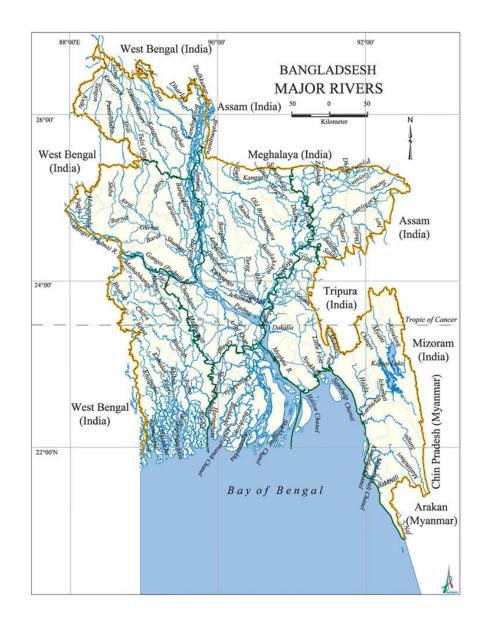
FloodVizBD: Visualizing Impact of the 2020 Monsoon Flood in Bangladesh and Areas At Risk of Potential Flood

Anika Sayara

October 2020 Department of Computer Science The University of British Columbia

Background

- Geographic location of Bangladesh makes it vulnerable to frequent flood
- The 2020 monsoon flood had an overall impact on the Northern, North Eastern and South Eastern regions of Bangladesh. The flood has impacted 30 districts of Bangladesh with moderate to severe impact on 15 Districts.



Objective and Data

Visualizing the demographic and geographic impact of the 2020 Monsoon Flood

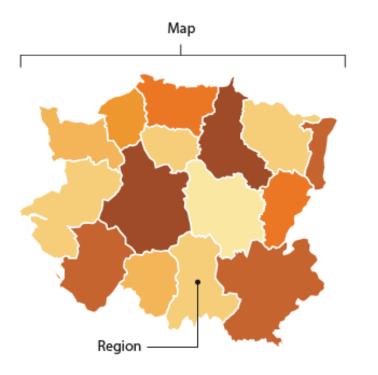
Data:

 Published with "Monsoon Floods 2020 Coordinated Preliminary Impact and Needs Assessment" report by the Needs Assessment Working Group (NAWG) of Bangladesh on 25 July 2020 Forecasting flood areas

Data:

- <u>Daily Rainfall Data</u> from data.gov.bd
- <u>Daily Water Levels Data</u> from data.gov.bd

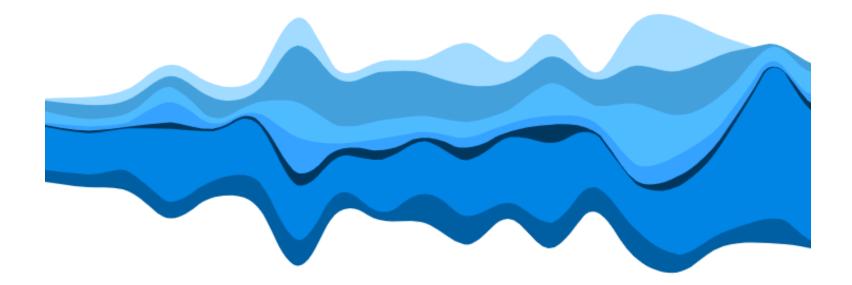
Mockup: Present Risk Level based on Water Level



Choropleth Map to show the danger level

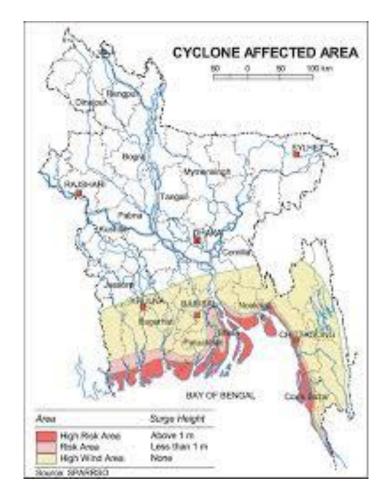
- Normal : More than 50 cm below danger level
- Warning: below danger level within 50 cm
- Flood: At and above danger level upto 1m
- Severe: More than 1m above danger level

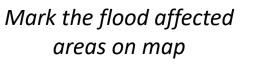
Mockup: Forecasted Variation of Risk Level

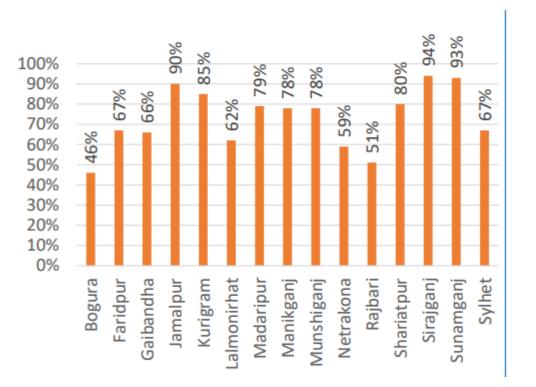


Streamgraph to show forecasted change of water level over next 5 days grouped by River Basins of Bangladesh

Mockup: Impact of 2020 Monsoon Flood

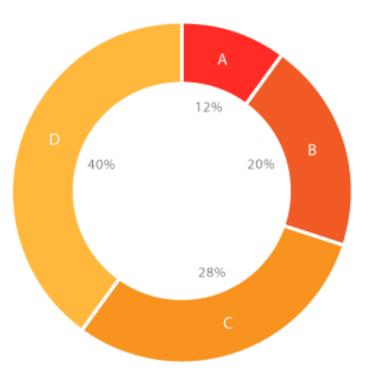




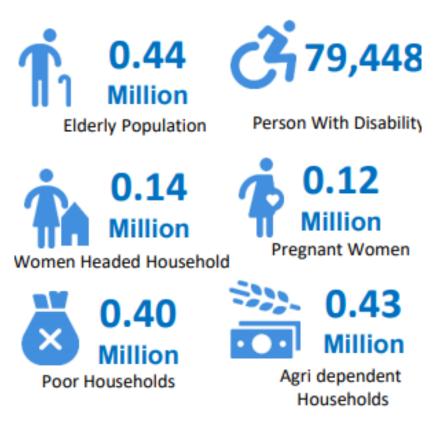


Percentage of affected villages

Mockup: Demographic Impact of 2020 Monsoon Flood



Percentage of Population Displaced by Flood



Also we can show affected vulnerable population breakdown

Challenges

- Some data are missing or incomplete in the indicated data sources
- The water levels are given for regions which are located on the river basins only

Thank You