Use of SBT and ICT in DRM in Bangladesh

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Disaster Context

- Due to impact of climate change the potential impact area is increasing with increasing of population at risk

- Communities are facing modified risks due to change in intensity and frequency of the hazards

- Difficulty in monitoring upcoming hazards

Use of SBT could contribute to ensuring a wider provision of relevant information for DRR, strengthen EWSs and monitor disaster's impact to provide effective emergency response.

Use of Space-based Info: Present Status

Space-based information and products are in incubation stage for DRR

Working level Capacity exists
SPARRSO, BMD, SOB, FFWC, CEGIS and IWM

Cyclone prediction: Proven and effective example of using space based information

Flood Forecasting: Space based information is using for local flood modeling

Spatial databases exist with projects

Capacity assessed for DRR
TAM carried out by UN-SPIDER in 2011

TAM Recommendations

The recommendations focus on the challenges and opportunities in the following specific areas:

- Policy and coordination,
- Capacity building and awareness raising,
- Information management and sharing,
- Data and access
- Emergency communication

Follow up Action Taken

- SoP has been drafted for the implementation of TAM recommendations
- Multi-hazard Risk Vulnerability Assessment (MRVA) Modeling and Mapping Cell and Damage and Need Assessment (DNA) Cell have been established at DDM
- Multi-hazard risk vulnerability assessment is undertaken by engaging an international consulting firm
- 50 academic and sector professionals were trained in SBT for Flood Risk Assessment and DNA supported by UN-SPIDER
- Applying RS in River Basin Management Project has been piloted supported by JAXA/ADB

Multi-hazard Risk and Vulnerability Assessment (MRVA)

EQ Vulnerability and Risk Assessment

RS and GIS-based Building Inventory Database:

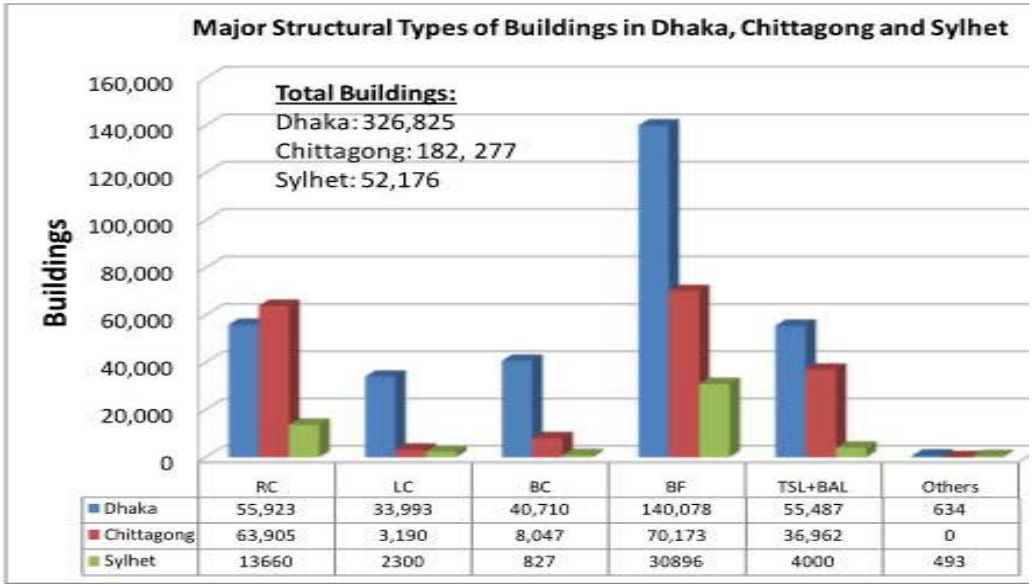
Image of a part of Dhaka City after Geo-referencing

Physical Features after digitization

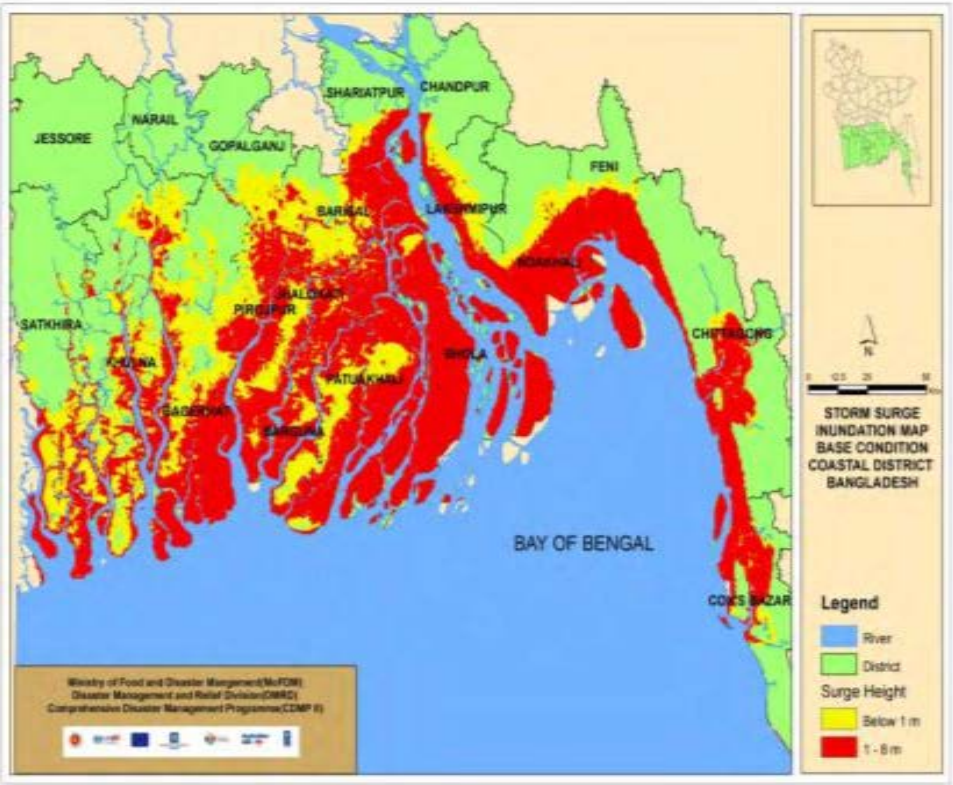
Chittagong : 183000

Sylhet : 52, 000

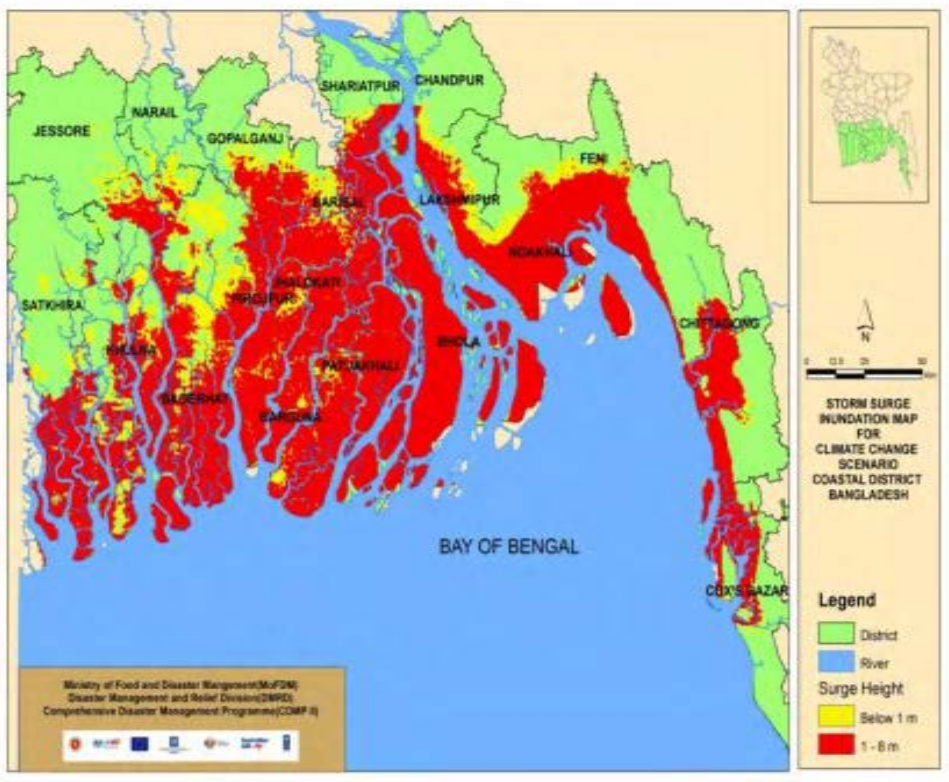
Dhaka : 327000



Storm Surge Risk Assessment



Base Condition



Climate Change Condition

An area of 20,745 km^2 will be inundated by more than 1m water depth in the changing climate

Improvement of Early Warning and Dissemination Systems

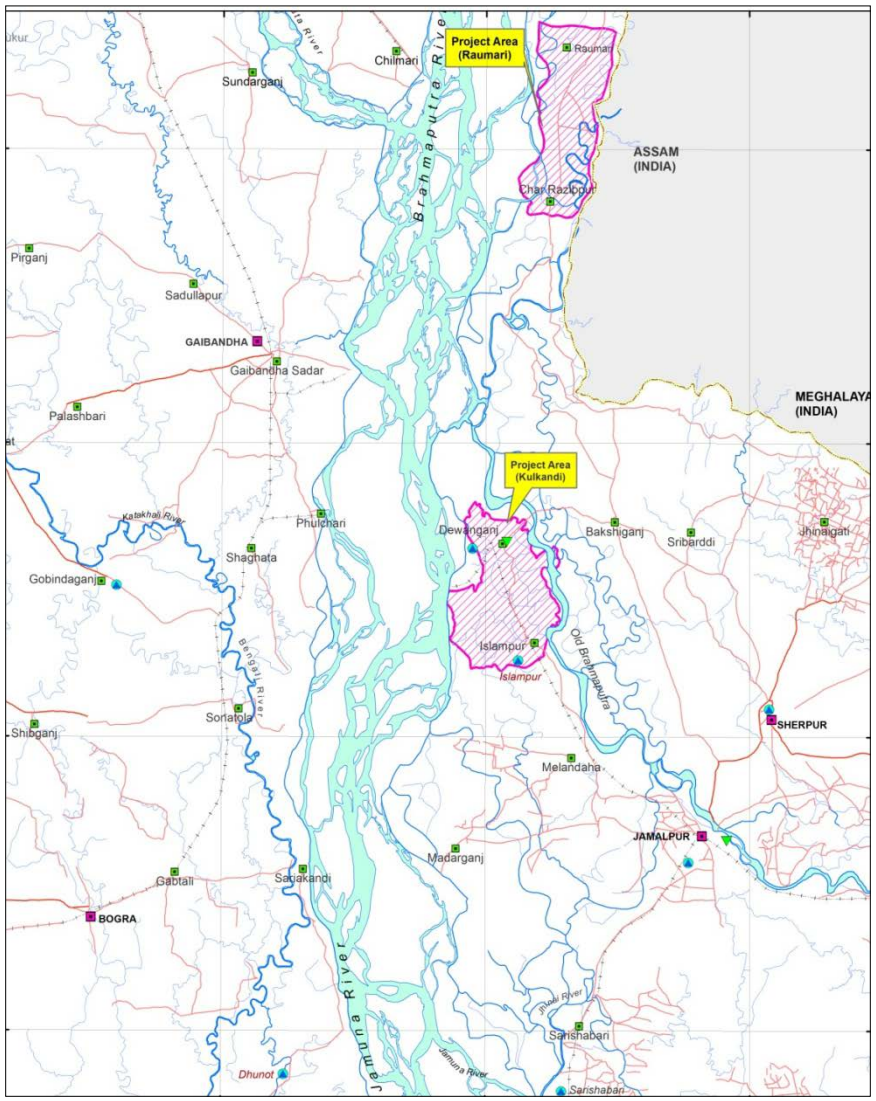
Applying Remote Sensing Technology in River Basin Management

Develop strategies and programs for flood risk reduction by applying SBT and ICT

Improve existing flood risk management systems in target area with EO satellite data

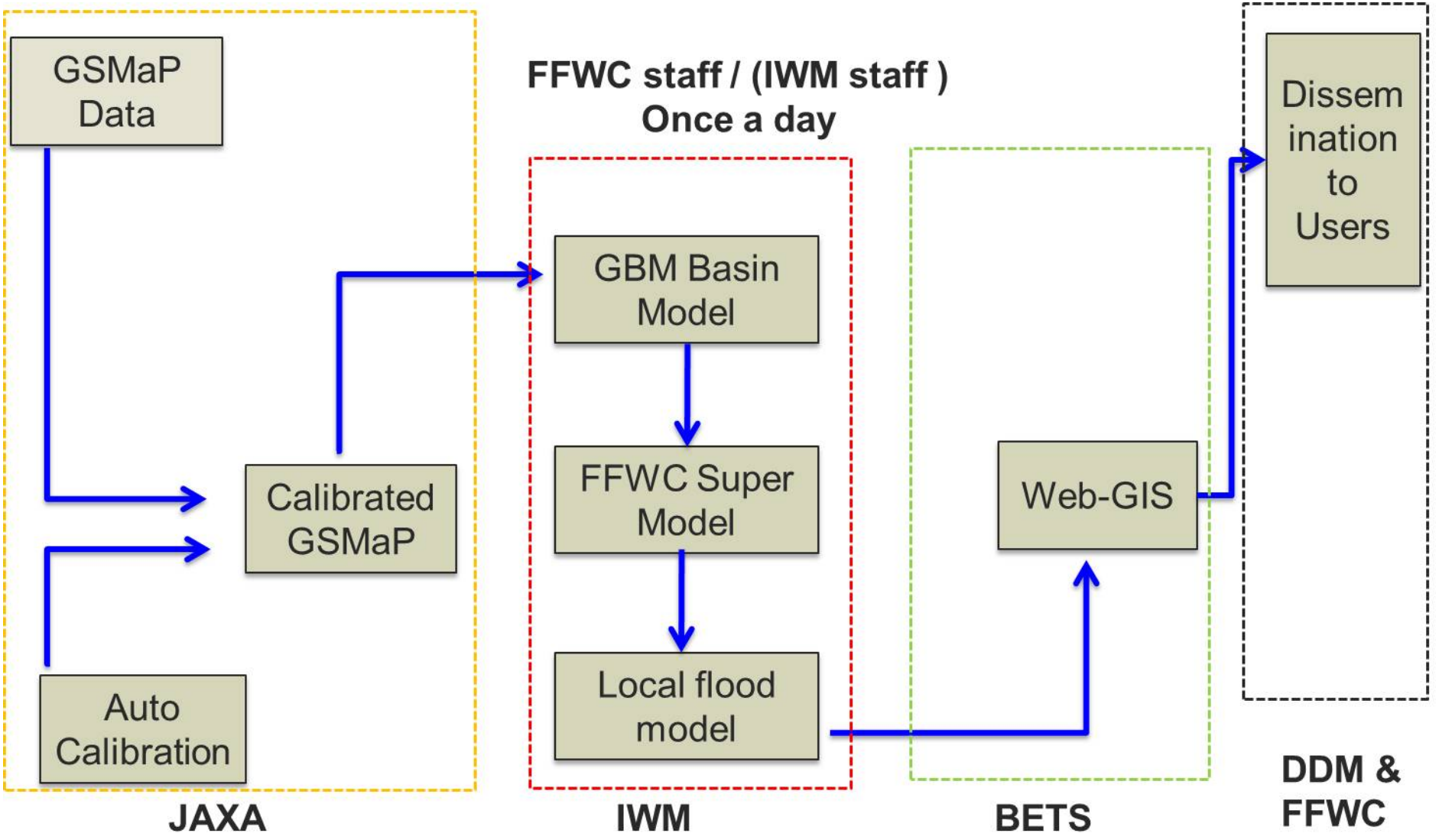
Develop methodology to make detailed flood hazard map and forecasting

Meet demand of end users by increasing lead-time



Implementation Mechanism

Applying Remote Sensing Technology in River Basin Management



Development of Database Using SBT and ICT

Online Shelter Database

Way Forward

- Building network and platform with international/ regional data and technology providers
- Capacity development for both EO and end users departments
- NSDI to avoid duplication and redundancy
- Incorporation of space technology for DRR-CCA to policy and plan