Country Proposals for Asian Water Cycle: Bangladesh

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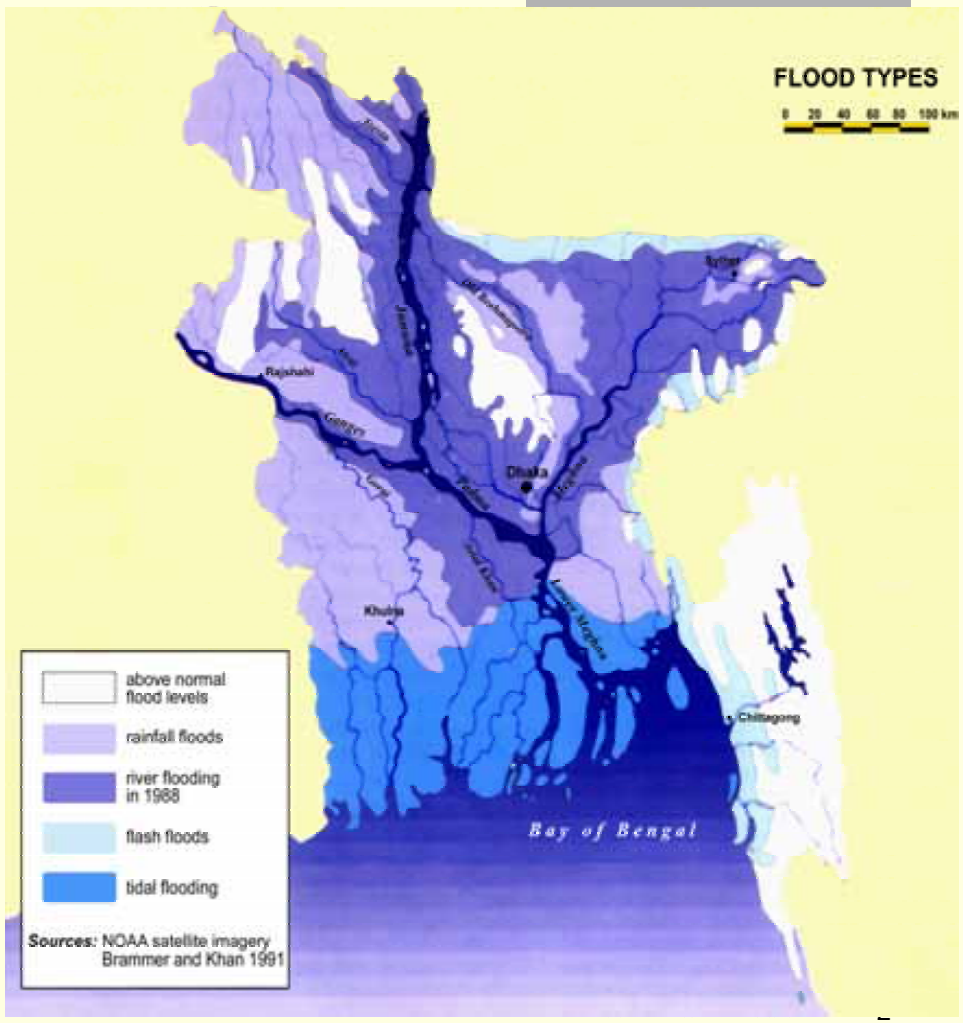
Floods in Bangladesh

- -Bangladesh, situated at the head of the Bay of Bengal, is the biggest delta in the world.
- -Land elevation of 50% of the country is within 7.6 m of MSL
- 20-30% of the area is inundated during normal flood

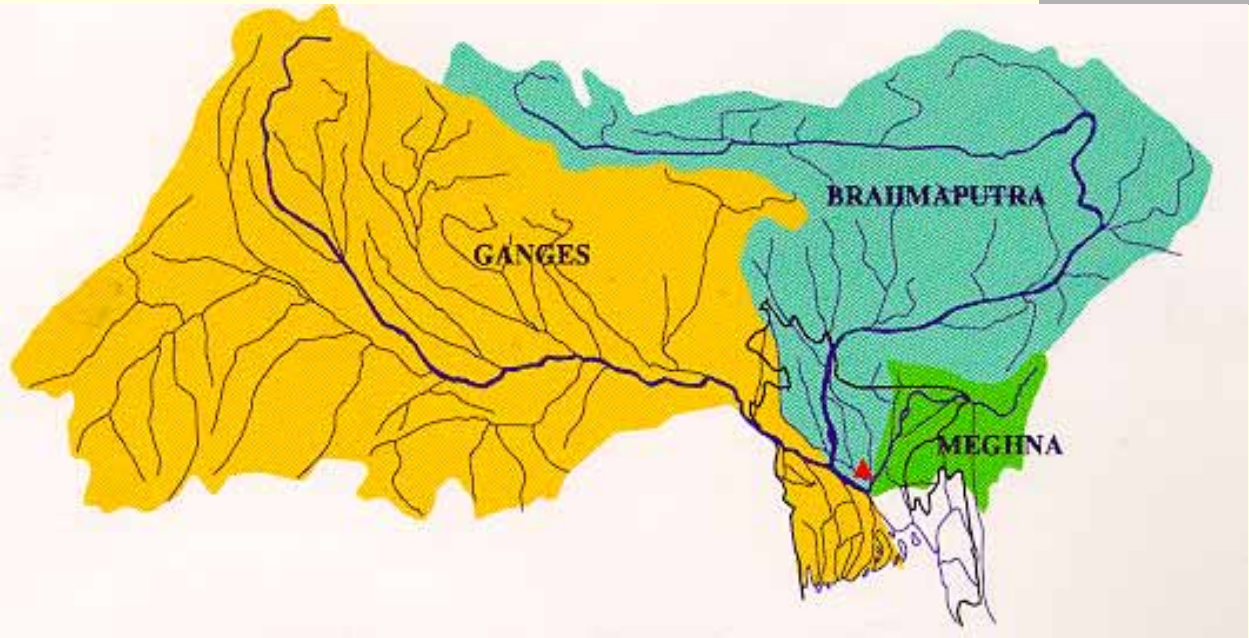
Types of flood

- River Flood
- Flash Flood
- Rain-fed flood
- **F**lood due to Storm Surges



Types of Flood in Bangladesh

Topography surrounding Bangladesh



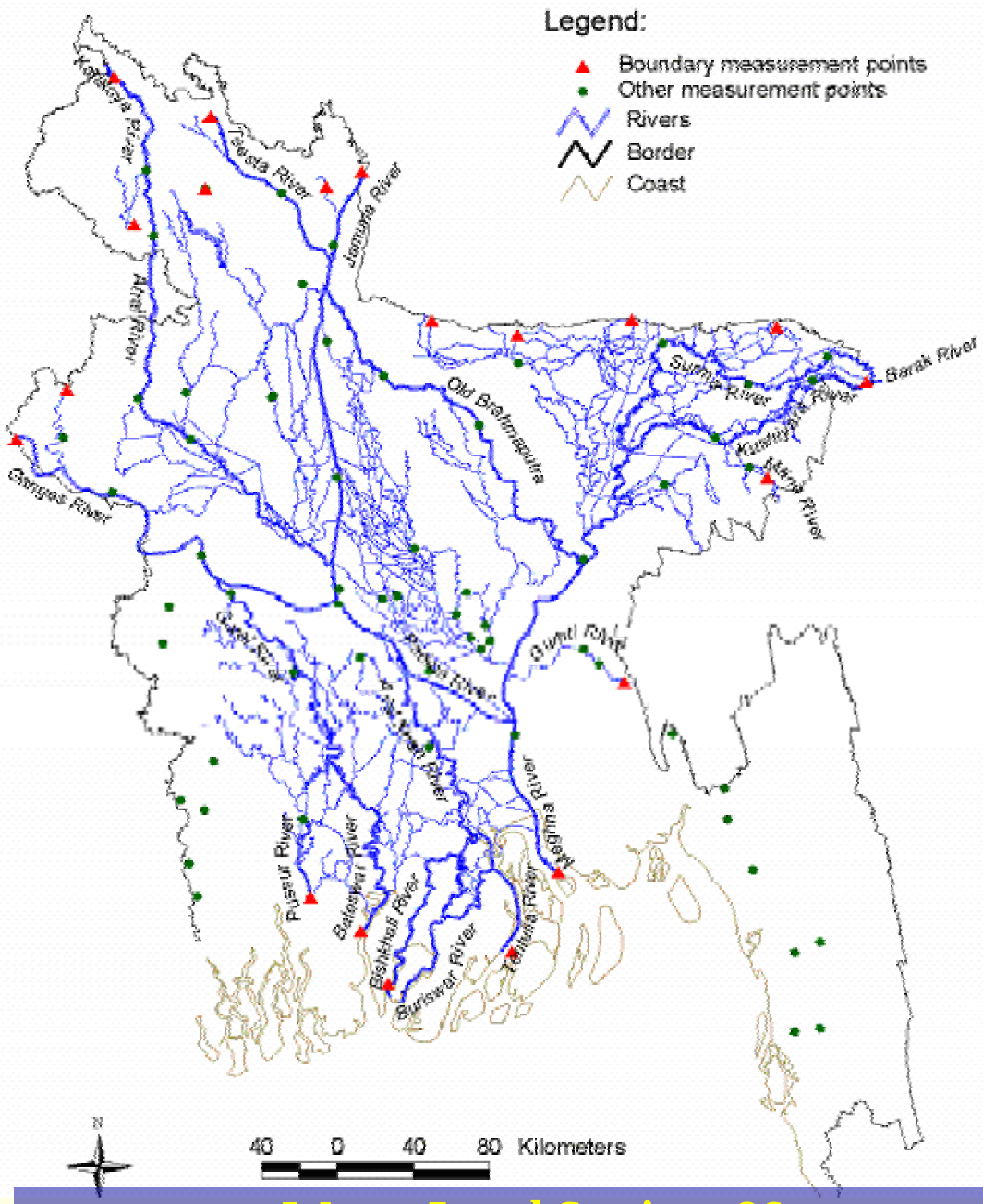
- **Flow**
  - **The Ganges-Padma: 1,000 ~ 120,000 cumec**
  - **The Brahmaputra: 2,400 ~ 102,000 cumec**
  - **The Meghna: 500 ~ 30,000 cumec**

- **Annual Sediment Transport**
  - **The Ganges-Padma:886 Mtons**
  - **The Brahmaputra: 600 Mtons**
  - **The Meghna: 1 Mtons**

Total basin area is 1.72 miillion sq. km. Only 8% of these three basin area lies within Bangladesh

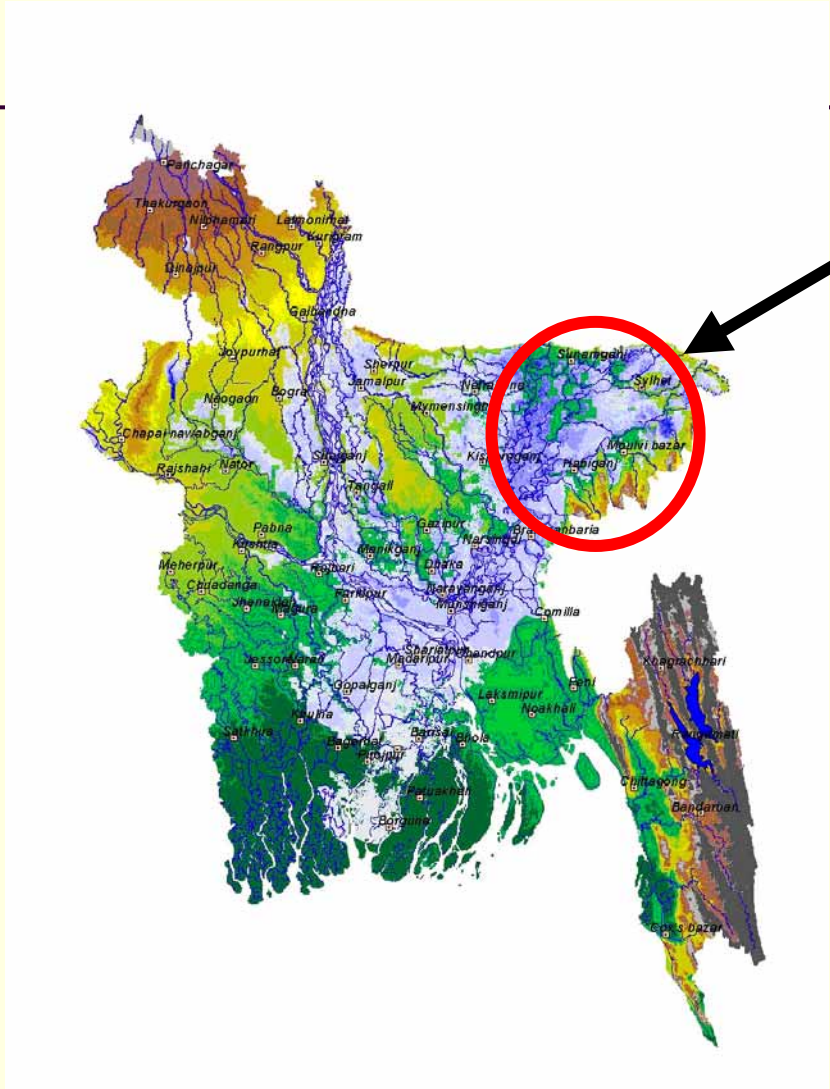
Current Monitoring System through FFWC

At present these data points are utilized for the input of Flood forecasting model. GEOSS can provide high-resolution input data.



- **Water Level Station: 86**
- **Rainfall Station: 56**

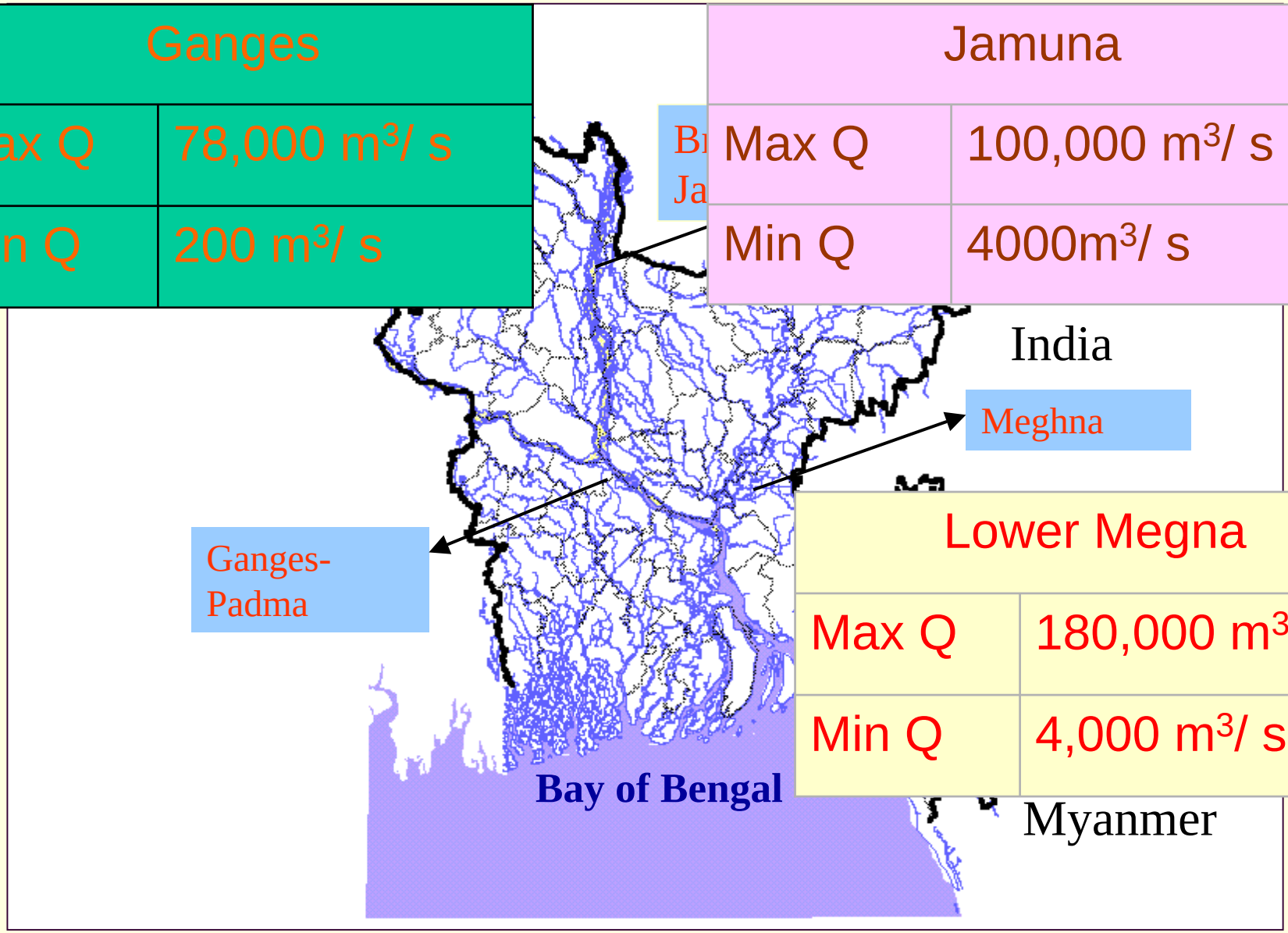
Flood map in the Year 2004



RIVER SYSTEMS OF BANGLADESH

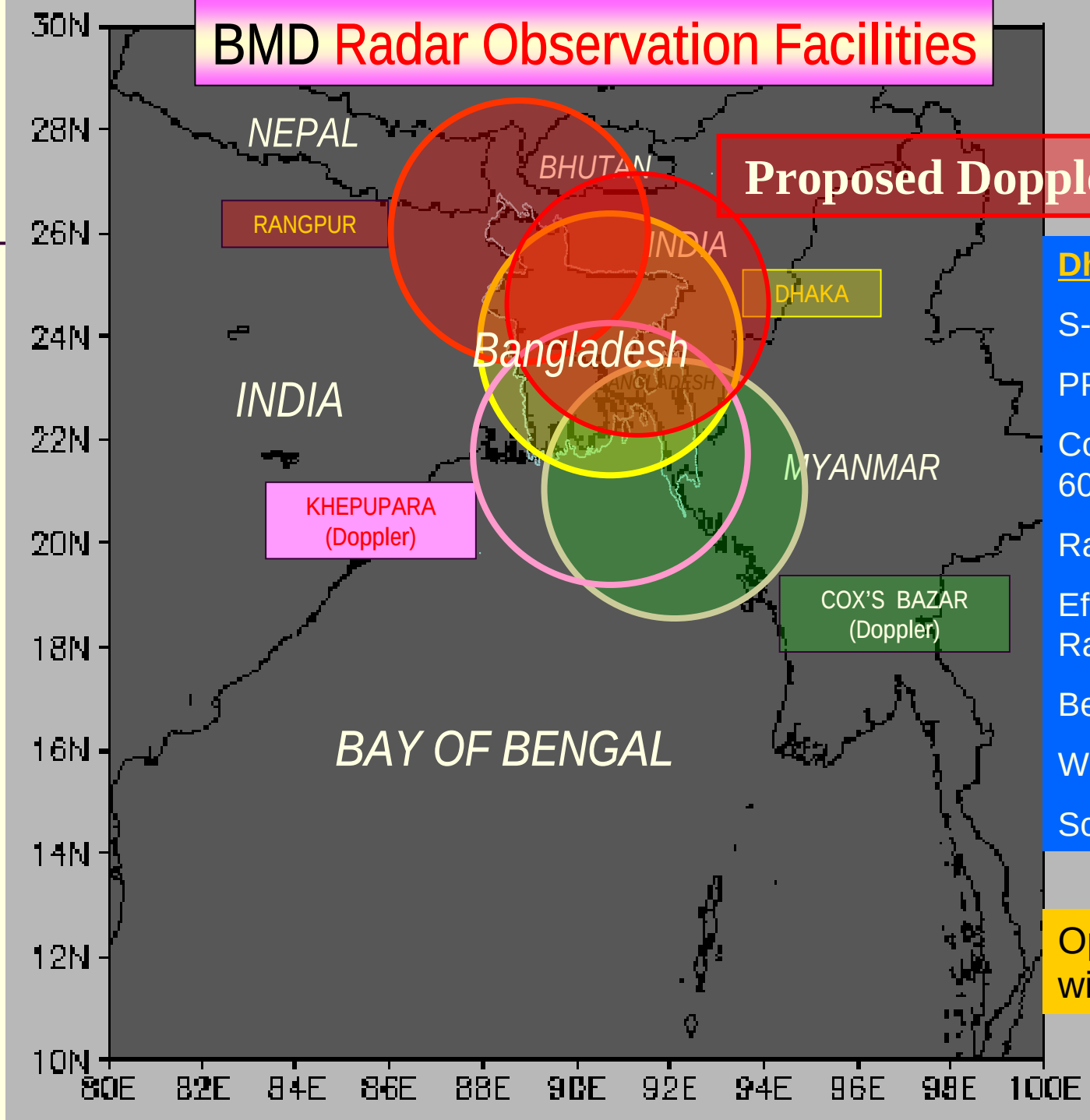
Ganges	
Max Q	78,000 m^3/s
Min Q	200 m^3/s

Jamuna	
Max Q	100,000 m^3/s
Min Q	4000m^3/s



Lower Megna	
Max Q	180,000 m^3/s
Min Q	4,000 m^3/s

BMD Radar Observation Facilities

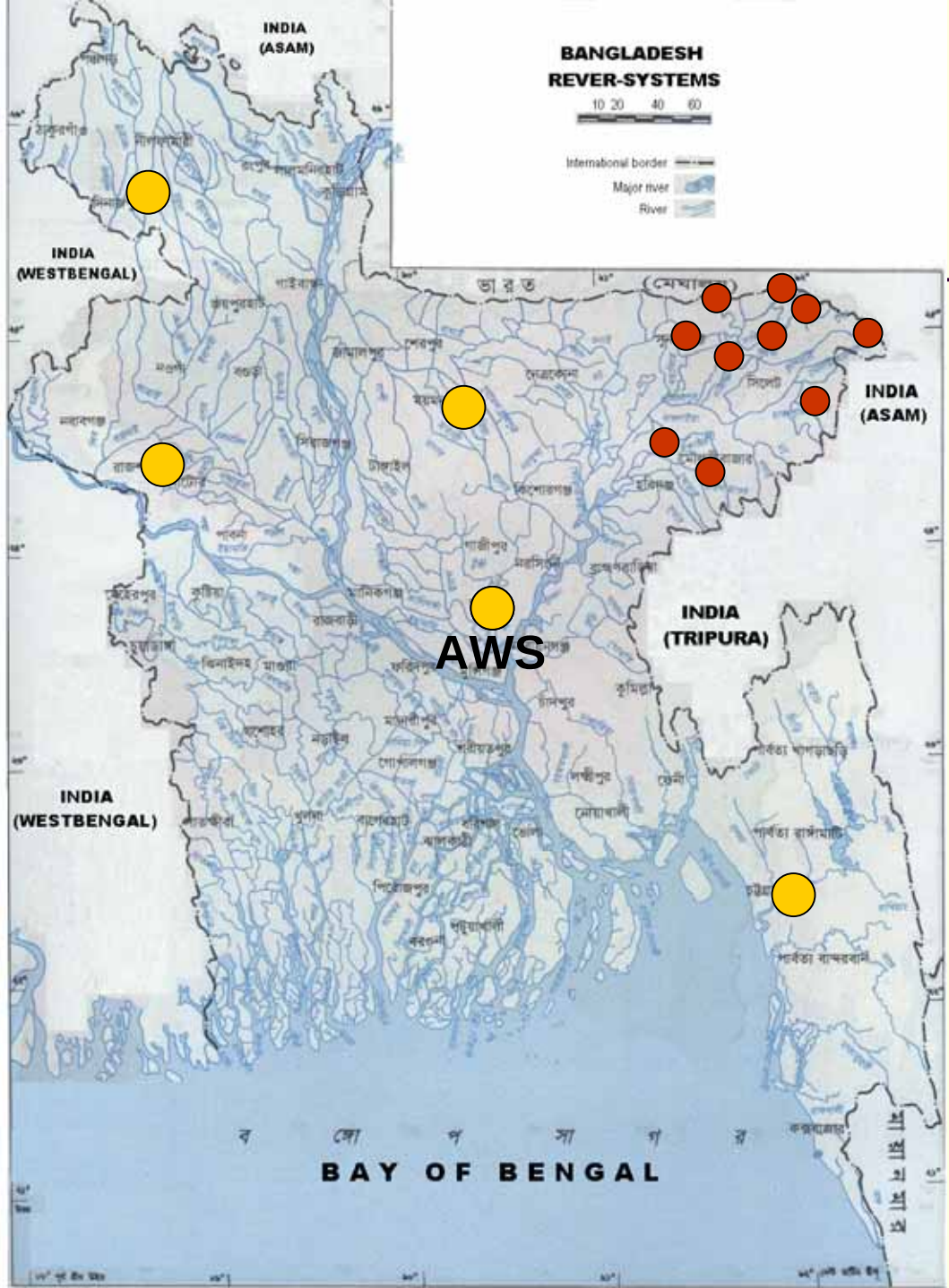


Proposed Doppler Radar

Dhaka + Rangpur

- S-Band Radar
- PPI scan facilities
- Coverage: 600km x 600km
- Radius= 400km
- Effective Radius=250km
- Beam width 1.7 deg
- Wavelength=10cm
- Scan rate=3 rpm

Operation: 1-hr with 2-hr pause



Installed Automatic Rain-gauges under MAHASRI

- **Meghna Basin is proposed for the pilot study project.**
- **This Basin is limited in scope in comparison with other two Basins.**
- **Japanese research group is working in this area.**
- **Once the project is implemented with considerable accuracy the model can be applied for other river basins.**

Automatic Rain-gauges, Japanese Research Group

THANK YOU