MORPHOLOGICAL CHANGES OF SMALL SPITS ALONG THE S.W. COAST OF SRI LANKA

Upali Weerakkody and Kanthi Ratnayake
Dept,. of Geography, University of Ruhuna.

Sand spits formed in front estuaries play an important role in the morpho-dynamics of the coast, and as a place of recreational attraction, even though they have been paid little attention, scientifically. The understanding of their changes would encourage their conservation and effective utilization.

An analysis based on old maps, sequential aerial photographs and topographical maps unravel that four spits found along the S.W. coast have been continuously degraded during the last century. The Hikkaduwa spit originated between 1840 and 1917, and was completely destroyed during the last decade of the 19th century. The spit at the Koggala lagoonal outfall which originated during the same period is also receding continuously, leaving behind only a very narrow beach. The spit across the Gin ganga estuary which originated before 1660 has evolved more than three centuries, exhibiting many changes. The changes that took place during the period between 1840 and 1934 show that the spit grew into an elongated shape, forming small outlet of the Gin ganga estuary. Breaching of the spit during the period between 1934 and 1987 formed many irregular features in its elongated shape. Continuous degradation may destroy the neck of the spit, to form an outlet of the spit as the northern end. The spit at the Nilwala estuary built up particularly during the period between 1766 and 1784. It has developed into a near-rectangular shape, with an east-west orientation. After about 50 years, the spit was degraded to form a narrow tip at its western end. The elongated western end was washed away during the second quarter of the 20th century. All these evidences suggest that the small spits along the S.W. coast have receded continuously.

A possible reason for such changes, as shown by climatic and tidal data, is the decreasing supply of material to the spits. Sand mining from rivers may also minimize this supply.