



SOUTH PELOPONNESE ANNUAL REPORT 2023

Conservation efforts at the nesting habitats of
Caretta caretta in south Peloponnese
(Lakonikos Bay, Koroni and SE Lakonia)

Natura 2000 sites:
GR2540003
GR2550010

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1 INTRODUCTION

ARCHELON's presence in south Peloponnese has been continuous since the mid 1980s, carrying out activities related to the monitoring and protection of sea turtle reproduction. The nesting beaches of the Loggerhead sea turtle (*Caretta caretta*) in South Peloponnese have been included in the two Natura 2000 network sites, as follows:

- The beaches of Lakonikos Bay with the names Vathi, Mavrovouni, Selinitza, Valtaki and Evrotas in the site GR2540003 “EKVOLES EVROTA, PERIOCHI VRONTAMA KAI THALASSIA PERIOCHI LAKONIKOU KOLPOU”.
- The beach of Koroni (Zaga - Memi) in the site GR2550010 “THALASSIA PERIOCHI NOTIAS MESSINIAS” (Map 3).

2 RESULTS

The ARCHELON project was carried out from the end of May to the end of September 2023, by two distinct groups of volunteers/researchers on the beaches of Lakonikos Bay and the beach of Koroni. There were several turtle strandings reported in the area during the first nine months of 2023, 16 dead in Lakonikos Bay and 2 in Koroni. Public awareness actions included informational presentations at tourist units and at the seasonal information stations operating on the beach of Mavrovouni and in the town of Koroni. Through these actions 3,300 visitors and residents of the areas were informed (2,000 people in Lakonikos and 1,300 in Koroni).

According to preliminary data, 1,095 loggerhead nests were recorded in the above mentioned areas. The nests were protected from predation, flooding, trampling and the effects of light pollution.

In addition to the above areas, 174 nests were recorded in the SE part of Lakonia (from Plytra to Monemvasia) and in Elafonissos by a trained team of the "Tulipa Goulimi" Association in collaboration with ARCHELON.



3 THREATS

General protection measures for the nesting beaches of sea turtles are included in the Joint Ministerial Decision (KYA, FEK B 1864/15-05-2020 and, amendment FEK B 2198/05-06-2020, Annex 2I), which regulates the "concession of simple use of coast and beach". According to its provisions, in the sea turtle nesting areas, competent Municipalities can grant local businesses the "simple use of the coast and beach", as long as the implementation of specific management measures is ensured during the nesting and hatching period of the species. These measures include, among others, the removal of beach furniture (sunbeds, umbrellas) after sunset, beach cleaning without heavy vehicles, the prohibition of vehicle traffic on the beach, the reduction of light pollution, and the prohibition of music and dance events (beach parties).

It is worrying that even in 2023, many cases of non-compliance with these management measures continued to be observed, thus disturbing the reproductive process of sea turtles. Below is information noted for each individual region.

3.1 LAKONIKOS

The uptake of space on the beach by beach furniture during night- time hours created problems for nesting female turtles. The project recorded regularly the numbers of beach furniture that remained on the beach during the night hours. On the beaches of Lakonikos Bay, 87% of the businesses did not move the beach furniture during the evening hours. At Selinitza, Mavrovouni and Vathi beaches only 3 businesses complied with this management measure. There need to be significant efforts so that all the businesses in the area enforce this measure.

In addition to the beach furniture of businesses, a large percentage of visitors to the area left private equipment on the beaches at night. During the 116 days of the project, at the beaches of Valtaki (1.1 km), Selinitza (1.5 km) and Vathi (1.8 km) there were cumulatively recorded 2,765 incidents of private beach furniture, 594 incidents of water sport equipment and 221 incidents of private shading equipment that were left on the beaches during the night.

The problem of light pollution at the beaches of Lakonikos remained prominent, except for the beaches of Valtaki and Evrotas that have no lighting. The biggest problem was found at the west side of Vathi beach and the east side of Mavrovouni, where there are no dark spots left. The intensity of the problem is made apparent by incidents of hatchlings that had already entered the sea but lost their orientation and came back out to the beach due to the intense luminescence. The percentage of nests that were affected by light pollution was 69.3% in Selinitza, 68.8% in Mavrovouni, 42.2% in Vathi and 37.7% in Valtaki.

In the project's 116 days of recordings, other threats have been identified that have a short-term impact on the Loggerhead's reproductive process. In particular, 51 incidents of the presence of vehicles and 11 incidents of heavy vehicles were observed, as well as 413 incidents of human presence during the night hours. Human presence at the beaches during the night is disturbing for the nesting females that could be discouraged to nest, as well as for hatchlings that could get trampled. Human presence is connected with fishing activities (53 incidents), camping (90 incidents) and campfires (160 incidents).



Unfortunately, in 2023, the illegal practice of feeding sea turtles by a certain business continued in Limeni, in the Municipal Unit of Oitilo, which is far from the nesting beaches (the phenomenon has started since 2019). As a result of this practice, not only is there a nuisance to the protected animals (receiving inappropriate food), but also animal attacks on bathers have been observed (40 incidents were recorded in 2023 according to information from the competent Port Authority and the Areopolis Health Center).

On the beaches of Selinitza, Mavrovouni and Vathi, in recent years, the destruction of the sand dunes in the coastal zone has been observed due to the opening and use of illegal dirt roads, which is one of the most important long-term threats to the nesting beaches in Lakonikos Bay.

In particular, the width of the dirt road along the Vathi and Mavrovouni beaches is so large that it also allows cars to be parked, destroying the dunes and the coastal vegetation. The situation on the beach of Mavrovouni deteriorated significantly in the spring of 2022, due to the works for the construction of a waste treatment plant, where inert materials were used on approximately 2 km of the beach and remained there after the completion of the project.

Illegal vehicle parking was also observed on Valtaki beach which has caused degradation of the protected sand dune vegetation. Also, in parts of the beach of Evrotas (Trinisa, Kyani Akti) arbitrary constructions for accommodation that had been previously abandoned were re-used.

In July 2023, a new dirt road was created, perpendicular to the beach of Evrotas, at the position of Asterio, for the entry and exit of small boats. During the same period, heavy vehicles were observed on the beach of Selinitza for the construction of a swimming pool.



3.2 KORONI

At the nesting beach of Zaga-Memi, 5 businesses were using beach furniture (sunbeds, umbrellas) and only one of them complied with the protection measure of removing them after sunset. As a result, a significant portion of the nesting zone on the beach was occupied by beach equipment. Adding to this problem is the water sports equipment of one business. Similarly to Lakonikos Bay, a large number of beach-goers left their private equipment on the beach at night further reducing the available nesting space for sea turtles. In 2023, a total of 89 incidents of sunbeds, 117 incidents of shading equipment and 50 incidents of water sports equipment left during the night on the 2.7 km of the nesting beach were recorded.

Light pollution by private as well as municipal lamps was prominent in the western and eastern parts of the beach, causing hatchling disorientation. In particular, the new lighting of the Municipal Stadium of Koroni, which is located directly behind the nesting beach, made the threat of light pollution more intense, affecting the largest part of the beach. In total in 2023 at Zaga-Memi beach, 23.5% of the nests were affected.

The human presence on the nesting beach of Koroni during the night can deter sea turtles from nesting. In 2023, in the 101 days of the project, 69 incidents of human presence were recorded, with 13 cases of camping and 20 cases of campfires at night-time. Finally, ARCHELON researchers recorded 20 vehicles on the beach and 5 incidents of fishing nets that were left very close to the shore, throughout the night with the risk of trapping and killing adult turtles that came ashore to make their nests.

At the back of Zaga-Memi beach there are a number of holiday homes and businesses. In addition, it has become known that the plans for a waste management plan in Koroni place the works on this particular beach, but there is no information about any approval or environmental licensing of it.

4 CONSERVATION

ARCHELON has been carrying out annual systematic work to record and protect the reproductive activity of sea turtles in Lakonikos Bay since 1985 and in Koroni since 1995. The analysis of the long-term data series shows that in recent years there is an increasing trend in the number of nests in these areas (Lakonikos, Koroni). If nest protection is not continued, negative trends in the breeding population may be observed in the medium term and it is therefore important to continue with the conservation efforts in these areas.