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# The potential of mobile services for early warning and food security in Bangladesh

## Aim

This study was initiated and financed by the Embassy of the Kingdom of the Netherlands in Bangladesh and was linked to the Blue Gold project. The general aim was to evaluate the potential for mobile applications in Bangladesh in water management and food security. This culminated in a report and the development of a demonstration app with weather and water information.

- What initiatives regarding information and mobile services are present and/or successful in Bangladesh?
- What are the information needs for local people?
- What challenges do we face in implementing a sustainable business model for mobile services for water management and food security?

*Formation services in Department of Agricultural Extension (GOB)*

*Interviews*

*Hurricane shelter in village near Patuakhali*

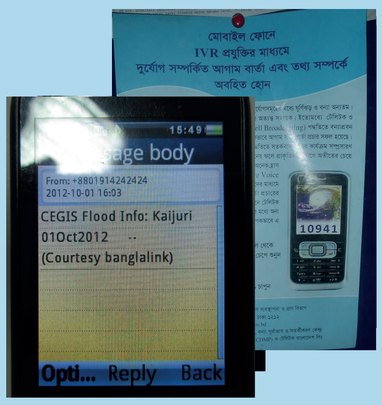
## Interviews with stake-holders and local villagers

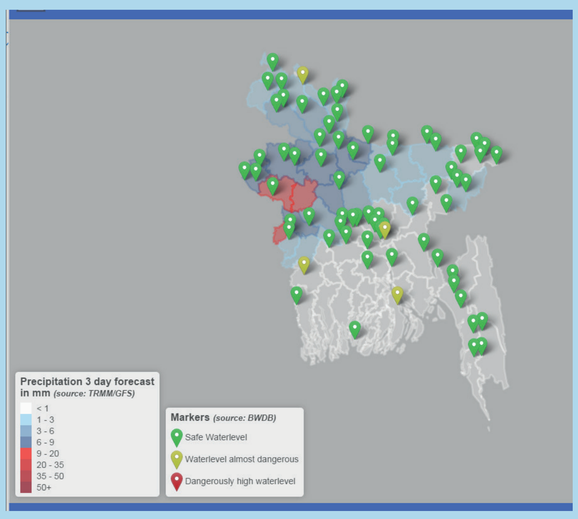
- **Meteorological and hydrological organisations**
  BWDB, FFWC, BMD, CEGIS
- **Government of Bangladesh (GoB)**
  DAE / AIS
- **Government of the Netherlands**
  EKN
- **NGO's/humanitarian/development organisations**
  BRAC, Oxfam, ECHO, World Bank, Save the Children, UNDP
- **Research organisations**
  RIMES, Socioconsult, IRRI, WorldFish (CGIAR)
- **Local people**
  Village near Patuakhali: Men, Women and Village Elders

## Early Warning and Disaster Monitoring

*Examples of pilot initiatives*

- FFWC > IVR/text warning
- BMD. Nokia weather app
- CEGIS Flood EW for inundation via texts to local representative > translation to flag hoist system
- BRAC Icress Dashboard (internal use) > warnings to local representatives > disaster information to headquarters
- Oxfam > outfitted 150 fishermen with GPS mobile phones > warning and monitoring locations
- RIMES > Rolodex roller board, Rain gauge monitoring


*Screenshot of demonstration app with weather and water information*

## Information needs

Patuakhali **farmers/fishermen** want:

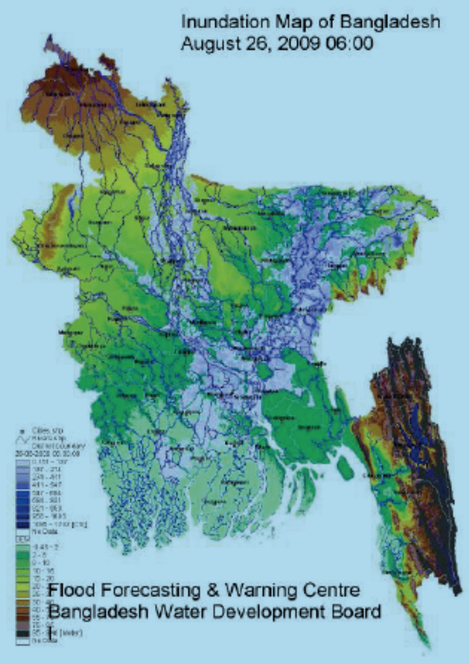
- Agricultural information (advice on crops, technologies, fertilizers, pest control, share experience)
- Cyclone information

Patuakhali **women** want:

- health information

Suggestions from **NGOs/Research Institutes/DAE**:

- Horizontal learning (locals exchange experience)
- Disaster warning (cyclone and fluvial/ flash flooding)
- Improved weather forecasts (seasonal), mainly precipitation, salinity, fog, drought
- Seasonal job availability
- Market prices
- Community maps, land use




*Example of national flood forecast map, derived from Annual Flood report 2009*

## Challenges

- IT maturity
- Internet access
- Electricity access > Regular blackouts, solar power
- Regular flooding > destruction of materials
- Sustainable business model, cost recovery
- Trust in information
- Low resolution weather forecast. Not accurate locally
- Cyclone misses + difficult cyclone category warning system
- Training for knowledge and understanding
- Translation of information to locals
- Illiteracy
- Government bureaucracy
- Dissemination warning mandate
- No investment in capacity building meteo/hydro services
- Corruption
- Capacity building
- Choice of response to warning (e.g. fishermen stay out during depression)
- …



**voor meer informatie**
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