Emerging from the Yamuna – studying an erstwhile oxbow lake in Sersa, Haryana, India

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Oxbow lakes in the Indian subcontinent are niches rich in biodiversity, and contain insights into the palaeoclimate and past settlement patterns of the region. This study examines an erstwhile oxbow lake in Sonipat, Haryana, India, which possibly arose from the former course of River Yamuna. The study first confirms the presence of this lake using satellite imagery to identify its remnants. It also employs various pathways, including elevation data, Corona imagery and Survey of India maps, to discern the path of the lake in today's geography of Sersa. The reason for its disappearance has also been accounted for in this study. Apart from using satellite evidence and GIS, an on-site ground truth survey was also conducted, the results of which are discussed. Finally, further suggestions for research are provided to understand the palaeoclimate of the study site. It is also significant that this would be an understudied avenue of research on such a feature in Sonipat.

Keywords: Ground truth survey, land-use patterns, oxbow lakes, palaeoclimate, remote sensing