

Salinity Intrusion in GBM

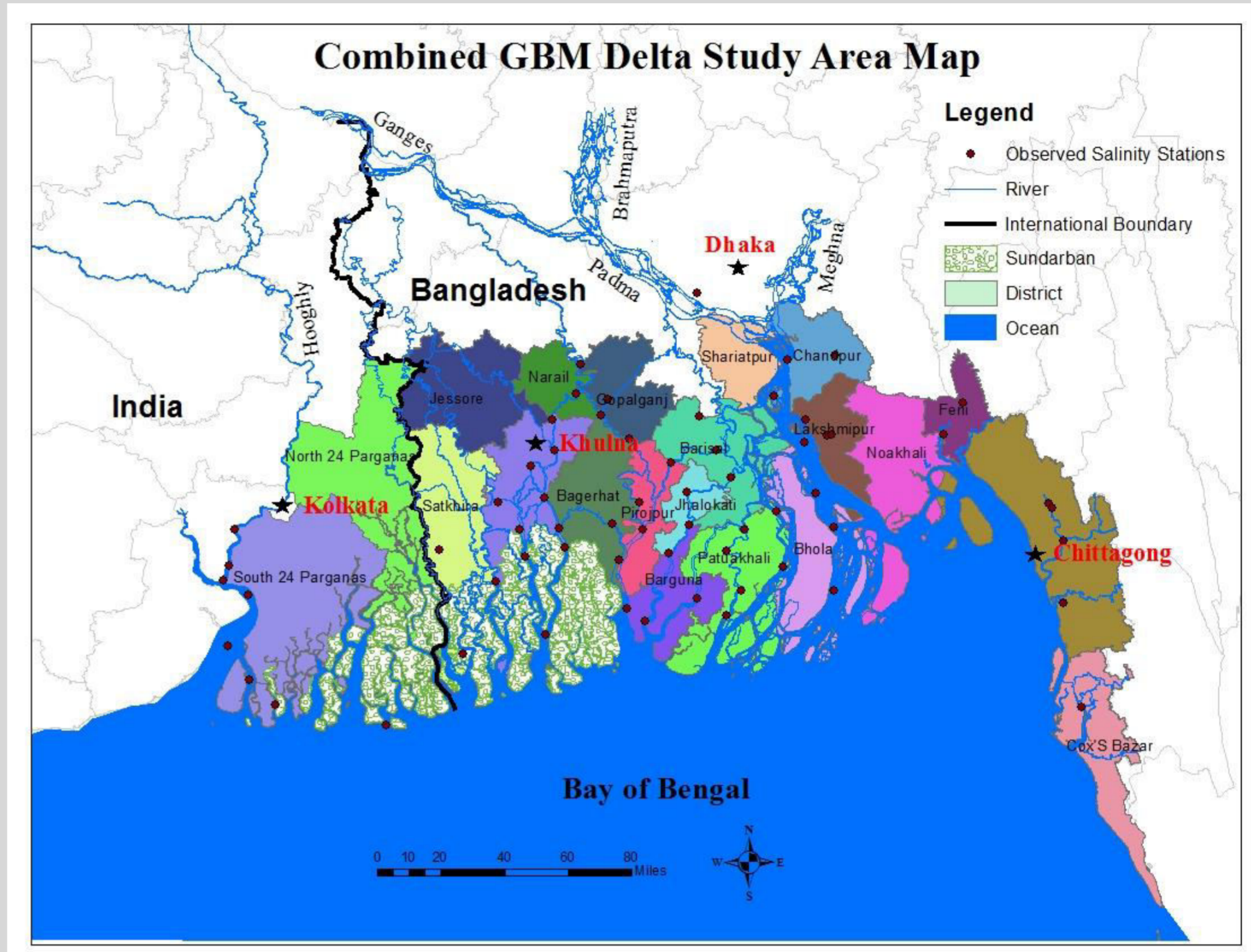
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INTRODUCTION

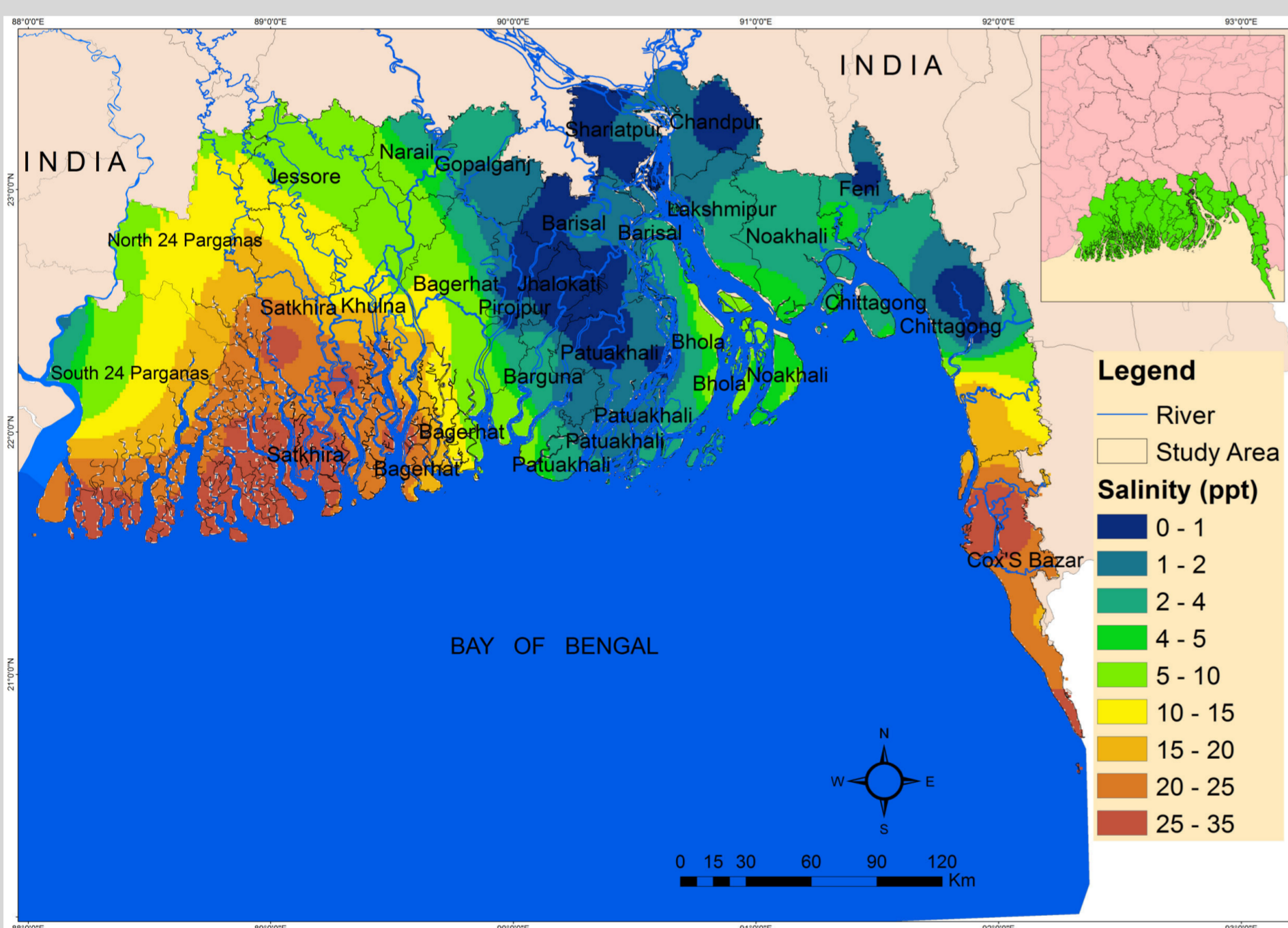
The GBM Delta is one of the world's largest (~100,000 km²), draining land from Bangladesh, Bhutan, China, India and Nepal with many of the 147 million people living in the delta under extreme poverty. Increase of salinity levels in river and estuaries of GBM Delta is one of the major concern in coastal region of Bangladesh and India. In this study, Delft3D model is applied to compute salinity levels of this region after calibration and validation using currently available data.

STUDY AREA



RESULTS

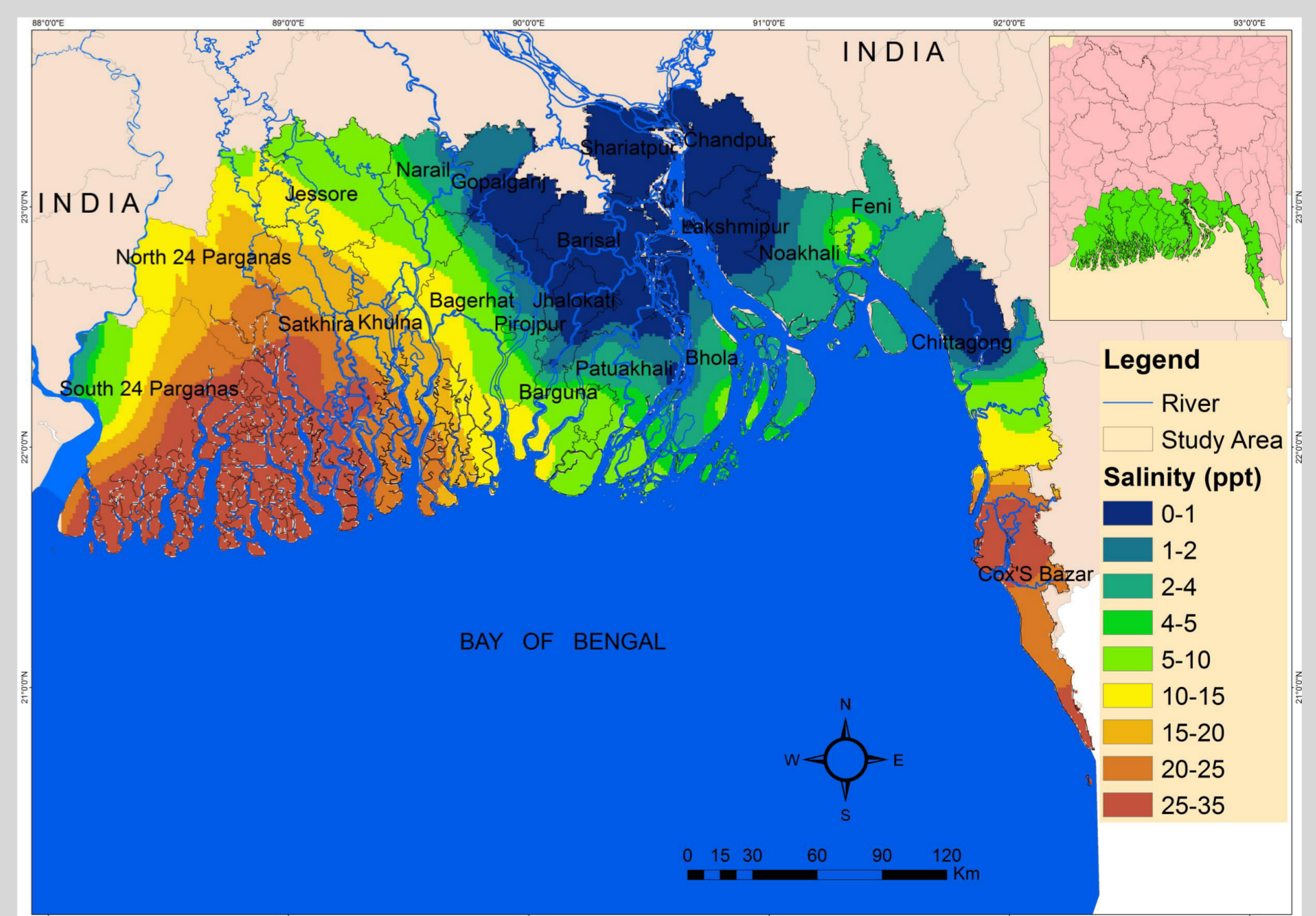
- ❖ Central system (Barisal, Jhalokati region) has the lowest salinity
- ❖ Eastern system (Chittagong region) has high salinity near Coss Bazar
- ❖ Western system (combined Sundarban region) is the most saline prone area where isohalines are shaped by freshwater flows from Baleshwar and Hooghly systems.



Measured maximum salinity of GBM delta (2011)

CONCLUSION

From the results it is apparent that the maximum salinity in the GBM is confined in the combined Sundarban region of India & Bangladesh, and along the Chittagong coast.



Model simulated maximum salinity of GBM delta (2011)