

Introduction:

Majuli, situated in Assam is the largest riverine island of the world. Sandwiched between the Brahmaputra river in south and Subansiri river in north, Majuli has been eroding at alarming rate affecting the socio-economic-cultural and rich biodiversity heritage.



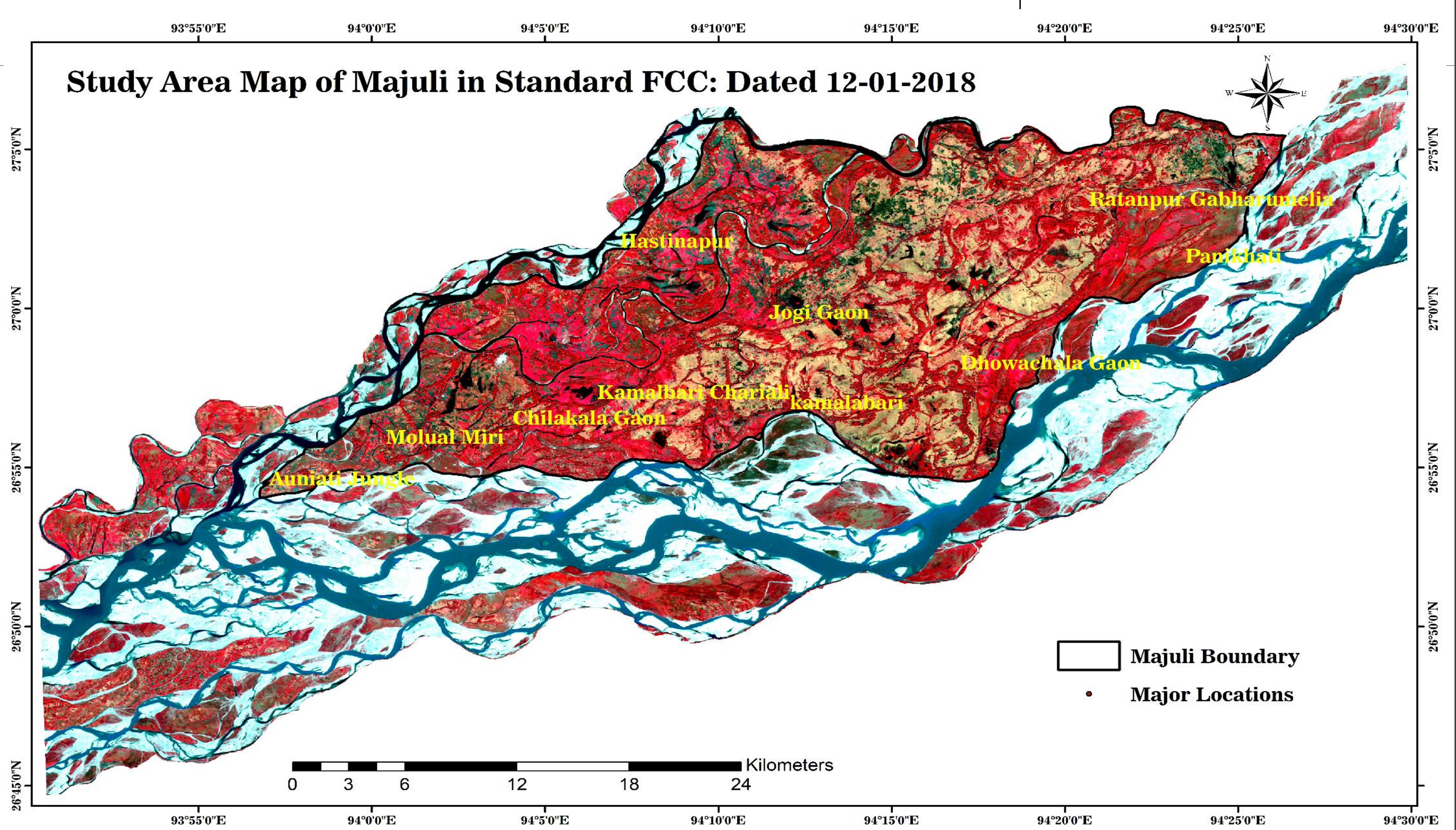
Team Name: Majuli

Topic: Change Detection Map

Team lead: Sandeep K. Mondal

Institute/Organization: IIT Guwahati

Contact/email: sandeepkumar@iitg.ac.in



Dataset Used:

In order to understand the changes due to erosion and deposition over the Majuli island, LISS-III (RESOURCESAT) datasets of 18 December 2008 and 12 January 2018 were used respectively.



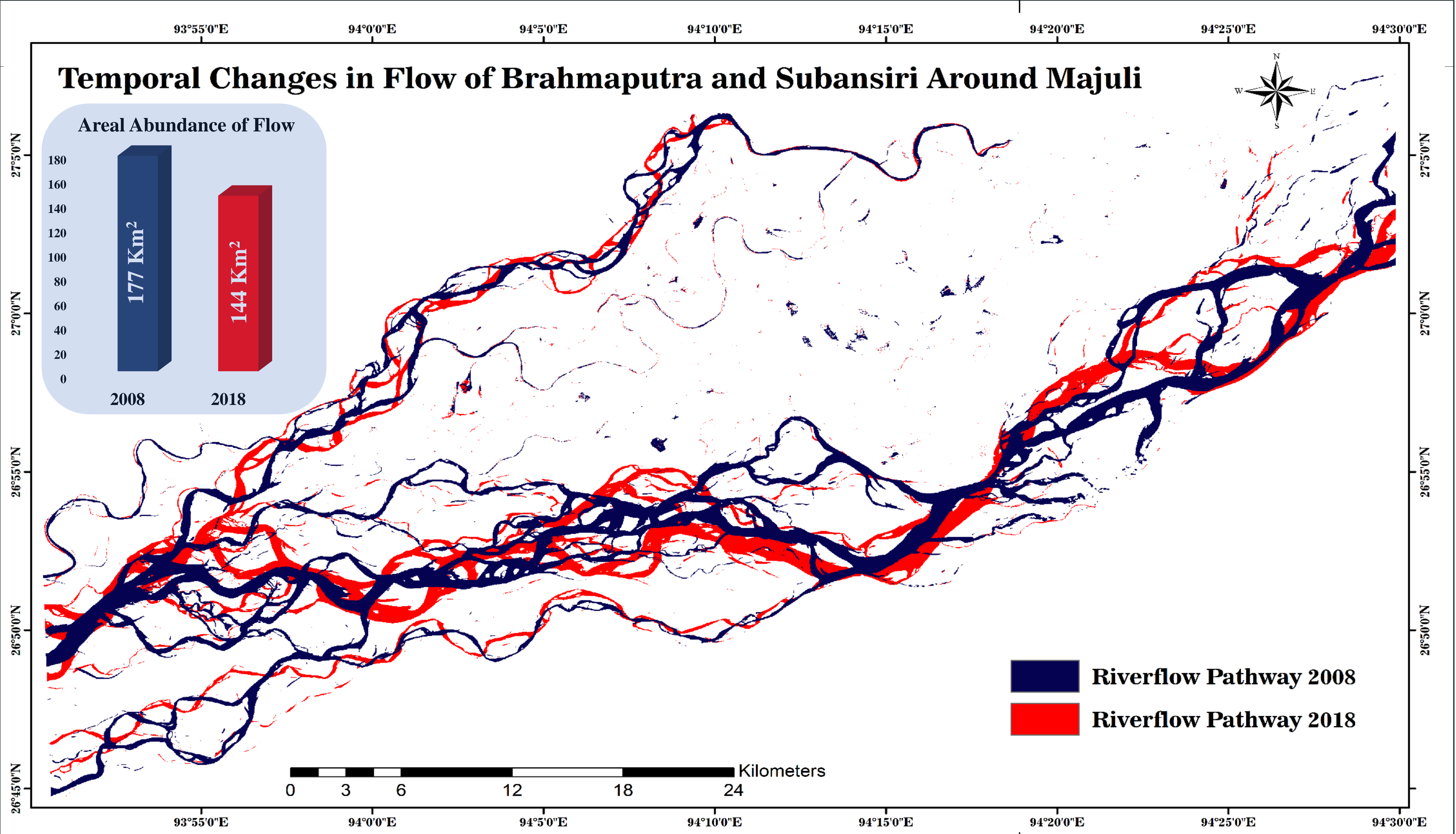
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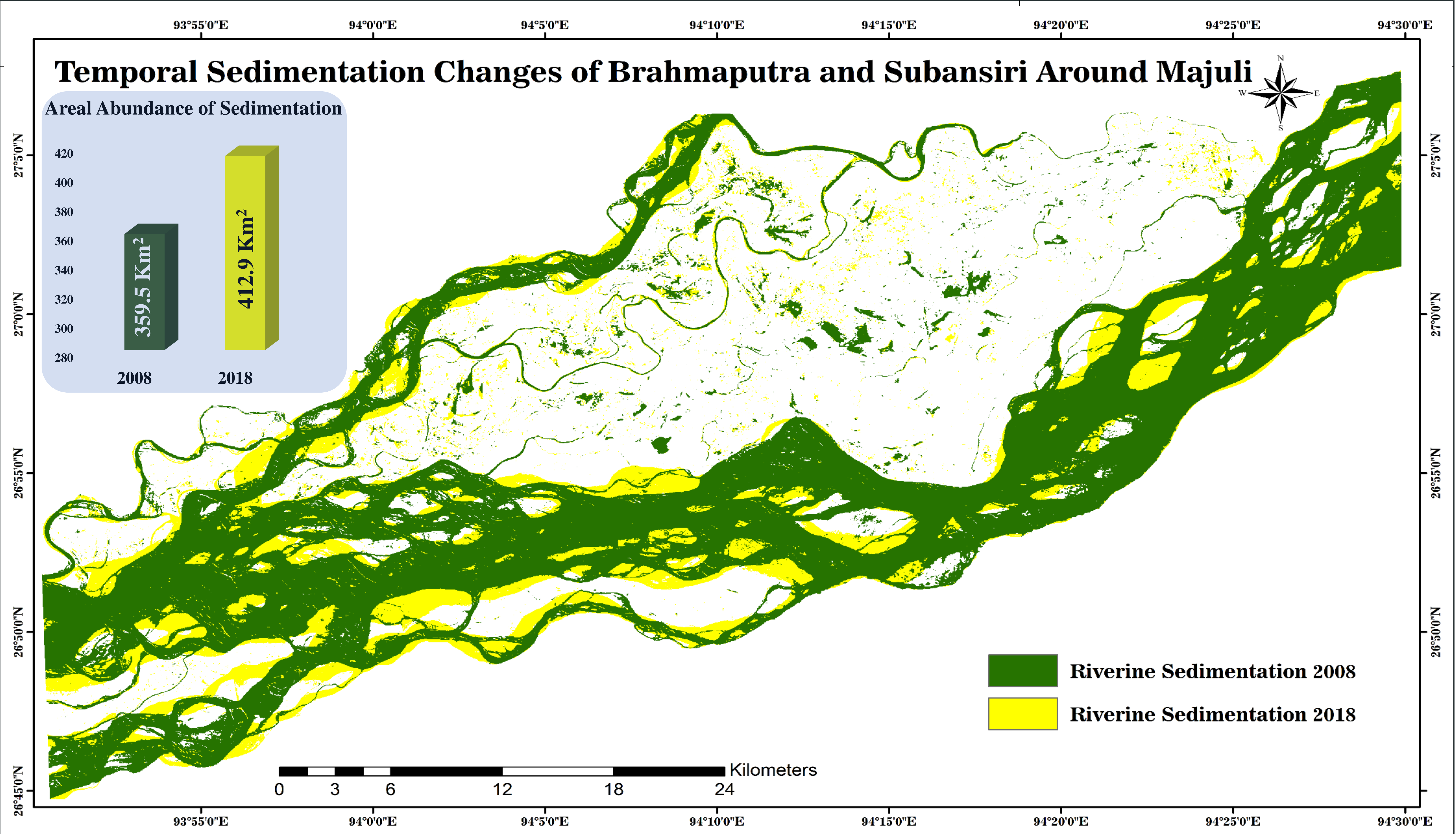
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Methodology:

- Digitization of Majuli region incorporating Brahmaputra and Subansiri for 2008 and 2018.
- DN to Reflectance conversion
- Band ratio (Normalised Difference Water Index)
- Reclassification for Riverflow pathway and Sedimentation

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Analysis:

- Majuli river island area is 20.54km² less in 2018 than that of 2008.
- Sedimentation contribution of Brahmaputra and Subansiri is increased by 12.93% in 2018 compared to 2008 affecting the rich biodiversity of Auniati Jungle in west Majuli.



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