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Standing Committee

44th meeting Strasbourg, 2-6 December 2024

Open file: 2010/05

Threats to Marine Turtles in Thines Kiparissias (Greece)

- REPORT BY THE COMPLAINANT -

Document prepared by ARCHELON



Council of Europe

DG Democracy – Directorate of Democratic Participation BERN CONVENTION on the conservation of European wildlife and natural habitats, Council of Europe, Avenue de l' Europe, F-67075 Strasbourg Cedex, France Bern Convention Secretariat, Mr. Mikael Poutiers, (<u>mikael.poutiers@coe.int</u>, <u>eoghan.kelly@coe.int</u>, <u>bern.convention@coe.int</u>)

> Athens, 29 October 2024 Ref No: 29888

Re: ARCHELON's annual short report concerning sea turtle conservation in Kyparissia Bay, Greece.

Dear Mr. Poutiers,

Please find enclosed ARCHELON's annual report "Conservation efforts during 2024 at the nesting habitat of *Caretta caretta* in Kyparissia Bay (Natura 2000 - GR2550005 "Thines Kyparissias")", which constitutes supporting evidence in relation to the file 2010/5: Greece: threats to marine turtles in Thines Kyparissias (Recommendation No. 174).

We would appreciate if the included information could be taken under consideration during the 44th meeting of the Bern Convention Standing Committee.

Kind regards Daphne Mavrogiorgou Director

Attachments: 1 Report

ARCHELON, The Sea Turtle Protection Society of Greece



Conservation efforts during 2024 at the nesting habitat of *Caretta caretta* in Kyparissia Bay, Western Peloponnese (Natura 2000 - GR2550005 "THINES KYPARISSIAS")

Short report submitted to the European Commission and the Standing Committee of the Bern Convention

Athens, October 2024

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Acronyms: MP: Management Plan MU: Management Unit NECCA: Natural Environment and Climate Change Agency NPZ: Nature Protection Zone PD: Presidential Decree SES: Specific Environmental Study

Summary

This report outlines findings and presents the issues related to the protection of the loggerhead sea turtles (*Caretta caretta*) and their habitats in Kyparissia Bay during the 2024 reproductive period. It focuses on the 9.5km core nesting area, stretching from Arcadikos River in the south, to Neda River in the north (Image 1). The report presents the results of the conservation work carried out by ARCHELON and provides an update on the application of the Judgment of the European Court of Justice of 10 November 2016 (case C-504/14) and the Bern Convention Recommendation No. 174 (2014), which address this part of Kyparissia Bay.

The core nesting area is included in its entirety in the Natura 2000 site GR2550005 "THINES KYPARISSIAS: NEOCHORI – KYPARISSIA" and is part of a Nature Protection Area designated in 2018 by a Presidential Decree (PD). The wardening and management of the protected area falls under the jurisdiction of the Natural Environment and Climate Change Agency (NECCA) and through its Management Unit of Strofylia Wetlands National Park and Protected Areas of Western Peloponnese (MU).

ARCHELON has been systematically monitoring and collecting nesting data in Kyparissia Bay since 1984. Following internationally approved protocols, since 1992, trained onsite volunteers supervised by ARCHELON personnel, annually protect most nests in the core nesting area against predation by mammals, inundation by the sea, and light pollution. Since about 2006, a gradual increase of nests, and therefore of adult females, has been recorded, presumably due to the extensive nest protection in previous years. In 2024, sea turtle nesting activity reached a record number with more than 6,700 nests at the core nesting area (9.5km), and about 1,200 nests over 4.5 km of beach north of River Neda, i.e. in the northernmost part of GR2550005. Approximately 38.2% of the recorded nests were protected against predation, trampling and/or light pollution. It is important to note that this positive trend is entirely conservation-dependent, demonstrating the importance of conservation efforts. Regarding sea turtle strandings, ARCHELON recorded 13 incidents between early May and late September (12 dead and 1 injured). In addition, local Coast Guard stations (of Kyparissia and Katakolo towns) recorded 15 dead and 1 injured sea turtles in the whole of Kyparissia Bay since the beginning of the year, raising the total number of strandings so far to 29.

A number of activities which caused disturbances to nesting turtles, their nests, and hatchlings and directly breached the PD's regulations were recorded in the area, as follows:

- <u>Illegal construction</u>: 2 new houses were built (Vounaki area, Nature Protection Zone, NPZ-2c) and 1 new wooden platform was constructed (Kalo Nero village, NPZ-1b) within Nature Protection Zones, where building is not permitted.
- <u>Vehicular activity</u>: Extensive vehicular traffic on the nesting beach and the sand dune zone, as well as beach cleanings / flattening of the nesting beach using heavy machinery were recorded, even after the nesting season had already started.
- <u>Beach furniture regulations</u>: Beach furniture was not stacked during night hours.
- Light pollution: Extensive light pollution from private and public sources persisted.
- **<u>Camping</u>:** Free camping, often including campfires on the beach was observed.
- <u>Agricultural activities</u>: Agricultural activities were recorded in the sand dune zone.
- **<u>Festivals</u>**: Annual local festivals took place just behind the nesting beach.
- <u>**Recreational activities:**</u> Recreational fishing persisted during nighttime. Additionally, horse riding on the nesting beach was recorded several times,
- **Invasive species:** Planting of alien species either behind the nesting beach or even in the sand dune zone continued yet one more year.
- <u>Marine violations</u>: In the protected marine area of the bay (NPZ-3) speedboats were recorded to violate the 6knot speed limit.

None or minimal action was taken to mitigate these long-standing threats.

ARCHELON additionally recorded a set of other harmful activities that are not regulated by the PD:

- Human activity: Frequent human presence on certain beach sections at nighttime persisted.
- **<u>Private beach equipment</u>**: Shade structures, chairs, and watersports equipment were left on the beach during the night hours.
- **Beach bars:** Beach bars in the sand dune zone (operated also during nighttime) increased light pollution, and further degraded sand dune vegetation.
- **<u>Parking issues</u>**: Illegal parking areas were created within NPZs.

Disrespect to environmental legislation is repeated year after year and causes continuous degradation of the area. The Nature Protection Area of Kyparissia Bay lacks important practical aspects in terms of its management such as wardening, supervision and appropriate infrastructure for the reception of visitors. The PD does not regulate activities posing threats within the Nature Protection Area, and the Management Plan (MP) for the site, which is still pending, should address these. Until these activities are regulated, many of the long-standing threats for sea turtles and the protected habitats will remain unresolved. In conclusion, although the high ecological value of this coastal area is the main attraction for visitors, local authorities, local operators, and visitors do not generally respect environmental legislation, and especially regulations concerning the nesting beach and the coastal habitats.

Kyparissia Bay and the nearby Laganas Bay (Zakynthos) contain together more than 86% of all loggerhead nests in the European Union. The announcement of the Greek government to establish a large National Park in southern Ionian Sea, containing both sites, is a hopeful development towards the continuing survival of the species.

A set of recommendations appears at the end of this report as a guide for the near future.

Foreword

This report outlines the main events and presents the issues related to the protection of loggerhead sea turtles and their habitats in southern Kyparissia Bay, specifically in the core nesting area within the Natura 2000 site GR2550005 "THINES KYPARISSIAS: NEOCHORI – KYPARISSIA", during the 2024 reproductive period. It contains information on the monitoring and conservation work conducted by ARCHELON and outlines threats in the terrestrial as well as the marine habitat. Where appropriate, it includes information related to the northernmost part of GR2550005 (beyond the core nesting area), as well as the neighbouring site GR 2330008 "THALASSIA PERIOCHI KOLPOU KYPARISSIAS: AKR. KATAKOLO – KYPARISSIA".

1. Background

Kyparissia Bay, located in western Peloponnese, hosts the largest reproductive population of loggerhead sea turtles (*Caretta caretta*) in the Mediterranean, along with other important and protected ecological features. Its coastline consists of approximately 43.5km of continuous sandy beach, backed by dunes and coastal forests, from River Alfios in the north to River Arcadikos in the south. A small number of additional beaches separated by rocky outcrops are located further south until the town of Kyparissia. Due to its ecological significance, three Natura 2000 network sites were established:

1. GR2550005 "THINES KYPARISSIAS: NEOCHORI – KYPARISSIA",

2. GR 2330005"THINES KAI PARALIAKO DASOS ZACHAROS, LIMNI KAIAFA, STROFYLIA, KAKOVATOS, and

3. GR 2330008 "THALASSIA PERIOCHI KOLPOU KYPARISSIAS: AKR. KATAKOLO – KYPARISSIA".

The core nesting area (hereafter: southern Kyparissia Bay) extends from Arcadikos River in the south to Neda River in the north (Image 2). The core area belongs to the GR2550005 "THINES KYPARISSIAS: NEOCHORI – KYPARISSIA" site and has held approx. 84% of the total nesting activity in the bay during the initial years of the area's monitoring (1984-1989).

Touristic development and the number of visitors in southern Kyparissia Bay started to increase in the early 2000's, impacting the sea turtle habitat and the other ecological features of the site. As the Ministry of Environment took no action to safeguard the core nesting area, most of the conservation issues remainunresolved. This resulted in the European Commission taking the Greek State to the Court of Justice in March 2014. The Court hearing took place on 13 January 2016 and the relevant Judgment, posted on 10 November 2016, declared the failure of the Greek State to fulfill its obligations under the Habitats Directive 92/43/EEC.

The Bern Convention also opened a case file for this matter. In December 2014, the Standing Committee of the Bern Convention issued Recommendation No. 174 on the conservation of the nesting habitat in southern Kyparissia Bay. The Recommendation consists of 12 points, addressing the main anthropogenic threats for sea turtle nesting.

In 2018, almost two years after the Judgment of the European Court of Justice (November 2016) and four years after the Bern Convention Recommendation (December 2014), Kyparissia Bay in its entirety was **designated a Nature Protection Area by Presidential Decree (PD)**. The PD was issued in October 2018 (Government Gazettes D 391/03-10-2018, D 414/12-10-2018) and includes the three Natura 2000 sites GR2550005, GR2330005, and GR2330008. Since 2020, the wardening and management of the Nature Protection Area has been entrusted to the Natural Environment and Climate Change Agency (NECCA) through its Management Unit of Strofylia Wetlands National Park and Protected Areas of Western Peloponnese (MU), which is based close to Patras (2hrs away from southern Kyparissia Bay).

The case file in the Bern Convention has been reviewed annually during the Bureau and Standing Committee meetings since December 2015. During their latest meeting in December 2023, the Standing Committee decided to keep the case file open, due to (a) the continuous delay of the Greek authorities to issue a Management Plan (MP) for the area, (b) the poor enforcement of the existing PD,

(c) the incomplete implementation of Recommendation No. 174, and (d) the inactivity of the competent MU in supervising and managing the protected area.

ARCHELON's long-term program, carried out annually from early May until end of September, involves monitoring of the nesting activity, protection of nests and hatchlings, and recording of sea turtle strandings. Additionally, ARCHELON's field team regularly records the threats that persist on site and implements public awareness activities to inform visitors and residents of the area.

2. The 2024 nesting season

I. Monitoring and Conservation work

During 2024, ARCHELON conducted monitoring and conservation work from 12 May until 25 September, within the GR2550005 Natura site. To facilitate monitoring work, the 9.5km core nesting area was divided into four sectors (O, A, B, C), while the 4.5km beach north of River Neda (northernmost part of GR2550005) was designated in one sector (D) (Image 3).

Preliminary data indicate that about 6,700 nests were recorded in the core nesting area, and about 1,200 nests in Sector D. Both are record numbers in the area and explained by the massive nest protection that started in 1992. This positive trend regarding the nest numbers is entirely conservation-dependent; therefore, it is important that current conservation efforts continue. Tagging of nesting females, aiming to obtain better understanding of the sea turtles' inter-nestingand migration patterns, continued for yet another year. It should be noted that due to the significant increase of nests, in 2024, ARCHELON revised its monitoring protocols to make the workload feasible. In areas where human presence and light pollution were intense, all nests were protected, whereas in other areas, only one fourth of the nests was protected.

Public awareness activities were conducted from 17 May to 23 September on the beach, in various touristic facilities, in ARCHELON's permanent Environmental Station at Agiannakis, and through the operation of ARCHELON's seasonal Information Kiosk at Kalo Nero village. Over 6,500 visitors and locals were informed about sea turtles and the threats affecting them.

Additionally, ARCHELON recorded 12 dead and 1 injured sea turtle within the monitored area. An additional 16 stranded turtles (15 dead and 1 injured) were recorded by the competent Coast Guard stations along the entire KyparissiaBay, bringing the total to 29 stranded sea turtles. The 2 injured animals were transferred to the ARCHELON's Rescue Centre. It was not possible to accurately define the cause of death of most stranded turtles, since they were in a highly decomposed stage when found. In cases where it was possible to do so, the cause appeared to be attributed to interaction with fisheries and deliberate injuries from humans.

II. Threats

This section focusses on the anthropogenic threats directly or indirectly impacting sea turtles (adults and hatchlings), their nests, and the nesting habitat along the monitored section of Kyparissia Bay, as recorded by ARCHELON in 2024.

A. Southern part of GR 2550005 "THINES KYPARISSIAS: NEOCHORI – KYPARISSIA" – corenesting area

Threats in Sector O

Unsustainable touristic development: Sector O contains the coastal settlement of Kalo Nero. Unlike the more pristine areas in the core nesting zone, this part of the beach has been severely affected by touristic development. In 2024, as was the case in previous years, large parts of the nesting beach were occupied by private equipment. ARCHELON recorded a total of 48 private equipment such as sunbeds, chairs, tables, watersports. Additionally, light pollution from public and private light sources

remained a serious conservation problem (photos 1a, 1b), because the existing light sources were not reduced, despite the PD's provisions. Even after authorities issued their demolition, seven wooden platforms remained in place on the beach, and one business even renovated its platform (photo 2). Moreover, despite the provisions of the PD, beach furniture from 7 businesses, totaling to 392 pieces were stacked incorrectly (2 businesses) or not at all (5 businesses). In addition, a new practice of manual sand raking and flattening was adopted in 2024 by 2 businesses (photo 3). This practice, performed in the early morning hours, resulted in instances where sea turtle tracks were wiped before ARCHELON researchers could record them, thus causing some nests to be impossible to be identified and protected.

It must be noted that light pollution in Kalo Nero is so strong that it renders useless the standard method of "nest- shading" applied in other nesting areas, and ARCHELON's field team is obliged to use the unorthodox practice of "nest-boxing". According to preliminary data, a total of 302 nests (24.6% of nests in sector O) were affected by light pollution, with "nest-boxing" to be applied to 207 nests (16.9% of nests in sector O).

In addition to the regular light pollution levels, an annual local Music Festival took place on 5 August 2024, just behind the nesting beach (photo 4). This event directly violated the PD and took place despite the efforts of the competent MU to prevent it. The participation of hundreds of peopleand a live band on a stage (with floodlights) caused both noise and intense light pollution.

Free Campers: In 2024, a significant number of caravans (approx. 15-30 every night) were observed at the back of the beach causing extra light and noise pollution.

Human presence on the beach: Although the PD does not regulate human presence on the nesting beach during the night, this phenomenon has a direct impact on the nesting process. It can prevent adult females from laying their eggs and can increase the risk of trampling hatchlings. ARCHELON recorded 111 people on the beach (including people fishing from the shore), who, especially during hatching season, were trying to see hatchlings.

Extensive beach cleaning and vehicle presence on the beach: Vehicles moving along the beach cause extensive degradation of the habitat, compacting the sand and oftentimes damaging existing nests. Incidents of beach cleaning using heavy vehicles in this sector were recorded on 6 June, 7 June, 8 June, and II June (photo 5).

Threats in Sectors A-B-C

Sectors A, B, and C of the core nesting area include the beaches of Vounaki, Agiannakis and Elaia respectively. This area is characterized by a very wide beach with an appropriate incline for nesting turtles, backed by low sand dunes and vegetation. These sectors host about 75% of all nests recorded along the 9.5km core nesting area and should be maintained in a pristine condition to effectively protect sea turtles. Unfortunately, each of these beach sectors faces several challenges caused by human activities. Most of the conservation issues threatening the area remained unresolved for yet another year. Interventions to the natural landscape have led to a slow but steady degradation of the ecosystem.

Coastal Constructions: Several houses in the sand dune area, built before the issuance of the PD permanently alter and degrade the natural sand dune zone and are indicative of the pressure that the habitat faces due to coastal building. Even after the issue of the PD in 2018, 2 houses (one in Agiannakis and one in Vounaki) were built from 2019 to 2023 (photos 6a, 6b). Unfortunately, in 2024 another 2 new houses were being constructed in Vounaki, within a Nature Protection Zone (NPZ-2c), where building is not permitted (photos 6c, 6d). According to information from the competent MU, the building permits for those 2 new houses are in direct contradiction with the PD's provisions. It is notable that in all plots of land where buildings exist, alien vegetation has been planted.

Beach bars: Beach bars, located in the sand dune zone on sectors B and C, continued their operation for another year (7th consecutive year for sector C, and 5th consecutive year for sector B), resulting in destruction of the dune vegetation. An increasing number of visitors were attracted to the beach bars,

especially during the high touristic season, from mid-July to end-August, leading to increased light and noise pollution, as well as increased human presence after sundown. Additionally, numerous vehicles parked in the surrounding areas and therefore created new illegal parking lots.

Free campers and human presence: A large number of free campers occupied the beach and the sand dune zone during July and August. This phenomenon is connected to high human presence on the beach. In 137 days of observation, 53 individuals were recorded on the beach during night hours, 1,261 pieces of private equipment were left on the beach, and campfires were recorded 3 times. The presence of free camping causes trampling of the sand dunes by vehicle and foot traffic (photo 7). Additionally, recreational fishing with rods during nighttime (144 instances) was observed multiple times across all sectors and throughout the season.

Vehicles on the dunes: To prevent further sand dune degradation and fragmentation, in 2021 the Ministry of Environment placed concrete barriers blocking access to the dirt roads that were illegally constructed by the real estate firm NEOS KOTINOS S.A. (2011 and 2012). However, this measure was shown to be inefficient and caused further degradation of the surrounding habitats, as vehicles continuouslyaccessed the beach by driving around the sides of these barriers. No action has been taken to further enforce the barriers and to block other beach entrances. As a result, and despite the provisions of the PD, many vehicles were recorded to be parked either in the sand dune zone (photo 8a), or on the nesting beach (photo 8b).

Agriculture: Behind sectors A and B, the extensive stretches of land used for agriculture, negatively impact the sand dunes (photo 9).

Light pollution: No efforts have been made to reduce light pollution. There is a relatively small number of artificial lights along these sectors (2 private houses with floodlights and a few public streetlights), which impact many nests due to the high nest density in the area. ARCHELON's preliminary data for 2024 indicate that almost 215 nests were affected by light pollution, representing 4.6% of the total monitored nests on SectorA, 23.8% on Sector B and 15.8% on Sector C (note that these numbers correspond only to areas where full protection of nests took place).

Horse riding: This activity was recorded throughout the season mainly in Sectors B and C, both during the morning and in the early evening. Even though no nest was observed to be trampled by horses, the vibrations close to the nests can cause embryos to detach from their egg. It should be noted that horse riding oftentimes took place in the sand dune zone, degrading its vegetation.

B. Northernmost part of GR 2550005 "THINES KYPARISSIAS: NEOCHORI – KYPARISSIA"

Threats in Sector D

In 2024, in sector D the field team recorded similar anthropogenic disturbances to sectors A, B, and C throughout the whole season. These included a large number of vehicles on the beach driving in close proximity to nests (48 tracks recorded during the season) (photo 10). Temporary beach shelters, caravans, alongside 753 pieces of private equipment were left on the beach. Camping activities were observed on the beach (33 people recorded camping during the season) oftentimes with beach fires (4 campfires recorded during the season) (photos 11a, 11b, 11c). Light pollution and beach bars with illegal constructions on the sand dune zone that did not stack their beach furniture during the night also posed threats. Regarding the operation of the beach bars, beach parties took place on a weekly basis during July and August, disturbing the nesting and hatching process (photo 12).

Local festivals: This year, sector D hosted one large public event. On 4 August 2024 the village of Giannitsochori hosted its annual Music Festival. Artificial lights, loud music, fireworks and the participation of hundreds of people, caused extensive light and noise pollution during hatching season just behind the nesting beach (photos 13a, 13b).

C. GR 2330008 "THALASSIA PERIOCHI KOLPOU KYPARISSIAS: AKR. KATAKOLO –KYPARISSIA" – marine area of Kyparissia Bay

Professional and recreational fishing remain a threat for sea turtles during the mating and nesting seasons. Uncontrolled fishing activity occurred widely across all sectors, creating potential obstacles for incoming turtles and increasing the danger of entanglement and injuries by fishing lines and nets. In 2024, fishing boats and stationary nets were recorded very close to the shore (approx. 25 times) in all beach sectors, in some cases at distancesless than 30m from shore (photo 14). Set nets are usually left for the duration of the night, so any females attempting to emerge for nesting were at risk of entrapment. Issues regarding fishing activities are not addressed in the PD and therefore need to be included in the under-development MP.

While the PD foresees a maximum of 6knot speed limit, speedboats were recorded to exceed this limit. Although this threat was recorded only 3 times during the season, it is something that did not occur in previous years. Thus, concerns were raised about possible new pressures.

3. Discussion and Recommendations

The long-term field project of ARCHELON

As mentioned, ARCHELON has been monitoring the nesting activity of the loggerhead sea turtles in Kyparissia Bay since 1984. By the early eighties, it was clear that many nests in the area were affected by predation from mammals (average of 50% of nests/year) and by sea water inundation (average of 25% of nests/year). To mitigate these threats, ARCHELON started to implement protection measures on the majority of nests within the core nesting area in 1992. These protection measures resulted in a notable decrease of predated nests down to an average of 13%, and of nests inundated by sea water to 9%.

Sea turtles are long-lived animals and as such, positive or negative effects on their population cannot be recorded until after many years, when the adult females return to their natal beach for nesting. The long-term survival of the loggerhead sea turtle population largely depends on the number of hatchlings making it to the sea and being recruited to the population.

A significant increasing trend in nest numbers, which reflects an increase of adult females, has been recorded since about 2006 in the core nesting area, with the average number of nests reaching 2,145 in the period 2006-2024 as compared to 552 nests in the period 1994-2005. Another indication of an increasing population is shown through parallel analyses of turtle tagging data, which demonstrates an increase in the percentage of "neophyte" turtles, i.e. turtles that are observed laying eggs for the first time. Given that the estimated age of sexual maturity for loggerheads in the Mediterranean ranges from 14 to 25 years, the observed 289% increase of nests is believed to be the result of the protection measures that have continuously been applied since 1992. The conservation work carried out by ARCHELON in 2024, where 90 researchers and volunteers from all over the world participated, resulted in a successful sea turtle nesting and hatching season. However, this positive trend is entirely conservation-dependent, and therefore it is important that current conservation efforts continue. To effectively protect sea turtles in Kyparissia Bay, it is crucial to address the aforementioned threats alongside ARCHELON's intensive conservation efforts.

Governance and law enforcement issues

Following the designation of the entire Kyparissia Bay as a Nature Protection Area by PD in 2018, has been little – if any – progress concerning the implementation of the 12 points of the Bern Convention Recommendation, and the compliance with the European Court of Justice's Judgment of 10 November 2016. There are three issues that ARCHELON would like to bring to the discussion of this problematic situation:

The first issue is that local authorities demonstrate complete disregard for the regulations in the legislation for the site. As a result, the existing legal provisions of the PD and the rest of the

environmental legislation are not implemented nor are they enforced adequately. In 2020, the competent municipalities, as well aspart of the local community, submitted 7 cancellation requests against this PD to the Hellenic Republic Council of State. These were rejected in early 2021 (Decisions 164/2021 until 170/2021), after ARCHELON, in cooperation with MEDASSET and WWF Greece, intervened in defense of the PD. However, the complete disregard for legislation continues until today. Indicative of this situation is the construction of 2 new houses withing the Nature Protection Zone (NPZ-2c), where building is not permitted.

The second issue is that there are important activities posing threats within the Nature Protection Area thatare not regulated by the PD. These must be addressed by the MP for the site, but the relevant project undertaken by the Ministry of Environment has been significantly delayed for some years now. The issues to be addressed include public access to the beach through a legal road network, fisheries regulations, operation guidelines for beach bars in the core nesting area, measures to control light pollution, and regulation and management of human presence on the nesting beach during night hours. Until these activities are regulated, many of the long-standing problems that threaten sea turtles and the habitat will remain unresolved.

The third issue is related to practical but important aspects of the management of the Nature Protection Areaof Kyparissia Bay; there is a total absence of wardening and supervision and a lack of appropriate infrastructure for the reception of visitors in the area, because until now, the MU has had limited involvement in active site management.

Recommendations

- Strict enforcement and implementation of the PD provisions are essential for the conservation of this valuable coastal ecosystem. Competent authorities must ensure that the existing threats of theprotected area are dealt with permanently.
- The adoption of an MP addressing the threats that are not regulated by the PD is quite necessary. The ongoing review and development of Specific Environmental Studies (SES) and MPs for all Natura 2000 sites on a national scale must be completed as soon as possible.
- Sand dunes in Kyparissia Bay are very important and they must be restored to a good conservation status as soon as possible.
- The MU of NECCA that is responsible for the site must develop ways to ensure the supervision and management of the protected area and to collaborate with local authorities andstakeholders, as soon as possible.
- Analyses of ARCHELON's long-term datasets on the nesting habitat of Kyparissia Bay indicate a significant increase in the annual number of nests. This positive trend is entirely conservation-dependent; therefore, it is important that current conservation efforts continue. If the sea turtle population of Kyparissia Bay is to be effectively protected, all threats must be dealt with effectively. If no action is taken towards this direction, despite ARCHELON's and the other environmental organizations' intensive conservation efforts, the viability of the nesting habitat will be compromised.

Final Remark

Kyparissia Bay and the nearby Laganas Bay (Zakynthos) are the largest nesting areas in the Mediterranean and together contain more than 86% of all loggerhead nests in the European Union. ARCHELON since 2012 had proposed the unification of both areas for better and integral management. The recent announcement of the Greek government to establish a large National Park in southern Ionian Sea, containing both nesting sites, is a hopeful development towards the continuing survival of the species.

ANNEX: Images and photos:



Image 1: Map of Kyparissia Bay. The arrows indicate the core nesting area, ranging from Arcadikos River (south) toNeda River (north).

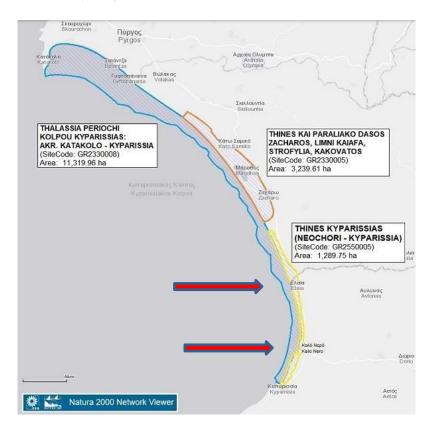


Image 2: Map of Kyparissia Bay and the relevant Natura 2000 sites. The three sites are included in the PD issued in 2018. The core nesting area is marked by red arrows.

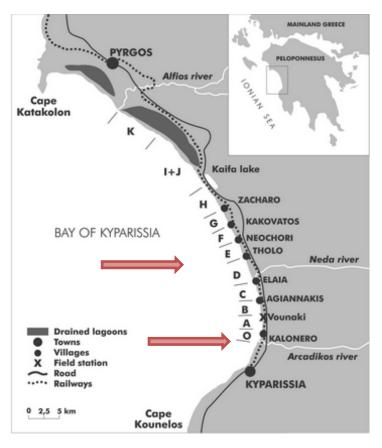


Image 3: Map of the entire Kyparissia Bay and the separation by sectors used by ARCHELON for the monitoring of Caretta caretta nesting activity. As indicated by the red arrows, monitoring work in 2024 covered five Sectors (O-D), allincluded in GR2550005 "THINES KYPARISSIAS: NEOCHORI – KYPARISSIA".



Photo 1a: Location Kalo Nero (O Sector) – 30 July 2024 – Intense light pollution is a hindrance for nesting females and

hatchlings. The photo is a clear example of light pollution caused by public and private light sources. Also visible are the illegal constructions of the coastal businesses and the unstacked sunbeds.



Photo 1b: Location Kalo Nero (O Sector) – 30 July 2024 – Intense light pollution is a hindrance for nesting females and hatchlings. A shaded nest is marked with a red circle.





Photo 2: Location Kalo Nero (O Sector) – 07 June 2024 – Renovation of a wooden platform.

Photo 3: Location Kalo Nero (O Sector) – 2 July 2024, 6:55am – Local businesses do not stack beach furniture correctly. Sand has been manually flattened between the sunbeds.

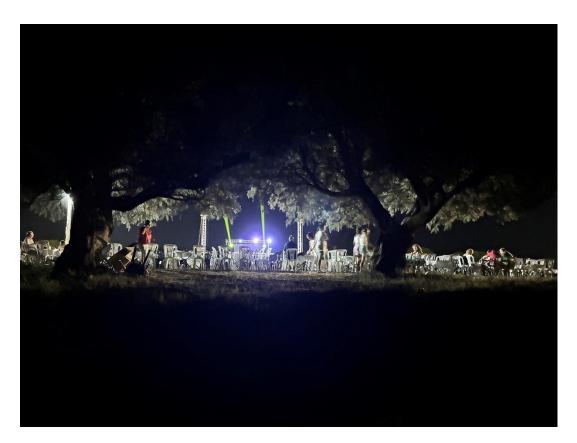


Photo 4: Location Kalo Nero (O Sector) – 5 August 2024 – A festival with loud music and bright headlights is taking place justbehind the nesting beach.



Photo 5: Location Kalo Nero (O Sector) – 07 June 2024 – Beach cleaning with heavy vehicles.



Photo 6a: Location Agiannakis (B Sector) – 28 May 2024 – New house completed since 2023. Degradation of sand dunes is visible.



Photo 6b: Location Agiannakis (B Sector) – 06 July 2024 – House completed in 2023 built its new fence in 2024.





Photos 6c, 6d: Location Vounaki (A Sector) – September & October 2024 – Construction of 2 new houses within the NPZ-2c.



Photo 7: Location Elaia (C Sector) – 09 June 2024 – Camping on the nesting beach and vehicle on the sand dune zone.



Photo 8a: Location Elaia (C Sector) – 07 August 2024 – Road barriers placed by the Ministry of Environment on the roads of NEOS KOTINOS S.A. proved inefficient to prevent the access of vehicles.



Photo 8b: Location Vounaki (A Sector) – May 2024 – Vehicle tracks crossing over a sea turtle nest.



Photo 9: Location Vounaki (A Sector) -13 September 2024 - Agricultural activities in the sand dune zone result in the continuous degradation of the natural habitat type.



Photo 10: Location D Sector – 16 June 2023 – Vehicle tracks are shown right over sea turtle tracks.



Photo 11a: Location D Sector – 11 July 2024 – Free camping causes the degradation of the sand dune area and the disturbance of nesting females.



Photo 11b: Location D Sector – 4 August 2024 – Private equipment left on the beach next to hatchling tracks (indicated by a red circle).



Photo 11c: Location D Sector – 4 August 2024 – Private equipment on the beach entrapped hatchling.



Photo 12: Location D Sector – 28 July 2024 – Beach bar organized beach parties on a weekly basis with loud music and bright lights resulting in disturbance of both nesting females and hatchlings



Photo 13a: Location D Sector – 4 August 2024 – A festival with loud music and bright floodlights took place just behind the nesting beach.



Photo 13b: Location D Sector – 4 August 2024 – A festival with loud music and fireworks takes place just behind the nesting beach



Photo 14: Location Kalo Nero (O Sector) – September 2024 – Fishing with nets at a very close distance from the shore is a constant threat to the nesting females, as they may get entangled and injured in their attempt to reach the beach for nesting.