The training and capacity building exercises are very important in all the layers including the volunteers and DMC members at all level. During the pilot testing it was found that there is a great demand for this. A simple round of training and capacity building exercise actually elevates the expertise, refreshes people and practitioners memories substantially. The training exercises need to be locally based more hand-on and demonstrative with the needed early warning information with interpretations.



Availability of basic early warning communication equipments and logistics

For the early warning information communication at local level the availability of public addressing equipments is a crucial factor or readiness. In many cases, it was seen from the past experiences that the although the warning information have sent from the central or district level but often do not go down to the community and household level in a rapid manner. Information flow remains stagnant due to unavailability of the adequate public addressing communication equipment at ground. For rapid onset hazards like cyclone this type of rapidness is very much a desire for community readiness. Thereby availability of megaphones, locally prepared mikes, traditional methods as drums (i.e. dhol/sorod) etc. as well as sirens from the mosques and temples or from the police stations or voluntary groups are quite important.



During the pilot testing exercises, such rapid notification and early warning communications are identified in the communities and attempt has been made to engage those existing available modes of rapid public notification at last mile in an effective manner. Existing facilities that are already available in the communities such as use of mosque milkes, temple bells etc. and other modes of indigenous communication methods such as drums (i.e. dhol/sorod) or locally available modes such as beating CI sheets etc. are used and

demonstrated for effective information sharing upto household levels. Beside these, the use of cell phones as dissemination tool is also set as a redundant system.

However, it was found particularly in the cyclone prone areas that CPP has some available public addressing electronic material such as megaphones but CPP also face a problem of maintenance of these equipment as well as availability of these in a sufficient number at local level. This is clearly due to unavailability of regular logistical and financial support to maintain these last mile communication technologies. The picture below shows that without battery support often these megaphones remain useless which needs regular maintenance and demonstrative use.



Another issue for the isolated islands and more remote communities is the availability of the right kind of equipments for reaching out. In this respect, often the cell phone remains as the only form of electronic communication technology. But if high frequency radio or high frequency siren systems with solar or sustainable power system is introduced then it would more effective for them. It was found in the remote areas that the solar energy systems have started to be introduced in the ferry ghat and other areas (shown in pictures below) which could be an encouraging point to think of. Similarly for the remote sea going fishers the broadening of the cell phone network as well as community radio systems with necessary regulations (and check-balance system) should be improved as well.



Community interest and ownership

In order to establish the community based early warning system in an effective way that goes upto household level the major challenge is to make the community interested about it for a sustainable time. In this regard, the community ownership into the process is essential indicator of communication readiness.

In course of the pilot testing such attempts to build on community owned early warning system was adopted. UDMCs, local leaders and public representatives are engaged with the system and discussed the need of it. In the pilot areas the local leaders have showed their interest significantly and gradually started to own the process as in each pilot testing activities their participation was ensured. During the local referencing period, planning the training and capacity building sessions or meeting community people the local leaders and UDMC members took the lead and unfolded the pilot testing related activities.



One of the key lessons learned from the exercise, is that the local UDMCs should be fully engaged in all process of the establishment of community based early warning system whether it is for riverine flood, cyclone or riverbank erosion. People have their own ways to established things, external people can just make an interface between the early warning sources providers and people and educate them what technicalities needs to be known for technical aspects of the early warning information in a facilitating mode but the UDMCs and the local agents are the key to establish the process and own it for sustainable use within the communities.

In the above pictures it is shown that how the local UDMC members and leaders are carrying out early warning related activities and awareness programs by themselves after a little training from the project team.

Women participation

Participation of the women is essential to see the preparedness of a household as well as community. This perspective was adopted during the pilot testing and involvement of women in all activities of the pilot testing was ensured. It was found that women play a very key role in overall disaster preparedness of the households both within households as well as inter-household information sharing and validation. Women in cyclone, flood and erosion all the areas showed interest to know more about the early warning in a very simple way such as when a flood would come or how long it will stay.

Women remained eloquent of their preparedness measures as response to the early warning. They have pointed out that if the early warning comes from the mosques or temples, local UP representatives, NGO workers, health workers and discussed through the court-yard meetings or gatherings then this is more useful for them.



General populations' awareness and continued learning

During the pilot testing, the mock drills are proved to be a very good way of keeping general people's awareness for the community based early warning system in both cyclone and flood prone areas. The mass participation in huge number in the pilot testing mock drills and simulation exercises are very much welcomed by the respective communities and people suggested that it was very useful in understanding the roles and responsibilities of each stakeholder in early warning information sharing in the community and household level.



Mock drills are useful tools to simulate each phase of the early warning systems as well as to clarify who does what on which conditions. This kind of demonstrative process enables general population into a continued learning process which is extremely important to keep momentum of early warning based community preparedness at very community level as well as penetrates the household level.

In addition to that, during the pilot testing it was found that rural people often show a great deal of interest on the billboard based easy understandable pictorial information sharing. When these demonstration boards are placed locally where people can have open access to these information and these are introduced -conveyed- interpreted through the local agents then these are proved to a good tools for continued information, education and learning at community levels.



Comparative status of the indicators in the pilot areas

The results of the CRC criteria based evaluation is also looked at in a comparative scale of high-medium and low in terms of the current status of the respective pilot areas. These evaluation results are shown for flood and cyclone prone areas respectively in the following two tables.

Table 3. Summarized evaluation results from riverine flood pilot areas.

Criteria	Status on indicator in riverine flood areas		
	Low	Medium	High
1. Existence of voluntary groups in the community		+	
2. Flood local referencing system is in place or not			+
3. Availability of basic early warning dissemination related communication equipments and logistics		+	
4. Training and capacity building exercise of the volunteers and stakeholders			+
5. Community interest and ownership for establishing early warning/forecasting		+	
6. Women participation in early warning communication and related activities		+	
7. General populations' awareness and continued learning about the flood forecasting and warning system		+	

Table 4. Summarized evaluation results from cyclone/storm surge pilot areas.

Criteria	Status on indicator in cyclone/storm surge areas		
	Low	Medium	High
1. Existence of voluntary groups in the community			+
2. Cyclone flag hoisting system is in place or not			+
3. Availability of basic early warning dissemination related communication equipments and logistics		+	
4. Training and capacity building exercise of the volunteers and stakeholders			+
5. Community interest and ownership for establishing early warning/forecasting			+
6. Women participation in early warning communication and related activities			+
7. General populations' awareness and continued learning about the cyclone warning system		+	

Annex

Annex 1. Reflections of communication readiness through participation and DMIN network building.



Working with the community to establish flood local referencing points



Sharing the meanings and interpretations of early warning modes and means (i.e.. flag meanings)





Mass participation and enthusiasm in mock drills in flood and cyclone prone areas



Training, learning and demonstration sessions at all levels (from upazila down to household levels)



Women's participation and involvement in EW dissemination at household level



IEC materials and public display points



Community interest and enthusiasm through IEC and local leadership



Role clarification of various stakeholders in front of people.

