IMPORTANCE OF BEACH CHARACTERIZATION ON MONITORING SEA TURTLES NESTING SEASON

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Objective: In this study it is intended to emphasize the importance of nesting beach characterization in order to understand the relationship between coastal geomorphology and the reproductive success of two species of sea turtles (*Caretta caretta, Chelonia mydas*).

Methods: Afield study conducted at IMS-METU incorporated two different techniques. The first approach employed daily time lapse photography from the same location and at the same time taken using identical setting features to observe coastline seascape changes within the timespan of one day and between days. After the collection and analysis of all images, a safe zone was determined with respect to nest location. The second technique involved defining those parameters of the nesting beach having an impact on the success of the nest. Firstly, boundary parameters, beach profile, vegetation zone and beach width were defined. After a general beach profile was determined sand softness and sand composition were assessed. To evaluate more accurate risk assessment analyses, sea defences and predation risk were identified as natural threats. Direct anthropological threats included the reported beachfront lighting, illegal fishing and the disturbance impact of human activities.

Results and Discussion: These findings enabled us to understand the conditions for a successful incubation period and minimize the anthropological threats. For a quick result Initial results identified the most effective monitoring methodology to be a protective approach. Also, monitoring the changes in these parameters help us understand the relationship between nesting ecology and geomorphology. In long term studies, we expect to show how nesting success of the sea turtles *Caretta caretta* and *Chelonia mydas* is affected by climate change and human development, how changes in coastline morphology affect beaches and their biodiversity and the potential effects such change may have on nesting success rates.

Keywords: *Caretta caretta, Chelonia mydas,* geomorphology, reproductive success, characterization