



Terms of Reference

1. Title of the Assignment: Enhancing Flood Early Warning System in Bangladesh

2. Introduction of DG ECHO and NARRI Consortium:

European Commission Directorate General for Humanitarian Aid and Civil Protection– DG ECHO has set up disaster risk reduction programme to improve the capacities of communities at risk to better prepare and protect themselves. These programme interventions are designed as pilot strategies for their region: their impact is multiplied when the strategies are systematically integrated into long-term development projects.

In Bangladesh, European Commission is supporting a project under the Sixth Action Plan which is being carried out by the NARRI Consortium. National Alliance for Risk Reduction and Response Initiatives (NARRI) is a national level consortium consisting of six leading INGOs working in Bangladesh for increasing community capacity, awareness and skills to reduce disaster risks. The NARRI partners are ActionAid Bangladesh, Concern Universal, Concern Worldwide, Islamic Relief Worldwide, Oxfam GB and Plan International. In addition, Handicap International (HI) and HelpAge International (HAI) are working as technical partners to mainstream issues of persons with disabilities and elderly people respectively. All these pioneers in the DRR sector are working in the most disaster-prone areas across the country with a multi-hazard approach covering both rural and urban areas. Please refer <http://narri-bd.org/> for further details about NARRI consortium.

3. Background and Rationale of the Activity:

Bangladesh is one of the most flood prone countries because of its unique geographical location and topography. Around 93% of the catchments areas of these rivers lie outside Bangladesh. River flood is a most common phenomenon in the country from time immemorial. Normally, 25-30% of the area is inundated during monsoon season along the river. In case of extreme flood events 50-70% of the country is inundated extending the areas far beyond the riverbanks. Rural areas, the living places of 73 per cent of the population are often affected with mainly two types of floods; rain-fed flood and river flood. Bangladesh experiences an intensive monsoon from May to September, and occurrences of flooding have become with more intensity and frequency due to climate change. Flood of different magnitude and types occur every year. During the last 20 years a total of 53 nos. of flood events occurred. A total of 5,373 people were killed, affecting 118,960,975 persons and 50 % of the land area (Source: EMDAT). Flood of 1998 was the severest one in terms of magnitude and duration. The consequences of these flooding and the resulting environmental degradation pose a serious threat to the social and the economic development of

the country, and the situation always demands large resources for emergency response and recovery.

The impacts of floods are expected to worsen as the vulnerability of Bangladesh to natural disasters is increasing due to several factors including poverty, worsening environmental soundness, population growth, urban growth, weak governance and institutional factors, and climate change and variability. In terms of institutional arrangement and national capacity, it is quite impossible to control flooding through structural measures. Non-structural measures can be particularly effective in mitigating the damaging effects of flooding in Bangladesh and flood forecasting and effective warning system are essential means to achieve this in a highly cost effective manner.

Therefore it is high time for the NARRI members to work towards enhancing the existing early warning system to cope with future floods in the country in close coordination with the stakeholders already contributing to the process of developing early warning systems in the country. The Early Warning System (EWS) for floods in Bangladesh was developed from the flood forecasting work of BWDB's Flood Forecasting and Warning Centre (FFWC). Investment in to flood forecasting early warning systems, according to the World Bank report (2009) on the Climate Forecast Application Network (CFAN) shows a return of 40.85 US Dollars in benefits for every US dollar invested over a period of ten years.

4. Proposed Assignment - Key Components and rationale

Section 1: Identification of flood related good practices and lessons on early warning system of Bangladesh.

Description:

Bangladesh has adopted different kinds of measures for flood management with mixed experiences. FFWC's system is preparing quality flood forecasts and warnings and producing reasonable forecasts, especially in the central region of the country. Dissemination of the flood warnings and response element of the Flood EWS is much less developed, and works mostly at national level. These components have received more attention recently by both the state and non-state actors, through number of projects linking the forecasts and warnings provided by FFWC to the community based flood-warning and coping system in the flood plain.

Since various actors have taken various initiatives on EWS, there is clear scope for holistic sharing and replicating the successful efforts in order to make progressive achievement in the area of EWS. So far this information is not centrally available and there is a need for harnessing the good practices and lessons learnt at national and local level to make the EWS more comprehensive and widespread.

Expected outcome(s):

- Identify good practices and lesson learnt on flood early warning system through consultative and participatory process at local, national and regional level.
- Develop further ways for institutionalization of harmonized early warning system.

Section 2: Make recommendations to improve existing infrastructures and tools for predicting and monitoring the early warning.

Description:

The strengthening of flood early warning systems is an essential element of the NARRI consortium's risk reduction strategy. The Early Warning System (EWS) for floods in Bangladesh was developed by Flood Forecasting and Warning Centre (FFWC), under the Water Development Board (BWDB) that was established in 1972.

The existing system is well established and produces reasonable forecasts, but the information provided by the warning stations is too technical for ordinary people to understand. The information of increase and decrease water level against the BWDB monitoring stations cover only major rivers and is related to the rise and fall of water levels of various rivers. This is not the vertical and lateral inundation of specific districts or sub-districts which is valuable at local level. Indigenous knowledge and information at local level is always not taken into account and as a result people in vulnerable locations cannot relate these warnings to their lives and livelihoods.

Dissemination of flood warnings is much less developed, and works predominately at national level. FFWC disseminate forecasting through electronic and printing media, but most of the Bangladeshi people are very poor and are living vulnerable life in areas where they do not have access to electronic media. The communication system below the district level is not fully operative. Lack of coordination and insufficient communication between upazila and union levels about flood warnings causes greater problem, although they are closer to where floods have their main impact and could benefit from receiving flood warnings. In addition, consequences of changing climate, higher seasonal variability and more frequent extreme meteorological events have made communities more vulnerable.

Expected Outcome(s):

There is an immediate need to update and improve the Flood EWS so that all elements of the Flood EWS provide useful flood warnings to all potential users. NARRI partners, therefore propose to conduct needs assessment to enhance systems efficiency. The following are the key elements of the needs assessment:

- Scale-down the macro level forecasts to a locally specific warning signal.
- Identify and incorporate locally available traditional knowledge and techniques to transform existing early warning prediction and forecasts into easy and understandable language. This will also supplement the modeling errors (if any) and the data and information gaps in the forecasting systems.

- Develop and/or strengthen user friendly early warning dissemination plan combining local and national flood forecasting system
- Identify exact type and number of the infrastructural support to enhance the local level early warning predication and monitoring in four selected districts as an overall process. This was done previous in the form of installing locally understandable rain/ water gauges and flood markers followed by a formal education and awareness process.

5. Proposed Duration of the assignment: 30 days - Starting 25th December 2011

6. Location(s):

National level

- Dhaka – NARRI secretariat

Local level

- 3 Unions of Faridpur District – Oxfam GB working area
- 3 Unions of Gaibanda District – Islamic Relief Worldwide working area
- 5 Unions of Jamalpur District – Concern Universal working area
- 4 Unions of Sirajgonj District – Concern Worldwide working area

7. Expected Deliverables and methodologies:

- Arrange consultative workshops at national (mandatory) and local level (on need basis) to identify good practices/ lessons on various models and approaches and develop way forward for institutionalization of community based early warning system - involving all key stakeholders
- Carry out in-depth needs assessment in at least targeted districts (all four if scope of study requires)
- Specific measures proposed with BWDB/ FFWC and other key decision makers for harmonization and replication of the successful early warning system (national to community)
- Final reports to be both in English and Bangla language for wider dissemination
- Power point presentations for wider sharing and advocacy to be made available at the end of the assignment

Note:

- Consultation with all the key stakeholders at state and non-state level will be required in the process.
- We would appreciate list of important studies and programmes related to scope of the work is included in the proposal

8. Responsible Organisations: Islamic Relief Worldwide, Concern Universal, Concern Worldwide and Oxfam GB on behalf of NARRI Consortium

9. Funding Contribution:

- European Commission Humanitarian Aid and Civil Protection (ECHO): 85%
- NARRI consortium members: 15 %

10. Contacts Details for NARRI:

10.1 Focal Persons - Member Organisation:

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10.2 Contacts Details – NARRI Secretariat:

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11. Preparation of the Proposal

The bidder shall bear all cost associated with preparation and submission of the proposal. The bidder shall submit two (2) copies of technical and two (2) copies of financial proposal in a single envelope. The technical and financial proposals should be marked properly and should include the name and detail contact address of the bidder.

Submission of the proposal through email and/or soft copy will not be accepted

12. Validation of the Proposal

All cost should be quoted in BDT and will remain valid up to Forty Five Days (45) from the day of proposal submission.

13. Withdrawal/Termination

This agreement shall be effective between dates mentioned in agreement, unless otherwise earlier terminated.

IRW may terminate this agreement with immediate effect on occurrence of any irregularities, anomalies relating to project implementation and non-compliance of any terms and conditions as agreed upon in this agreement.

In the event of a major natural disaster, war or major civil or political unrest this agreement may be renegotiated and jointly revised between the two parties recognizing any consequent change in the environment for implementation.

14. Outline of the Technical Proposal

The proposal should not contain any publicity documents/brochure of the bidder. It is mandatory that the proposal should maintain the following format:

Topic	Page Limit
Literature Review	Maximum 1-2 pages
Understanding of the Task	Maximum 1-3 pages
Technical aspect of the proposal and work plan	Maximum 6-10 pages
Proposed team of the study with names and designation	Maximum 1 pages
Total Pages	8-16 pages

The detail CV of the team members should be included in the annexure of the technical proposal. It is desirable that the proposal should contain the above mentioned sections only. No company informal/brochure/list of previous assignments should be included in either the body or the annex of the proposal.

15. Outline of the Financial Proposal

The budget of the task should be broken down in details as like the following format:

A. Component 1

B. Component 2
B. Cost of Facilitation (consultancy and other charges)

- The bidder may include/exclude any necessary heads from the above mentioned format.
- All the pages of the financial proposal should be signed by the respective person of the bidder organization.
- All costs should be inclusive of VAT and TAX.

16. Competence Required:

- Excellent technical knowledge and proven working experience on early warning systems in Bangladesh
- Excellent technical knowledge and proven working experience on disaster management
- Established working relationship with DMB, BWDB/FFWC and CDMP
- Demonstrated knowledge and experience on conducting similar nature of assignment
- Relevant academic background
- Excellent analytical, interpersonal, communication and reporting skills
- Fluent in English and Bengali

17. Supervision:

The external consultant shall be under the supervision of PM-DRR of Islamic Relief Worldwide, and in close consultation with NARRI Secretariat and Project Management Unit (PMU).

18. Confidentiality:

All the outputs e.g. reports, documents, information etc product by this assessment will be treated as ECHO and NARRI's property. The above mentioned outputs or any part of it can't be sold in any manner, but can be used or reproduced by the assigned organization / individual with proper acknowledgment of DG ECHO and NARRI member organisations.

19. Miscellaneous:

- a) All the terms & conditions of this agreement are binding upon the parties and once executed this agreement no provision of this agreement can be questioned.
- b) After the termination of the project, all rights described in this agreement will automatically be transferred to an organization designated by NARRI.
- c) Any modification and amendment to the present agreement shall be made in writing with the consent of both the parties.
- d) Both parties assume that this assignment does not go against the rules and regulations of the Government of Bangladesh.
- e) This agreement shall be subject to Bangladeshi Law. Jurisdiction shall be Dhaka. Before undertaking legal steps the parties shall enter into discussion in order to find an acceptable settlement of such dispute by direct negotiation.