

# Sea erosion and its impact on turtle nesting in Karnataka

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Sea erosion along the coast of Karnataka has resulted in the loss of valuable beaches which is important for marine turtle nesting. In Karnataka, only the Olive ridley turtle is known to nest along the coast. Also known as the Pacific ridley, this

species is found in coastal waters of the tropical parts of the Pacific, Indian and South Atlantic Oceans. The three coastal districts of Karnataka such as Dakshina Kannada, Udupi and Uttara Kannada have a coastline of about 300 km of sandy



Erosion of beach at Yermal, Udipi District

beaches which are preferred nesting sites of Olive ridley turtles. Sea erosion especially during monsoon is the major reason for loss of beach in this coastal stretch. Based on the interviews of fishermen conducted during 2013 in 28 beaches of coastal Karnataka, ranks were assigned for the reasons for decline in turtle nesting (Table 1). In Dakshina Kannada district, sea erosion and seawall construction as well as lighting, human activities and litter in the beaches were ranked as important. In Udupi district sea erosion and seawall construction as well as fishing mortality was ranked first in equal

number of beaches. In Uttara Kannada district, lighting, human activities and litter in the beaches was ranked first in three beaches while fishing related mortality was ranked first in two beaches.

Trasi beach in Udupi is predominantly sandy with sand dune plants *Ipomoea pes-caprae* on the beach and a favourable site for turtle nesting. Yet during the rough monsoon season the beach is eroded. Climate change can also bring about increased wave action on beaches and result in loss of beach width. From year 2005, a turtle hatchery was operational and regular awareness programmes used to be conducted in this beach but of late this has been discontinued. Uttara Kannada district has beaches of tourist interest as well as fishing activities. With the electrification of the beaches, the time spent by tourists and visitors to the beaches have also increased. This in turn has resulted in more litter on beaches. Turtles that come for nesting can also get entangled in the damaged fishing nets left on the beach. Marine litter on the beach, illumination of beach front and fishery linked mortality are some of the threats perceived to turtle nesting along Karnataka coast.

Table 1. Ranking of reasons for decline in turtle nesting in three districts of Karnataka

District / Beach	Reasons for decline in turtle nesting			Turtle nesting observed as before
	Erosion/seawall	Lighting/human activities/litter	Fishing activity related	
<b>Dakshina Kannada</b>				
Someshwara	-	-	-	yes
Ullal beach	1	-	2	-
Bengre	-	1	2	-
Thaneerbavi	-	1	2	-
Panambur	1	2	3	-
Chitrapur	-	1	2	-
Surathkal	-	-	-	yes
Shashitulu	-	-	1	-
Hejimadi kodi	1	2	3	-
<b>Udupi</b>				
Padubidri	-	-	-	yes
Yermal	1	-	-	-
Muloor	-	-	-	-
Kaup	-	2	1	-

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Katpadi Mattu	1	-	-	-
Pitrody	1	3	2	-
Malpe	-	2	1	-
Trasi	3	2	1	-
Kilimanjeshwara				yes
Uppunda	3	1	2	-
Byndoor	-	-	-	yes
<b>Uttara Kannada</b>				
Bhatkal	-	2	1	-
Murudeshwara		1	2	-
Manki	-	-	-	yes
Kumta	-	-	-	yes
Gokarna	-	1	2	-
Tagore	-	1	2	-
Devbag	-	-	-	yes
Majali	-	2	1	-

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