
Progress Seminar

Seminar Title	: Integrated Modelling and Management of Climate Change-Induced Compound Floods in Coastal Areas of Mahanadi River Delta
Speaker	: Debabrata Mishra (Rollno : 522ce1003)
Supervisor	: Dr. Ratnakar Swain
Venue	: Seminar Hall, Department of Civil Engineering (CE)
Date and Time	: 18 Oct 2024 (04.00PM)
Abstract	: The shoreline environment is a critical concern globally, with significant patterns of erosion and accretion impacting many regions. This study focuses on the shoreline changes observed at the mouths of the Mahanadi, Nua Nai, Devi, and Bramhani rivers along the Mahanadi River Delta (MRD) coastline. Satellite imagery from 1990 to 2020 was analyzed to assess these changes. The findings reveal that the Mahanadi River mouth is experiencing a high rate of erosion, with an average End Point Rate (EPR) of -2.213 m/year and an average Net Shoreline Movement (NSM) of -209.095 m. The Nua Nai River mouth is undergoing moderate erosion, with an EPR of -1.859 m/year and an NSM of -189.57m. The Devi River mouth shows the highest erosion rate, with an EPR of -3.04 m/year and an NSM of -352.43 m. In contrast, the Bramhani River mouth is experiencing low accretion, with an EPR of 0.576 m/year and an NSM of 58.72 m. This study highlights the critical shoreline changes occurring at these river mouths, discusses the potential causes and consequences, and underscores the urgent need for preventive measures to mitigate further environmental degradation.