



# ANNUAL ACTIVITY REPORT ZAKYNTHOS PROJECT

———— 2024 ————

Athens, November 2024

**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 (PD) issued in December 1999 (Government Gazette 906 D/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, all MAs of the Protected Areas became Management Units (MU) that are supervised at a central level by the Natural Environment and Climate Change Agency (N.E.C.C.A.). The Management Unit (MU) of the National Parks of Zakynthos, Ainos and Protected Areas of the Ionian Islands is responsible for the safeguarding, protection and management of the NMPZ.

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# 2 RESULTS

The sea turtle conservation project in Zakynthos was carried out between May and October 2024 by a group of researchers/volunteers and was successfully completed. A record number of 2,400 sea turtle nests were recorded and protected with the contribution of NMPZ's MU. It should be noted that 2024 was the second consecutive year that a record number of nests has been recorded (2,033 nests in 2023) on the island, which gives a tone of optimism for the recovery of the Zakynthos population. However, data from more years is needed in order to draw safe scientific conclusions.

From the beginning of 2024 until October 10th, 25 incidents of sea turtle strandings have been recorded, of which 24 were dead and 1 injured (the injured turtle was transferred to ARCHELON's Sea Turtle Rescue Centre for rehabilitation). 5 of the strandings were found within the protected marine area of Laganas Bay. Examination of animals washed up in the protected area showed interaction with fisheries in 1 case, as well as signs of injuries caused by boat collisions in 4 different 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. ARCHELON has been collaborating with the MA (now MU) since its establishment. All ARCHELON data is delivered to MD for its management needs.



# 3 THREATS

During the 2024 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 they were not present on a daily basis. 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, causing disturbance to the sea turtles. As the existing regulations pose no limit on the number of boats allowed in Laganas Bay based on the carrying capacity of the marine protected area, a very large number of boats was crowding daily in order for visitors to observe sea turtles.

Violations were recorded on all the nesting beaches that are considered Nature Protection Areas (except for Sekania beach, which is an Absolute Nature Protection Area and no human presence is allowed). These violations include incidents of not removing beach furniture after sunset, human presence at night on the beach, and trampling of nests by people entering the nesting area.



In previous years, violations of the maximum number of beach furniture allowed by the PD were also recorded. In 2024, a significant improvement was noted (ARCHELON recorded 120 sun loungers in Gerakas, i.e. the exact number allowed, and 293 sun loungers in Kalamaki and East Laganas, while the maximum allowed number is 300). The wooden stakes placed by the PD staff were a completely successful measure in deterring the presence of vehicles and horses on the beach. However, horses continued to enter the sand dune zone behind the beach on a daily basis, putting 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. In addition to the illegal businesses that exist behind Daphne beach, it should be noted that in recent years three private rental villas have been built along the rural road leading to the beach. This area is entirely included in zone F1: protected landscape, where the construction of houses is permitted. However, their construction is indicative of the tourist pressure exerted on the area.



# 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 global warming on this Mediterranean-important sea turtle population, but no threshold in sand temperatures that would be destructive to eggs has yet been observed. In recent years, nesting and hatching have been observed to begin earlier than in the past. In 2024 the first nest of the island was recorded earlier than any other year.

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 and compliance with the maximum permitted number of beach furniture) 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 41 years of annual nesting records (1984 – 2024), 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.



It is noted that from the placement of satellite transmitters on 29 turtles, carried out by ARCHELON in Kyparissia Bay, it was found that the nesting frequency (nests/turtle/year) is higher than previously reported, which revises previous data on the size of the reproductive populations of *Caretta caretta*.

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 National Park of Zakynthos and the entire island has multiplied. Accordingly, the number of visitors to the nesting beaches and to the boats that move in the sea area for the observation of turtles has increased.

The constant presence of the NMPZ's MU and the great effort of the ARCHELON team during this summer season ensured the continuation of the long-term monitoring of the sea turtle nesting activity and the protection of nests and hatchlings on the island.

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 collaborative approach by all stakeholders, aiming at the implementation of legislation, the proper management of human activities and more effective guarding in the area.

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 that are currently being prepared by the Ministry of the Environment.





In January 2023, the SES for the protected areas of the Ionian Islands, including Zakynthos, was put out 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. ARCHELON and other environmental organizations submitted detailed comments in the context of the consultation.

All pressures exerted on the habitat and the protected species, both in the marine and terrestrial areas, must be appropriately addressed with adequate protection and proper enforcement of the legislation by the competent authorities. At the same time, a major information/awareness campaign among the local community and local entrepreneurs would contribute to the proper implementation of the legislation. Finally, the SES (accompanied by a draft PD and SD) must take into serious consideration the comments submitted by environmental organizations including ARCHELON.

Laganas Bay together with the neighboring Kyparissia Bay (in Western Peloponnese) gather more than 86% of the nests of the Loggerhead sea turtle in the European Union. The Greek Government's announcement to establish a large National Marine Park in the South Ionian Sea which will include both areas is a promising development for the long-term survival of the species.

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