

Flood and Flood Risk Update

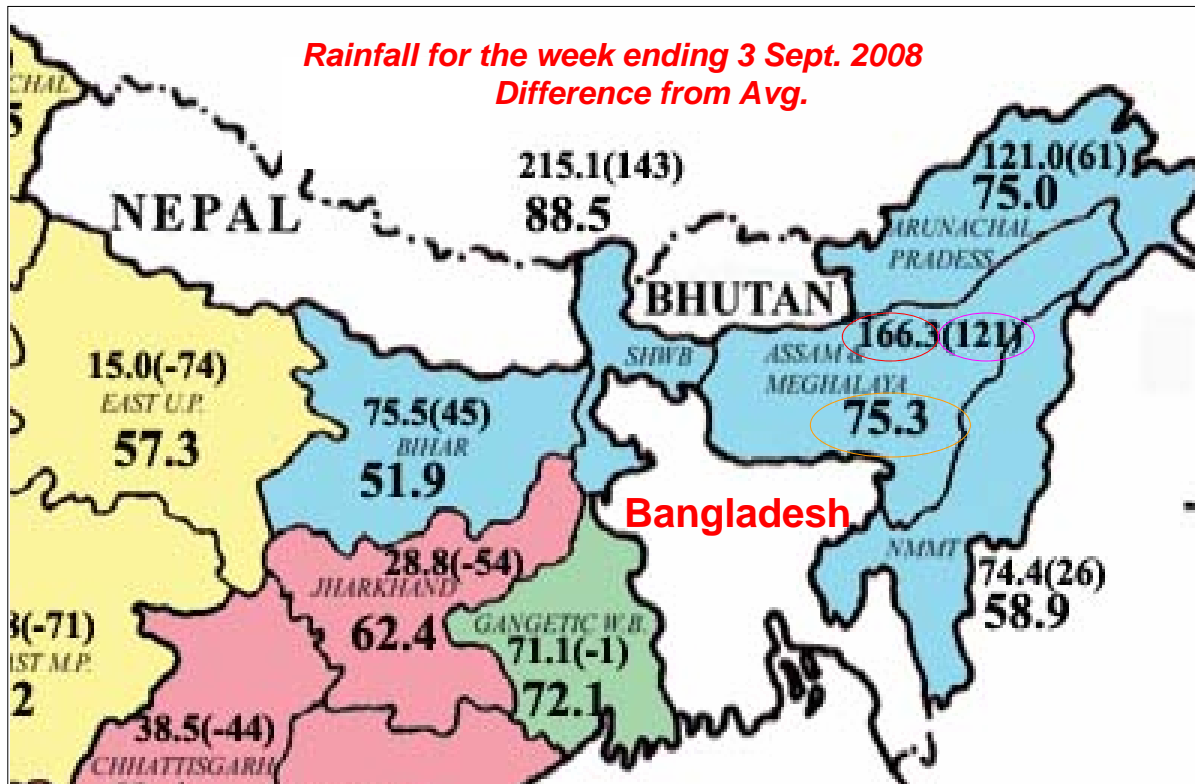
WFP Bangladesh
Disaster Risk Reduction Unit
8 September 2008

Overview

- Rainfall
 - Recent rain in the Up-Stream Basin (India)
- River Levels
 - Trends in Up-Stream Basin
 - Trends within Bangladesh
- Rainfall Forecasts

Why did flooding and flood risk increase in Bangladesh during late August and early Sept. ?

- **Mostly because of heavier rain in Up-Stream Basin (India)**
- Map shows weekly rainfall Up-Stream; difference from long term average for the week ending 3 Sept. 2008.
- **Blue** areas show regions where rainfall was significantly above the normal long term average

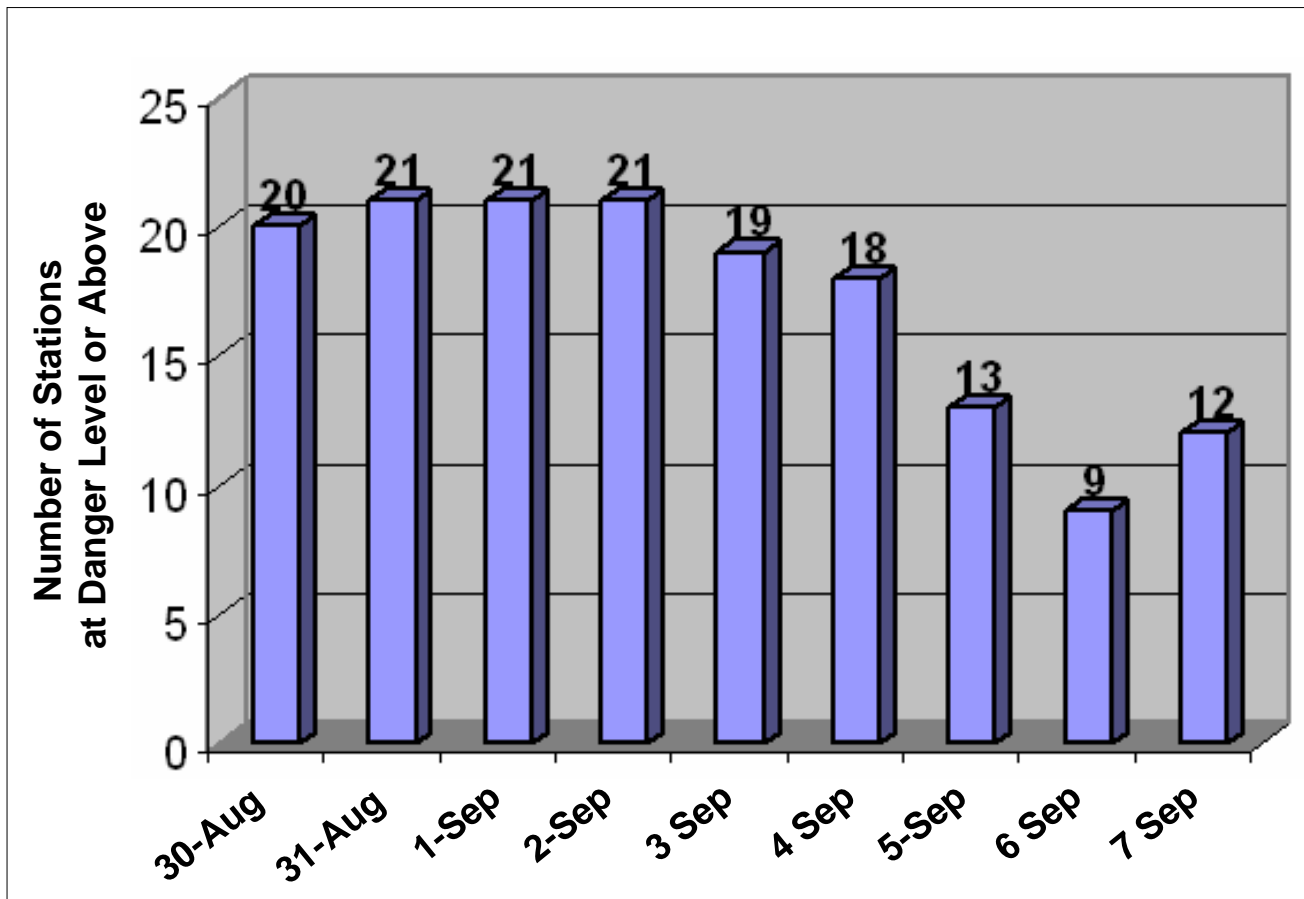


Example: Assam & Meghalaya

- 1) Area normally receives approx. 75 mms. rain
- 2) Area received approx. 166 mms. rain
- 3) Percentage difference from Average = 121% i.e. more than twice the long term avg.

Source: India Meteorological Department (IMD)

Rivers Up-Stream at Danger Level or Above



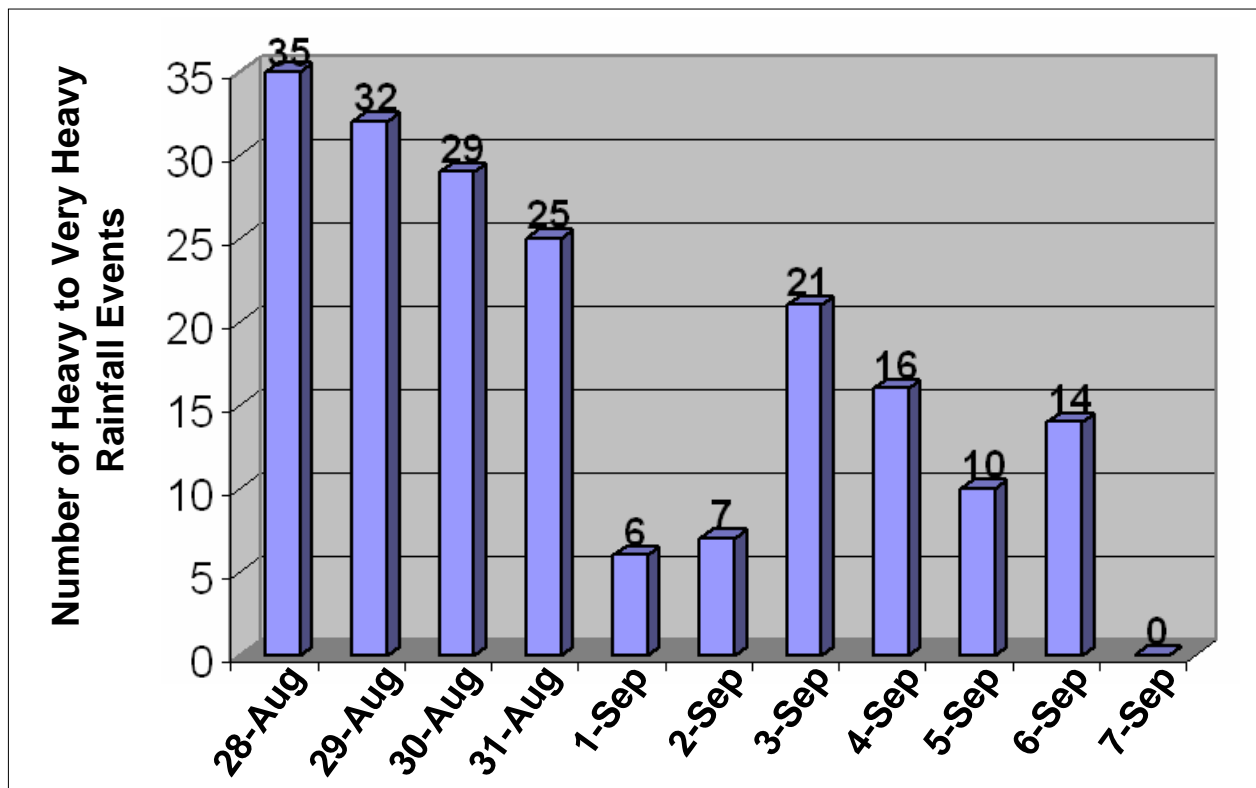
The number of stations Up-Stream at Danger Level or above has generally decreased during the more recent period

Source: India Central Water Commission

Considers stations in Assam, W. Bengal, Jharkand, Bihar, and Uttar Pradesh

Rainfall Up-Stream in the More Recent Period

- Number of Heavy to Very Heavy Rainfall Events; Neighboring Indian States



The number of Heavy to Very Heavy Rainfall Events has generally Decreased during the more recent period

Notes:

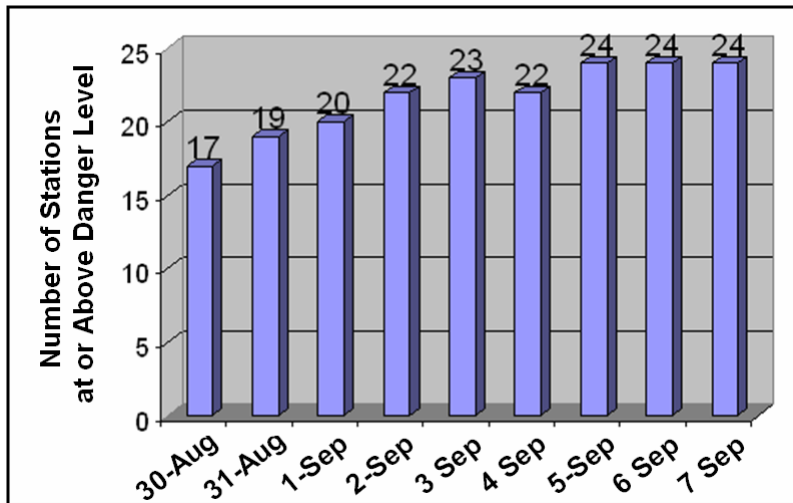
Source: India Meteorological Department (IMD)

50 mms. rain or more in a 24 hr. period used as a threshold to define "heavy to very heavy" rainfall events

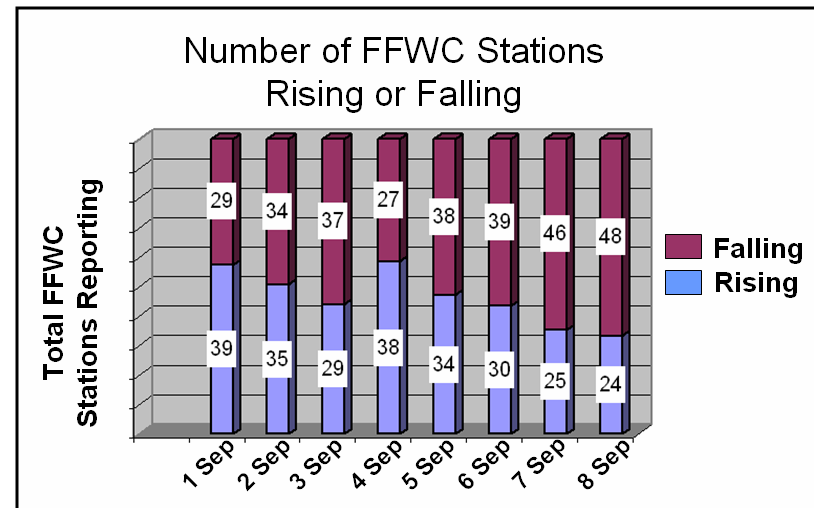
Data covers geographic areas of Assam, Meghalaya, Upper West Bengal, Sikkim, Bihar, and East Uttar Pradesh

What are the trends with River Levels **within** Bangladesh ?

- Number of FFWC **Stations at or above Danger Level** still relatively high despite conditions Up-Stream



However the **overall trend** considering **ALL Stations** (not just those at Danger Level) **is Falling**

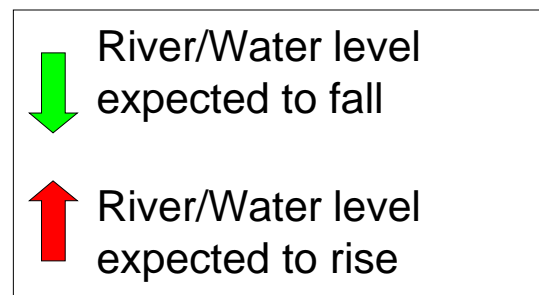
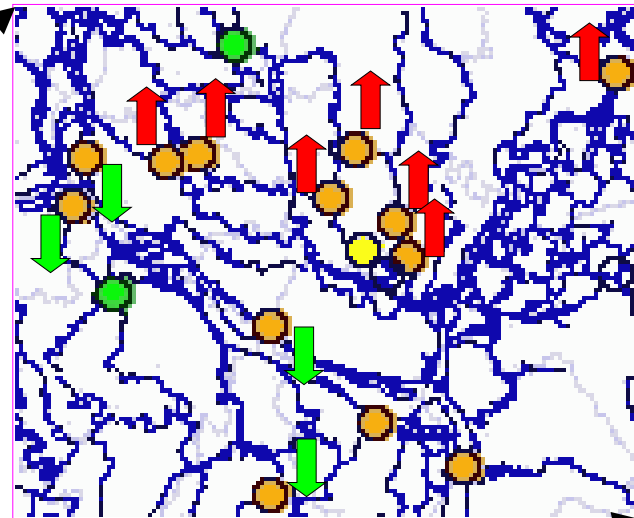
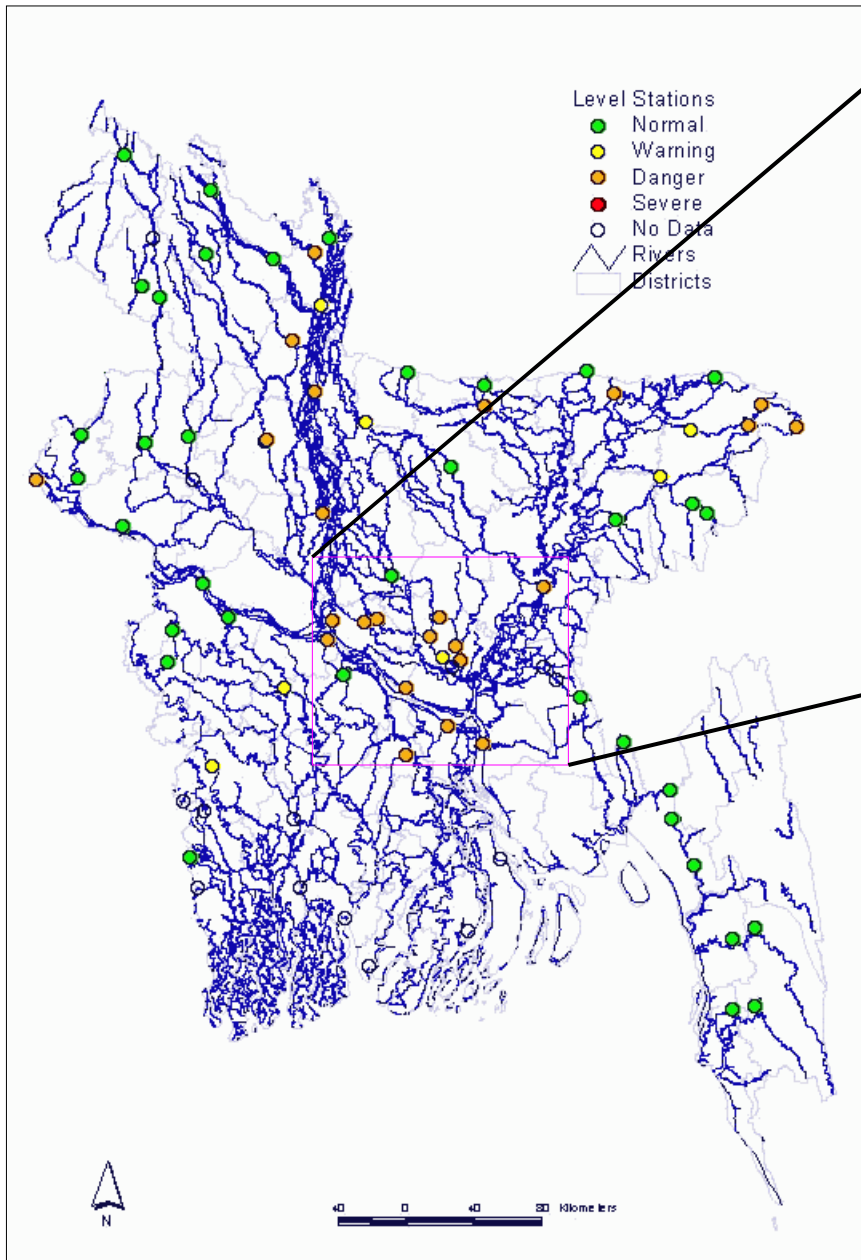


Most of the stations that are currently (as of 8th September) at Danger Level or higher are located towards the center of the country; near Dhaka

Drainage in this area is poor, and so these stations are expected to stay high or even rise in the next few days

Stations in the North of the Country are generally falling; water levels dropping

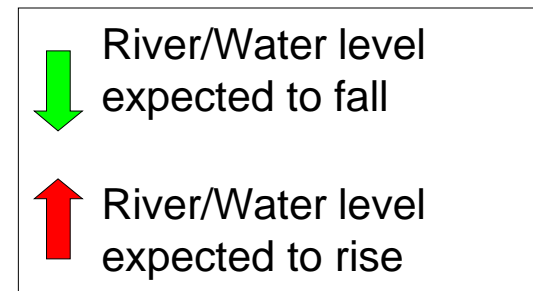
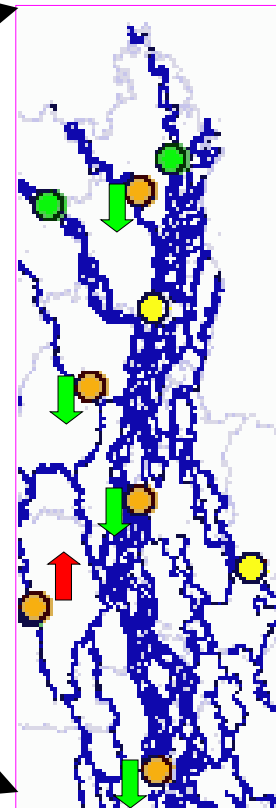
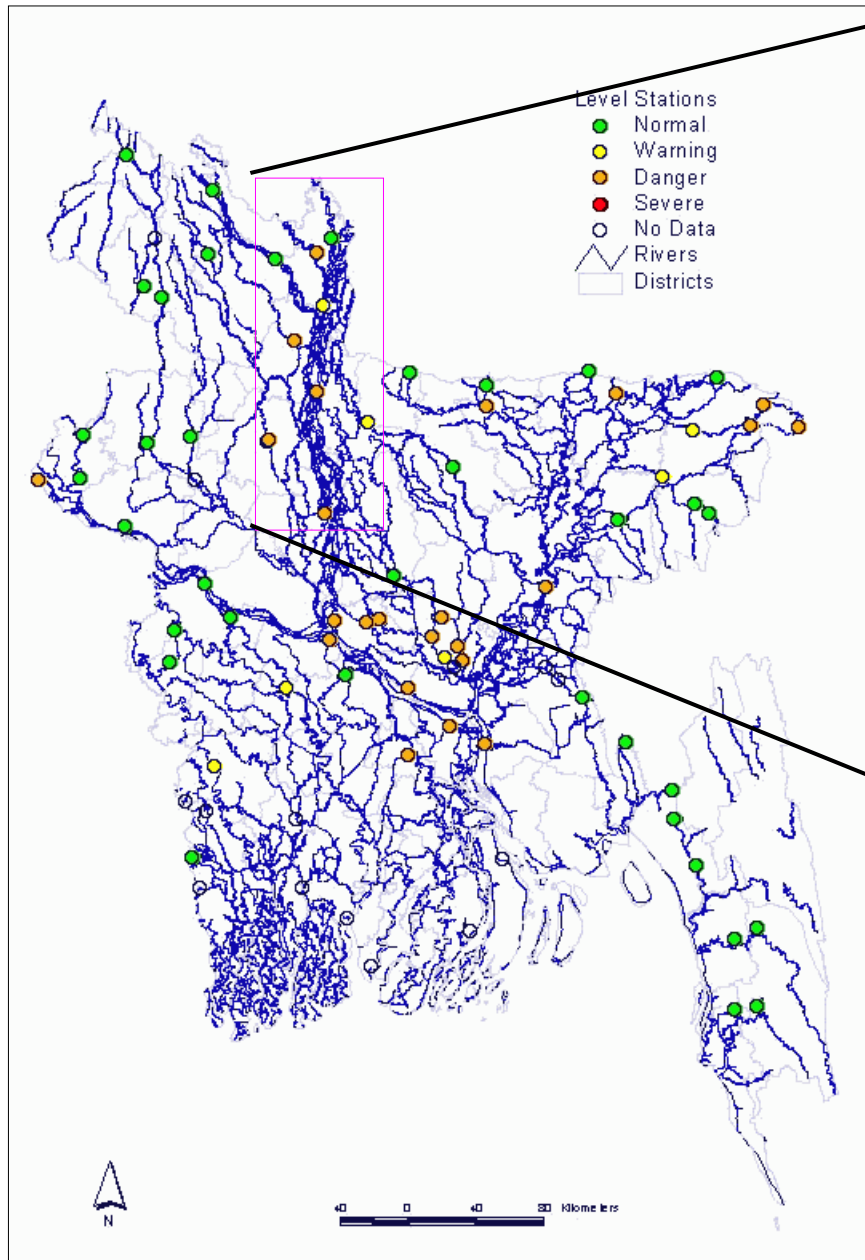
Central Bangladesh: River Trend Forecast for morning of 10th Sept.*



13 Stations currently at or above Danger Level
4 expected to fall
7 expected to rise
2 (forecast not available)

Source: Flood Forecasting and Warning Center (FFWC)
Map as of 8th Sept. 2008
* Forecast Data as of 7th Sept. 2008

Brahmaputra-Jamuna North: River Trend Forecast for morning of 10th Sept.*



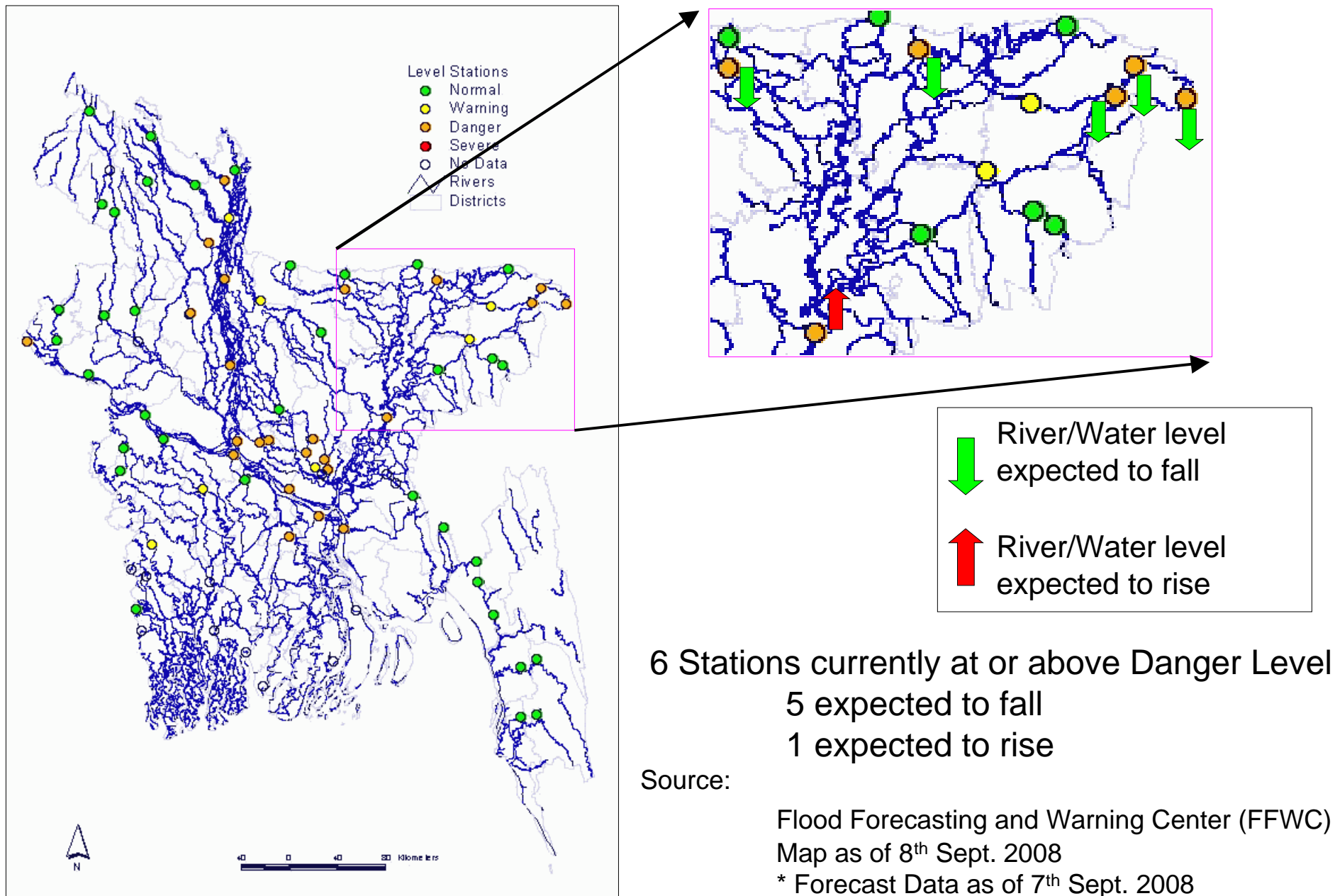
5 Stations currently at or above Danger Level
4 expected to fall
1 expected to rise

Source:

Flood Forecasting and Warning Center (FFWC)
Map as of 8th Sept. 2008

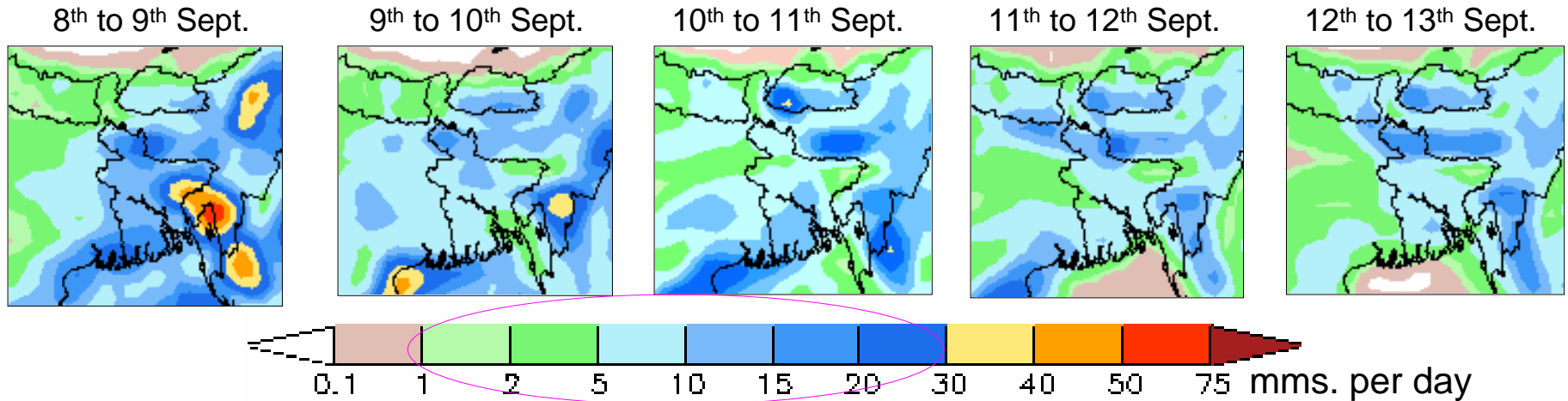
* Forecast Data as of 7th Sept. 2008

Meghna Basin North-East: River Trend Forecast for morning of 10th Sept.*



Rainfall Forecast for the coming days

- Light to moderate rain is forecast both Up-Stream and within Bangladesh for the coming days



Source: US Gvmt. NOAA Climate Prediction Center (CPC)

Summary/Conclusions

- Heavy to Very Heavy rain fell Up-Stream in late August across the border in India
- The number of stations Up-Stream at Danger Level or higher had been high; but is decreasing in more recent days
- The number of FFWC stations within Bangladesh remains relatively high for this season
- However, considering all FFWC stations; more stations are falling in recent days
- This trend is particularly true for the North

Summary/Conclusions (contin)

- Rivers in Central Bangladesh will likely continue to stay high in the coming days, because of slow drainage
- Rainfall forecast Up-Stream and within Bangladesh for next 5 days is favorable; light to moderate rains expected
- Assistance to flood victims (mostly by GoB) should be focused towards Central Bangladesh
- Overall situation is likely to improve during the next week; according to the rainfall forecasts
- Close monitoring and preparedness is warranted