

**POTENTIAL USAGE OF REMOTE SENSING DATA IN MONITORING THE  
BEHAVIOR OF SHORE DRIFT ALONG THE SENEGALESE COAST:  
SENEGAL RIVER ESTUARY FOLLOWING THE DAM CONSTRUCTION**

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The Senegalese coast is an area of highly variable wind and wave regime. Satellite images and aerial photos were analyzed to examine the direction, amount and spatio-temporal long shore drift and identifying areas vulnerable to coastal erosion and accretion along the coast of Saint-Louis. In the study area two approaches were adopted while utilizing remote sensing data couple to aerial photos interpretation and grain size analyses. Net shore-drift direction was first determined by studying various coastal landform indicators and secondly by surveying turbidity and grain size distribution patterns. Landform indicators suggest that during the northwest swell period, strong southerly currents played a great role in the accretion of prostrated sectors and depositing eroded material, though partially, along various sectors. Whereas, during the rest of the year, under the influence of the northerly counter-currents, depletion of sand is taking place along retreating sectors, which has been reflected in the development of the "Langue de Barbarie" spit-bar. Turbidity pattern distribution exhibited by satellite image suggests that from October to June, long-shore drift is from north to south and moves more material to the coastline. The spit-bar is consistently aligned to the south but, the modification of the river regime and the hydrodynamics in the estuarine zone had introduced temporal changes in the patterns which have to be confirmed. It may be concluded that shore-drift direction, which can be determined effectively by means of remote sensing, is season-dependent and plays a significant role in identifying eroded and accreted coastal areas. It is vital that this be kept in mind in planning future development along this very sensitive coastal sector.