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CONVENTION ON THE CONSERVATION OF EUROPEAN WILDLIFE
AND NATURAL HABITATS

Standing Committee

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Specific Site - File open

**Presumed degradation of nesting beaches in
Fethiye and Patara SPAs (Turkey)**

REPORT BY THE GOVERNMENT

*Document prepared by
the Ministry of Forestry and Water Affairs, Turkey*

**REPORT OF GOVERNMENT OF THE REPUBLIC OF TURKEY
ON COMPLAINT NO 2012/9 PRESUMED DEGRADATION OF NESTING
BEACHES IN FETHIYE AND PATARA**

PATARA

This document summarizes the conservation and monitoring studies of sea turtles carried out in Patara and Fethiye-Göcek SEPA's in 2013.

Firstly, it should be noted that the sea turtle nesting area of Patara Beach and the concerned area "the village settlement area" where the construction work will be implemented are not the same area.

The location of the construction project, which is within the boundaries of village settlement area, is about 2 km away from the beach. The Environmental Protection Agency for Special Areas approved the 1/5000 and 1/1000 Implementation Plans (where the concerned construction to be made) that were prepared by the Ministry of Culture and Tourism, and endorsed by the Antalya Culture and Natural Heritage Protection Regional Council and with the condition that protection and use balance to be considered and in line with the 1/25,000 scale Patara Environmental Master Plan that was approved on 17.05.1991.

The large-scale holiday house construction project area is within Gelemiş village settlement border, and in consistent with 1/1000 scale Implementation Plan. Of all the plans approved previously were reduced approximately 75 % - from 106,000 m² to 28,000 m² - and holiday houses construction area were confined according to this. Moreover, the settlement development was also directed in the opposite direction of sandy beaches and first-degree archaeological site.

As for the sea turtle protection activities; field studies were conducted between 15 May 2013 and 15 September 2013 in Patara Beach. During this period, a total of 239 *Caretta caretta* nests were determined. In addition, 588 *C. caretta* tracks were observed. Based on these data, *C. caretta* nesting density was 17.07 nest/km. In addition, 17 and 103 nests out of 239 total nests have undergone semi and full predation respectively. Average incubation time for 92 *C. caretta* nests is calculated 50.38 days. Total number of eggs in 223 *C. caretta* nests was 15,768, and average number of eggs per nest was calculated at 70.71. While 41.27% of these eggs became hatchling, 46.04% of these suffered from predation. 88.07% of 7,259 eggs suffered from predations that were destroyed by foxes. 64.33% portion of uncompleted their development *C.caretta* eggs was early stage. 90.82% of hatched *C. caretta* juveniles managed to reach the sea. 68% of *C. caretta* juveniles exposed to predation by foxes. This season 4,860 eggs in 64 nests were moved to appropriate fields. Average depth and diameter of *C. caretta* nests were found 49.86 cm and 17.69 cm respectively. Ten *C. caretta* tagged in 2013. In addition, temperature gauges were placed into the 3 nests. Given this temperature gauges data is composed 66.67% and 76.24% female individuals in Patara Beach.

In terms of public awareness activities, tourists and daily users were informed by means of leaflets, handouts and signposts. Public meetings and training programs were carried out for the conservation of sea turtles and their habitats during the nesting season by the research team.

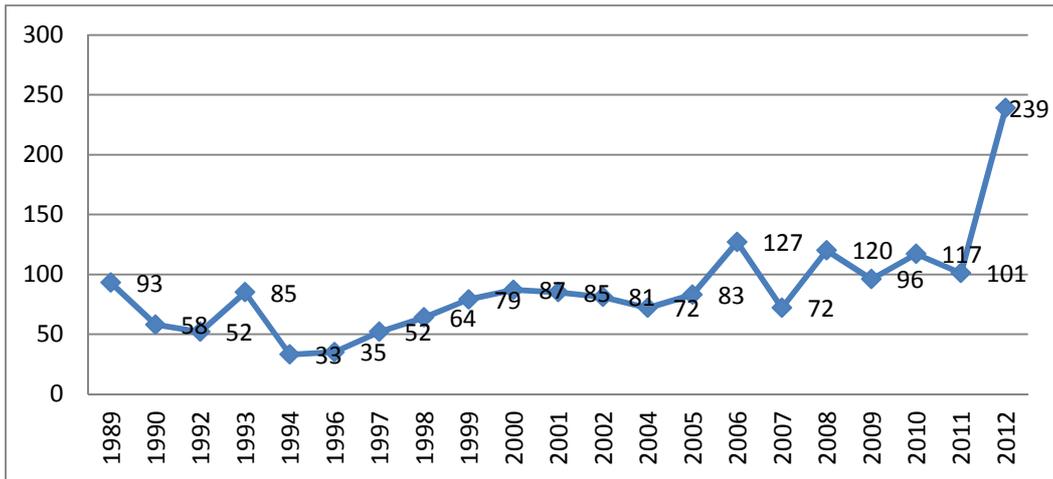


Figure 1. Temporal distribution of nest numbers between 1989 and 2012

	<i>C. caretta</i>				<i>C. mydas</i>				Total			
	Nest	%	Track	%	Nest	%	Track	%	Nest	%	Track	%
May	14	5,86	6	1,02	0	0	0	0	14	5,86	6	1,02
June	94	39,33	155	26,41	0	0	0	0	94	39,33	155	26,36
July	115	48,12	372	63,37	0	0	1	100	115	48,12	373	63,44
August	16	6,69	55	9,20	0	0	0	0	16	6,69	55	9,18
Total	239	100	587	100	0	0	1	100	239	100	588	100

Figure 2: The monthly number of nesting and tracks of *C. caretta* and *C. mydas*.

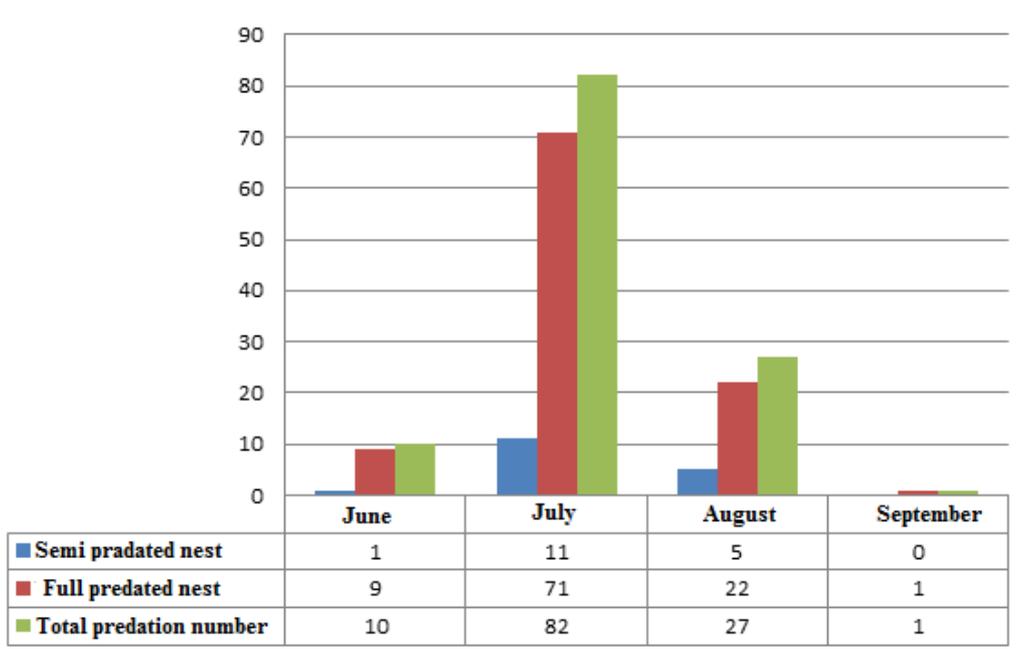


Figure 3. Monthly predation numbers on *C. caretta* nests in 2013



Figures 4. Public awareness activities in the field

FETHİYE

Fethiye is a district of Muğla Province in Turkey. Fethiye is one of Turkey's well-known tourist centers and is especially popular during summer. Fethiye-Göcek was declared as SEPA by the Council of Ministry in 1988. Approximately 140.000 people live in the city center, and this number exceeds 200.000 in summer season. The overall metropolitan area of the city of Fethiye stretches inland from the harbour for more than 7 miles, incorporating several villages into the one city. To the north of the city centre is the area of Çalış Beach (8.1 km beach), an extensive promenade along the coast, on which a lot of hotels are located.

Çalış beach is an important sea turtle nesting beach that has an open space property similar to other SEPAs. In the Fethiye-Göcek SEPA there is no local management unit, and physical points of entry/exits do not exist. Due to lack of management of the area is not being ensured, and control of the area is not adequately maintained.

In spite of anthropogenic impacts caused by lacking of management, breeding and nesting activities of Sea Turtles on Çalış Beach, which take place in Fethiye-Göcek Special Environmental Protection Area, were studied in 2013 nesting season. A total of 258 emergences, all of which belongs to loggerhead sea turtles, occurred in 2013, of which 104 (40.31 %) nests were deposited and the remaining 154 (59.69 %) non-nesting emergences were recorded. GPS records of the nests were taken and the distances of emergences from the sea were also measured. Mean nesting density was 12.53 nests/km in 2013 for the length of 8.3 km long beach. Mean depth of the nests was 40.99 (27-54) cm, diameter of egg chamber was 20.95 (14-28) cm with a mean clutch size of 77.92 (22-122).

A total of 12 nesting females were tagged, three of them re-observed during their second nesting.

The nests were caged against predation and human activities. A total of 33.65 % nests were caged against human activities and against predators. Hatching was observed in 98.08 % of the nests and only 1.92 % of the nests did not produce any hatchlings.

After excavating the nests, a total of 8104 eggs were counted, of which 601 of them were unfertilized. 1467 dead in shell embryos and 6036 empty eggshells that produced hatchlings. The hatching success was calculated as 91.99 %.

For the public awareness, monthly meetings with hotel owners and personnel have taken place and PowerPoint presentations were also made to the tourists and visitors. This public awareness champagne for both local and international tourists was active every night at Caretta Info Desk on Çalış beach. Three info signs were erected at the three main entrance to the beach at Çalış, Yanıklar and Akgöl sections.



Figure 1 . Measuring and tagging process.

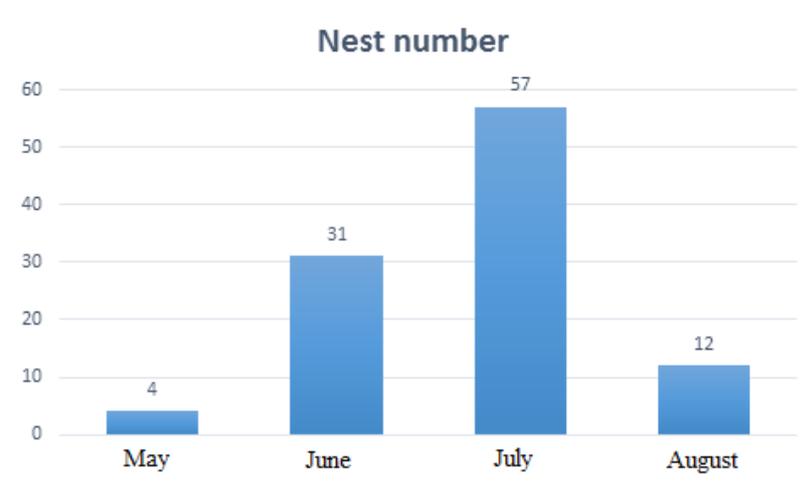


Figure 2. Temporal distribution of *C.caretta* nests on Fethiye Beach.

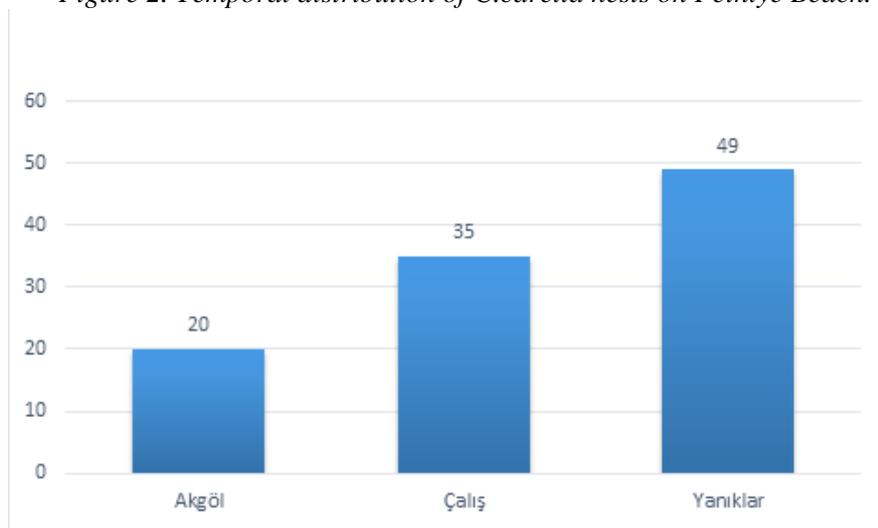


Figure 3. Nest numbers according to beach sections.

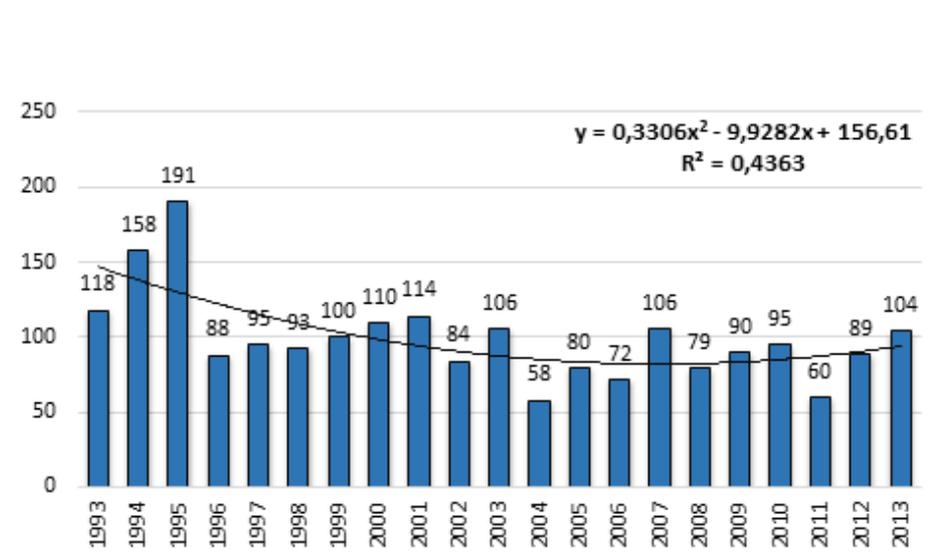


Figure 4. Temporal distribution of the nest numbers between 1993 and 2013



Figures 5. Information sign-boards.



Figures 5. Public awareness activities in the field.