# Article information:

(PDF) Geospatial Techniques for Assessment of Bank Erosion and Accretion in the Marala Alexandria Reach of the River Chenab, Pakistan  
<https://www.researchgate.net/publication/316712234_Geospatial_Techniques_for_Assessment_of_Bank_Erosion_and_Accretion_in_the_Marala_Alexandria_Reach_of_the_River_Chenab_Pakistan>

# Article summary:

1. Geospatial techniques were used to assess bank erosion and accretion in the Marala Alexandria reach of the River Chenab in Pakistan.

2. Landsat satellite images from 1999, 2007, and 2011 were processed to analyze river channel migration, changes in river width, and rates of erosion and accretion.

3. The study found that the right bank was under erosion in both time spans, with high rates of deposition exhibited in middle reaches. Maximum erosion occurred along the right bank at a distance of 24-28 km downstream of the Marala barrage.

# Article rating:

May be slightly imbalanced: The article presents the information in a generally reliable way, but there are minor points of consideration that could be explored further or claims that are not fully backed by appropriate evidence. Some perspectives may also be omitted, and you are encouraged to use the research topics section to explore the topic further.

# Article analysis:

The article "Geospatial Techniques for Assessment of Bank Erosion and Accretion in the Marala Alexandria Reach of the River Chenab, Pakistan" presents a study on the use of remote sensing and GIS technology to assess changes in river morphology caused by erosion and accretion. The study focuses on a 40 km reach of the River Chenab from Marala Barrage to Alexandria Bridge over a period of 13 years (1999-2011). The authors used Landsat satellite images for 1999, 2007, and 2011 to analyze river channel migration, changes in river width, and erosion and accretion rates.

The article provides detailed information on the methodology used for data preparation, image processing, classification, and data analysis. The authors used unsupervised classification technique to classify images into three classes: main river channel, sand bars, and cropland. They also produced a vector profile for the length of the entire study area to calculate distances of river channel and flood plain from reference points on both sides of the river.

The results showed that the right bank was under erosion in both time spans, with high rates of deposition exhibited in middle reaches. The maximum erosion was observed along the right bank at a distance of 24-28 km downstream of the Marala barrage in both time spans. Along the right bank mainly there is trend of accretion but erosion is much greater between 20 and 28 km reach. Maximum accretion was observed downstream of the Marala Barrage on the right bank.

Overall, the article provides valuable insights into using remote sensing and GIS technology for assessing changes in river morphology caused by erosion and accretion. However, there are some potential biases that need to be considered. For example, there is no discussion on how human activities such as dam construction or land use change may have influenced erosion and accretion rates. Additionally, the article does not explore potential counterarguments or limitations of the methodology used. The authors also do not discuss any possible risks associated with river channel migration and changes in morphology.

In conclusion, while the article provides useful information on using remote sensing and GIS technology for assessing changes in river morphology, it is important to consider potential biases and limitations of the study. Further research is needed to fully understand the complex factors that influence erosion and accretion rates in rivers.

# Topics for further research:

* Human activities and river erosion
* Impact of dam construction on river morphology
* Land use change and river channel migration
* Limitations of remote sensing and GIS technology in river assessment
* Risks associated with river channel migration and changes in morphology
* Factors influencing erosion and accretion rates in rivers

# Report location:

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