



# ZAKYNTHOS ANNUAL REPORT 2023

*Conservation efforts during 2023 at the nesting habitat of *Caretta caretta* in Laganas Bay, Zakynthos, Greece*

Athens, October 2023

**ARCHELON, The Sea Turtle  
Protection Society of Greece**



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# 1 INTRODUCTION

ARCHELON's presence in Laganas Bay of Zakynthos has been continuous since the early 80s, carrying out research activities related to the monitoring and conservation of sea turtle reproduction, while the nest monitoring projects began in 1984.

The nesting beaches of the Loggerhead sea turtle (*Caretta caretta*) in Laganas Bay have been included in the site GR2210002 "Kolpos Lagana Zakynthou (Akr. Geraki-Keri) kai nisides Marathonisi kai Peluso" of the European Natura 2000 network. In 1999 the beaches and marine area were included in the National Marine Park of Zakynthos (NMPZ), designated by a Presidential Decree issued in December 1999 (Government Gazette 906D, 22-12-99, Amendment: GOVERNMENT 1272/D/27-11-03). The Management Agency (MA) of the NMPZ was established in 2000. From 2020, according to changes in the legislation, responsible for the safeguarding, protection and management of the NMPZ is the Management Unit (MU) of the National Parks of Zakynthos, Ainos and Protected Areas of the Ionian Islands, which is supervised at a central level by the Natural Environment and Climate Change Agency (N.E.C.C.A.).

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# 2 RESULTS

The sea turtle conservation project in Zakynthos was carried out between May and October 2023 by a group of researchers/volunteers and was successfully completed. Over 1,870 sea turtle nests were recorded, which were protected with the contribution of NMPZ's MU.

From the beginning of 2023 until October 15, 29 incidents of sea turtle strandings have been recorded, of which 25 were dead and 4 injured/sick, while 9 were located within the protected marine area of Laganas Bay. Examination of animals washed up in the protected area showed interaction with fisheries in 2 cases, as well as signs of injuries caused by boat collisions in 2 cases.

Over 43,000 visitors were informed through ARCHELON's public awareness activities carried out as part of the project. Public awareness actions were carried out on the nesting beaches, in various hotel units, on the tourist boats operating in the protected marine area of Laganas Bay, as well as at the ARCHELON information station located in the city of Zakynthos.

The NMPZ's MU implemented guarding measures, surveillance patrols and the demarcation of the nesting zone on the beaches with ropes. The fire protection observatory in the area behind Sekania beach operated under the care of WWF Greece.



# 3 THREATS

During the 2023 nesting season, several incidents of violation of existing protection measures were recorded, both on land and in the sea. The Coast Guard and the Police are the authorities responsible for issuing fines at sea and on beaches respectively, but appeared present in few incidents during the summer season. In addition, according to a change in the legislation, in 2023, the guards of the NMPZ acquired the right to perform an autopsy, as well as to impose fines within the area of competence of the MU. The fact that no fines were issued on both land and sea areas of the NMPZ by the MU staff demonstrates the lack of training and organization regarding this otherwise positive development.

Specifically, in the marine protected area, during the summer season of 2023 there were daily incidents of violation of the Presidential Decree, i.e. exceeding the speed limit of 6 knots (Zones B and C), non-compliance with the no-anchoring zone (Zone B), while several incidents of boats entering the zone where their presence is not allowed (Zone A) were also observed. Also, the rules for the proper observation of sea turtles, which are in force by decision of the Port Authority of Zakynthos, were not followed. As no limit has been placed on the number of boats in Laganas Bay by the existing regulations, based on the carrying capacity of the marine protected area, a very large number of boats have been crowding daily to observe sea turtles by visitors to the area, causing significant disturbance to the animals.

On nesting beaches that are Nature Protection Areas (except Sekania, which is an Absolute Nature Protection Area and no human presence is allowed) violations were recorded regarding exceeding the number of beach furniture and not removing it at night, incidents of human presence at night on the beach, as well as trampling of nests by people entering the nesting area.



Regarding the presence of wheelbarrows and horses, the wooden stakes placed by the MU staff were a completely successful measure (with the exception of 2 vehicle incidents), because they were not observed on the beach. However, the position of the stakes at the borders of the dune zone did not prevent the entry of wheelbarrows and horses into it, exerting pressure on the sensitive flora of the biotope.

In addition, for another year there continued to be threats with serious long-term effects on the habitat from illegal activities. These include the old landfill site that remains without the prescribed environmental remediation and the illegal road between Dafni and Geraka beaches. They also include the arbitrary buildings/houses in Gerakas and the arbitrary buildings/houses in Dafni, which operate as illegal accommodation, catering and entertainment businesses. The local authorities have not implemented the existing administrative decisions to demolish these illegal structures.

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# 4 CONSERVATION

The ARCHELON sea turtle conservation and monitoring project in Laganas Bay is one of the longest-running projects worldwide for the species of loggerheads. Analysis of past nesting data from the region has shown the effects of warming on this Mediterranean-important sea turtle population, but no threshold in sand temperatures that would be destructive to eggs has yet been observed.

The analysis of past data also showed that, since the establishment of the NMPZ, the contribution of individual beaches to the nesting of the species has changed. Specifically, in recent years, the average contribution of Sekania beach has decreased with a corresponding increase in the contribution of the beaches of Eastern Laganas, Kalamaki and Gerakas. This long-term change is probably attributed to better protection measures (guarding, demarcation of the nesting zone, management of beach equipment) implemented by the NMPZ's MU, as well as by local businesses on these beaches. However, there is a significant decrease in the number of nests on the beaches of Marathonisi and Dafni, which is related to the disturbance of the species by boats in the marine area of the bay and the uncontrolled anthropogenic pressure respectively.

Taking into account the long-term trend of the breeding population, as shown by over 40 years of annual nest records, it can be concluded that the Laganas Bay nesting population of the Loggerhead is stable with strong annual fluctuations and continues to be one of the largest breeding populations in the Mediterranean.

Zakynthos has become a leading international tourist destination in the last 20 years. The number of tourist accommodations and businesses in the peripheral zone of the Marine Park and of the entire island has multiplied.



Accordingly, the number of visitors (bathers and non-bathers) to the nesting beaches and to the boats that move in the marine area for the observation of turtles has increased.

The constant presence of the NMPZ Management Agency/Management Unit and the great effort of the ARCHELON team during this summer season also ensured the continuation of the long-term monitoring of the sea turtle nesting activity and the protection of nests and hatchlings.

However, the interest of local businesses, landowners and local authorities to work together to better implement the legislation in the area seems to be quite low. The amount of visitors to the beaches and the marine area of Laganas Bay and the reluctance to comply with the environmental legislation shown by the local authorities and local organizations and businessmen highlight the need to inform and raise awareness among local organizations, authorities and visitors about the great ecological value of the NMPZ. Also, the above highlights the need for a greater effort to properly manage human activities and more effective guarding.

Although Zakynthos would benefit significantly from a sustainable tourism destination approach, no concentrated effort has been made in this regard.

This problematic situation is not expected to improve through the Special Environmental Studies and Action Plans (SES and APs) for the Natura 2000 areas prepared by the Ministry of the Environment. In January 2023, the SPS for the protected areas of the Ionian Islands, including Zakynthos, was put up for public consultation, which gives the impression that it aims more at consolidating the existing situation than at solving the existing problems and effectively protecting the protected object.

