

The state of conservation of sea turtles in the Mediterranean- case study of Greece

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**NORWEGIAN
ENVIRONMENT
AGENCY**



www.archelon.gr

**CONVENTION ON THE CONSERVATION OF EUROPEAN WILDLIFE
AND NATURAL HABITATS**

9th Meeting of the Group of Experts on Amphibians and Reptiles

9-10 October 2017

Trondheim, Norway



What are Marine Turtles?

They are reptiles, which means:

- Lay eggs on land (need beaches to nest)
- Breathe air (have lungs)
- Exothermic (avoid temperature extremes)

Special characteristics:

- Delayed maturity (14 - 30 years)
- Long life span (not known in nature)
- Highly migratory
- Sex determined by incubation temperature (STD)



Photo: ARCHELON / Kostas Papafitsoros

7 species of sea turtles in the world

All the 7 species are included in the IUCN Red List of Threatened Species:

- **Flatback (*Natator depressus*)**
Status: Data Deficient
- **Green Turtle (*Chelonia mydas*)**
Status: Endangered
- **Leatherback (*Dermochelys coriacea*)** Status: Vulnerable
- **Hawksbill Turtle (*Eretmochelys imbricate*)** Status: Critically Endangered
- **Kemp's Ridley (*Lepidochelys kempii*)** Status: Critically Endangered
- **Loggerhead Turtle (*Caretta caretta*)** Status: Vulnerable
- **Olive Ridley (*Lepidochelys olivacea*)** Status: Vulnerable

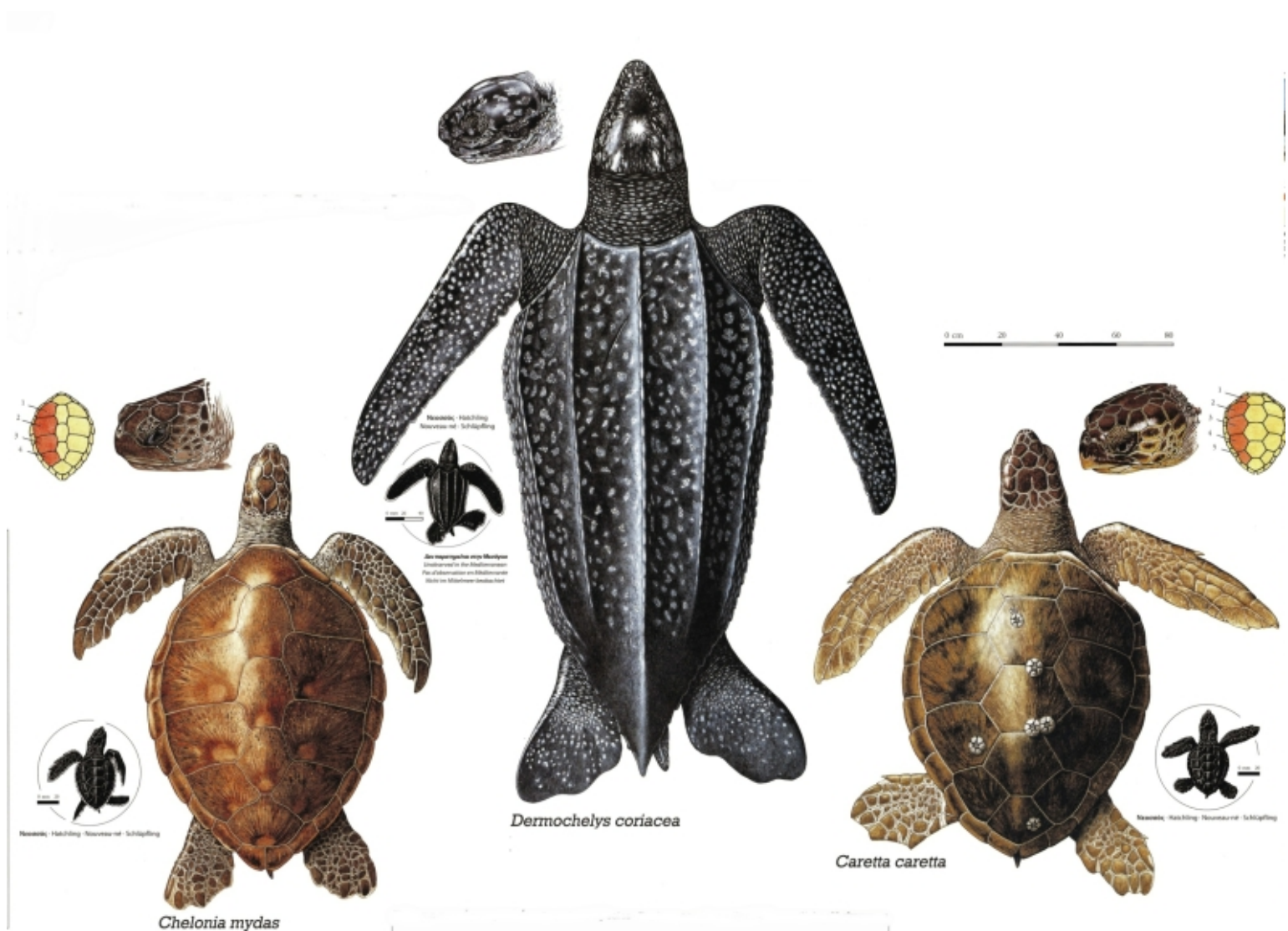
meet the turtles

The seven sea turtle species that grace our oceans belong to a unique evolutionary lineage that dates back at least 110 million years. Sea turtles fall into two main subgroups: (a) the unique family *Dermochelyidae*, which consists of a single species, the leatherback, and (b) the family *Cheloniidae*, which comprises the six species of hard-shelled sea turtles.



Visit www.SeaTurtleStatus.org to learn more about all seven sea turtle species!

Sea turtle species in the Mediterranean:



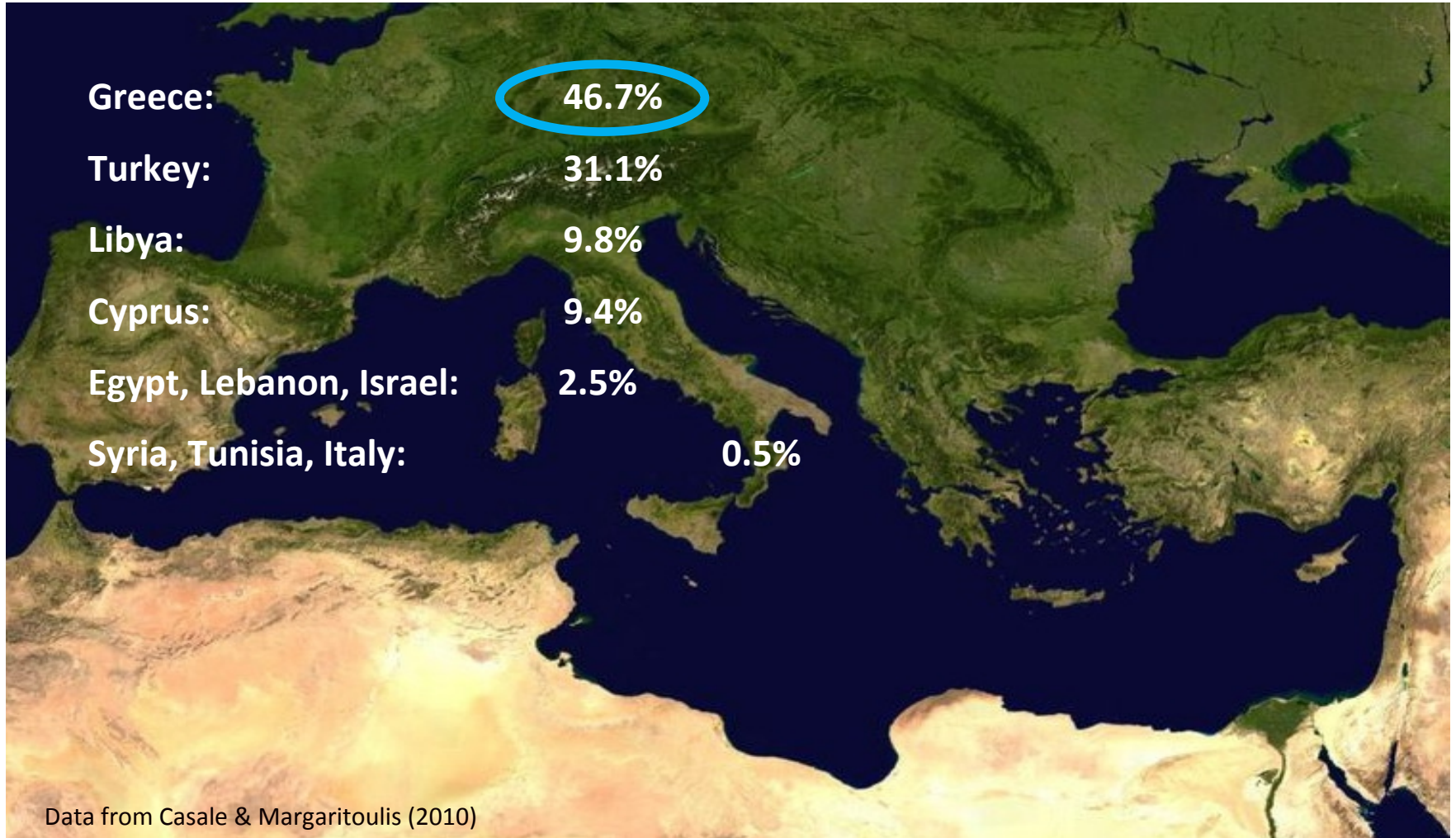
Sea turtle nesting in the Mediterranean:



▲ Loggerhead Nesting

▲ Green Nesting

Distribution of Loggerhead nesting in the Mediterranean:

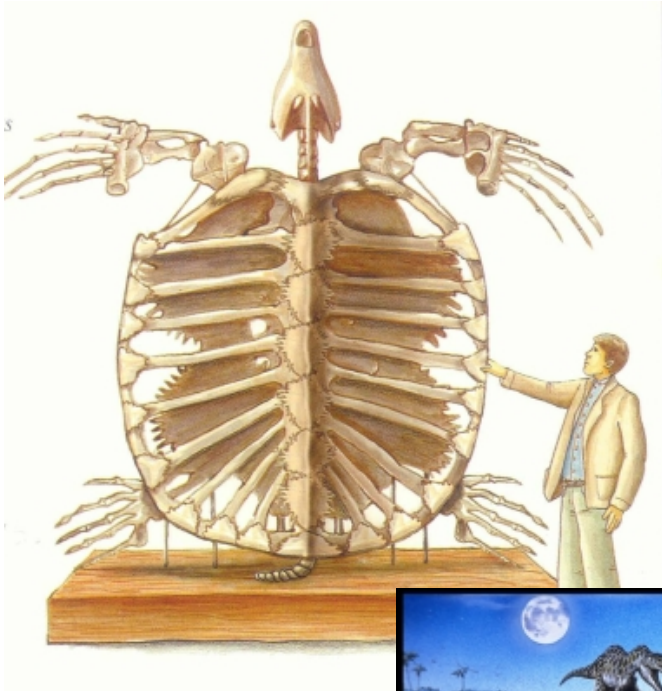


ARCHELON OBJECTIVE:

Since 1983, the primary objective of ARCHELON, the Sea Turtle Protection Society of Greece has been to protect the sea turtles and their habitats in Greece through monitoring and research, developing and implementing management plans, habitat restoration, raising public awareness and rehabilitating sick and injured turtles.



Inspiration of name & logo:



First fossil of sea turtles was 4.5 meters long and named *Archelon Ischyros*



First coin ever manufactured in Greece was Statiras of Aigina. It's about 2,500 years old and represents a loggerhead turtle

ARCHELON projects' areas:

- 9 field projects in the major nesting areas

Average nest number/year

ZAK: 1,190 (33 yrs)

KYP: 872 (33 yrs)

RET: 275 (27 yrs)

LAK: 206 (32 yrs)

CHA: 84 (25 yrs)

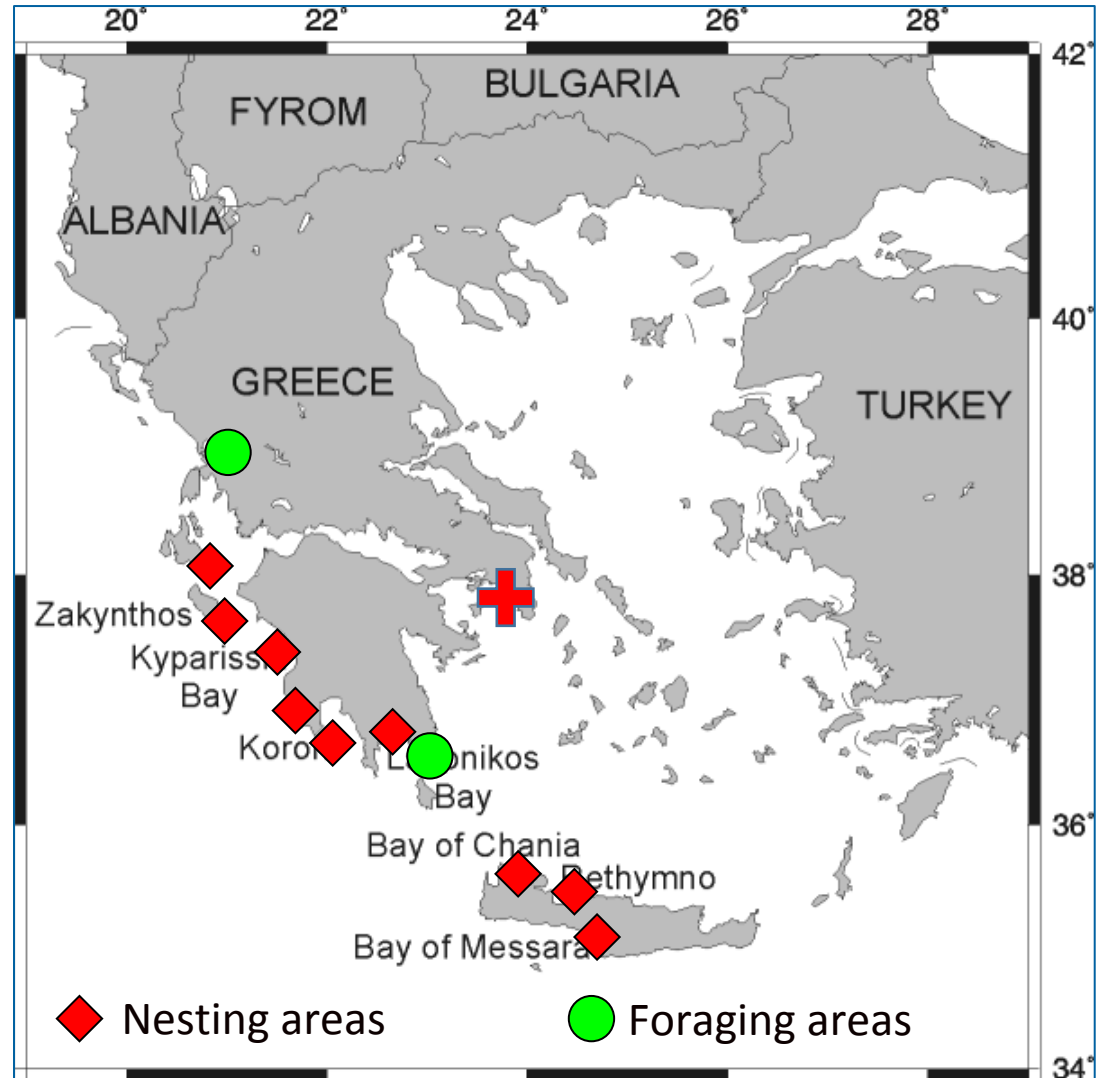
MES: 61 (24 yrs)

KOR: 50 (22 yrs)

ROM: 25 (8 yrs)

KEF: 42 (33 yrs)

- 2 field projects in the major foraging/feeding areas (Amvrakikos Gulf, Lakonikos Bay)



Actions' pillars in the projects' areas:



Research, monitoring & protection



Protection & management of nesting/foraging habitats



Photo by Julia Costescu
(ARCHELON volunteer 2016)

Environmental education & public awareness



Rescue & rehabilitation

Research & monitoring of nesting activity:

75 km of core nesting beach are daily monitored, turtle activity is recorded & scientific data are collected



Photo: ARCHELON/Marietta Mitosinka

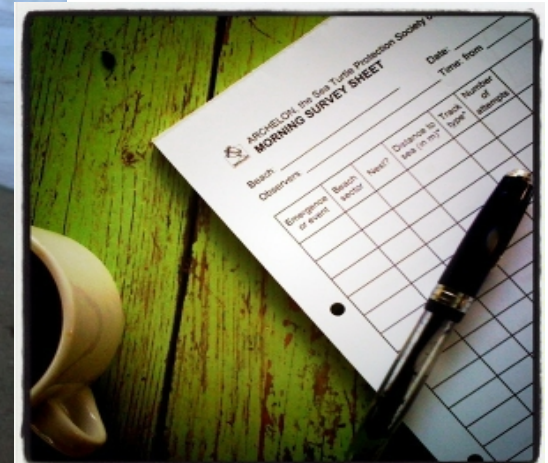


Photo: ARCHELON/ Brian Ground

Nest protection:



Locating & mapping



Photo: ARCHELON/George Jackson

Protection from predation



Protection from trampling



Photo: ARCHELON/Lilia Bantikou

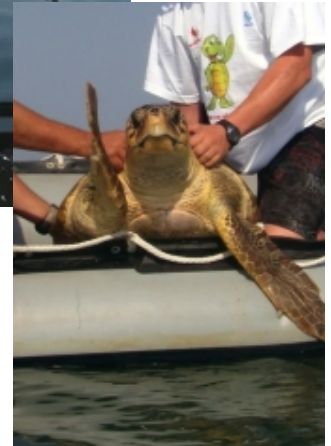
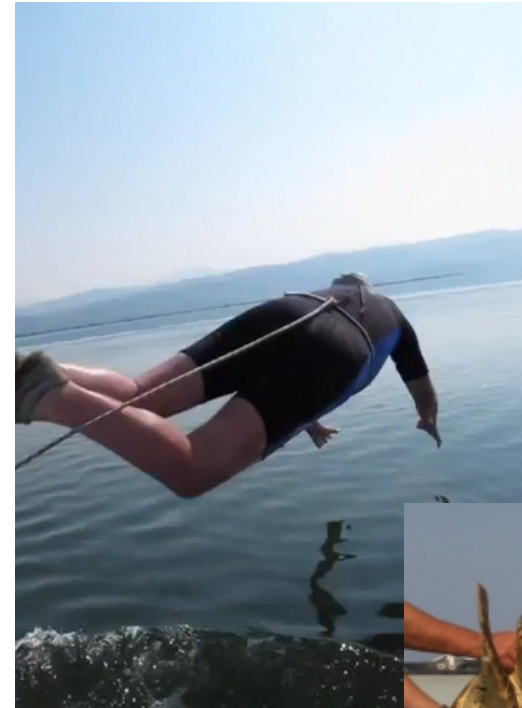
Protection from artificial lighting



Protection from inundation

Tagging program:

- Nesting areas: Flipper tagging (since 1982) & occasional satellite tracking
- Foraging/ feeding areas (Amvrakikos Gulf): Flipper tagging (since 2000) & satellite tracking

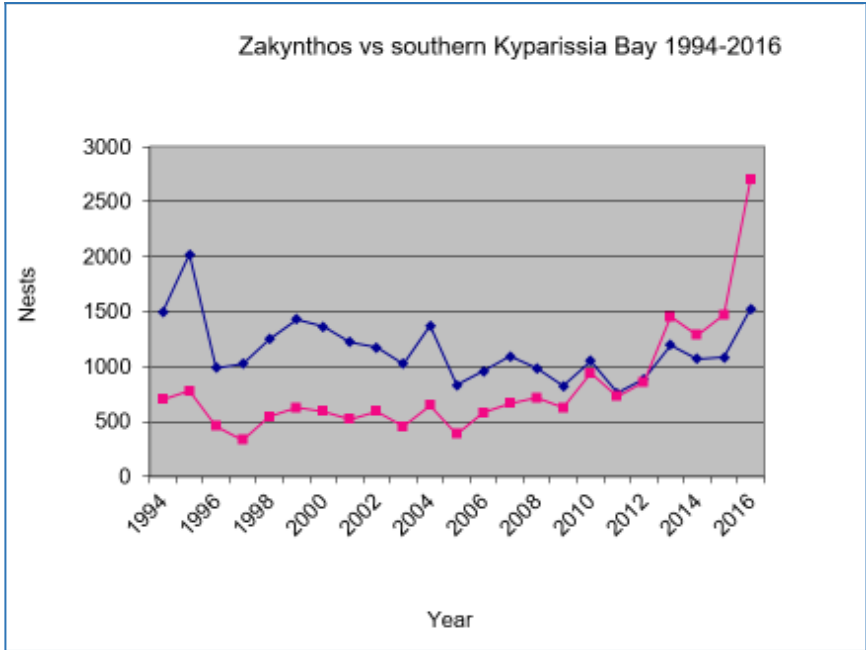
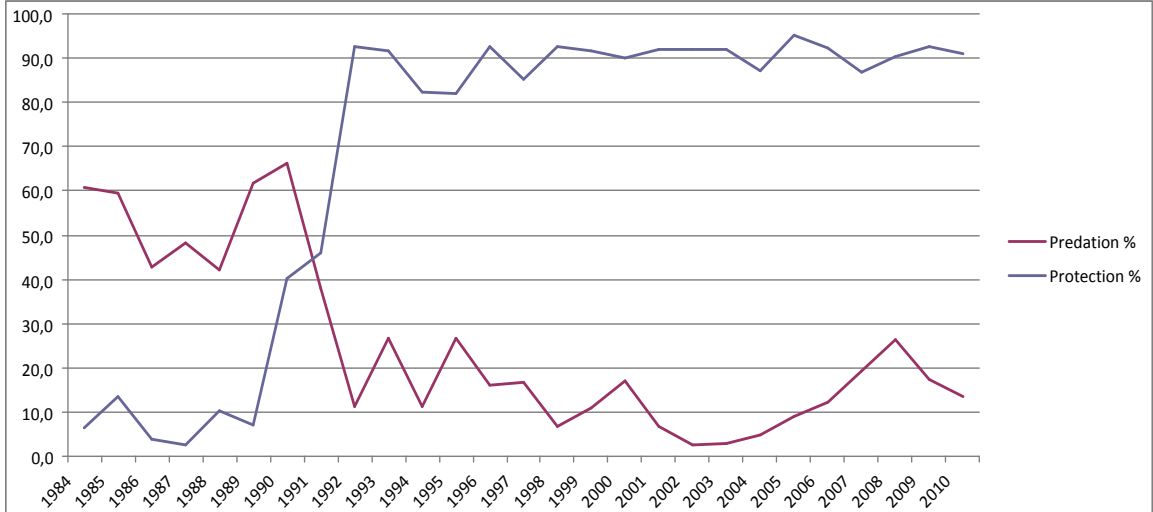


Significant upward trend in Kyparissia Bay :



301,594 hatchlings (9,424 – 22,047 hatchlings/year) were saved from predation during the period 1992-2010

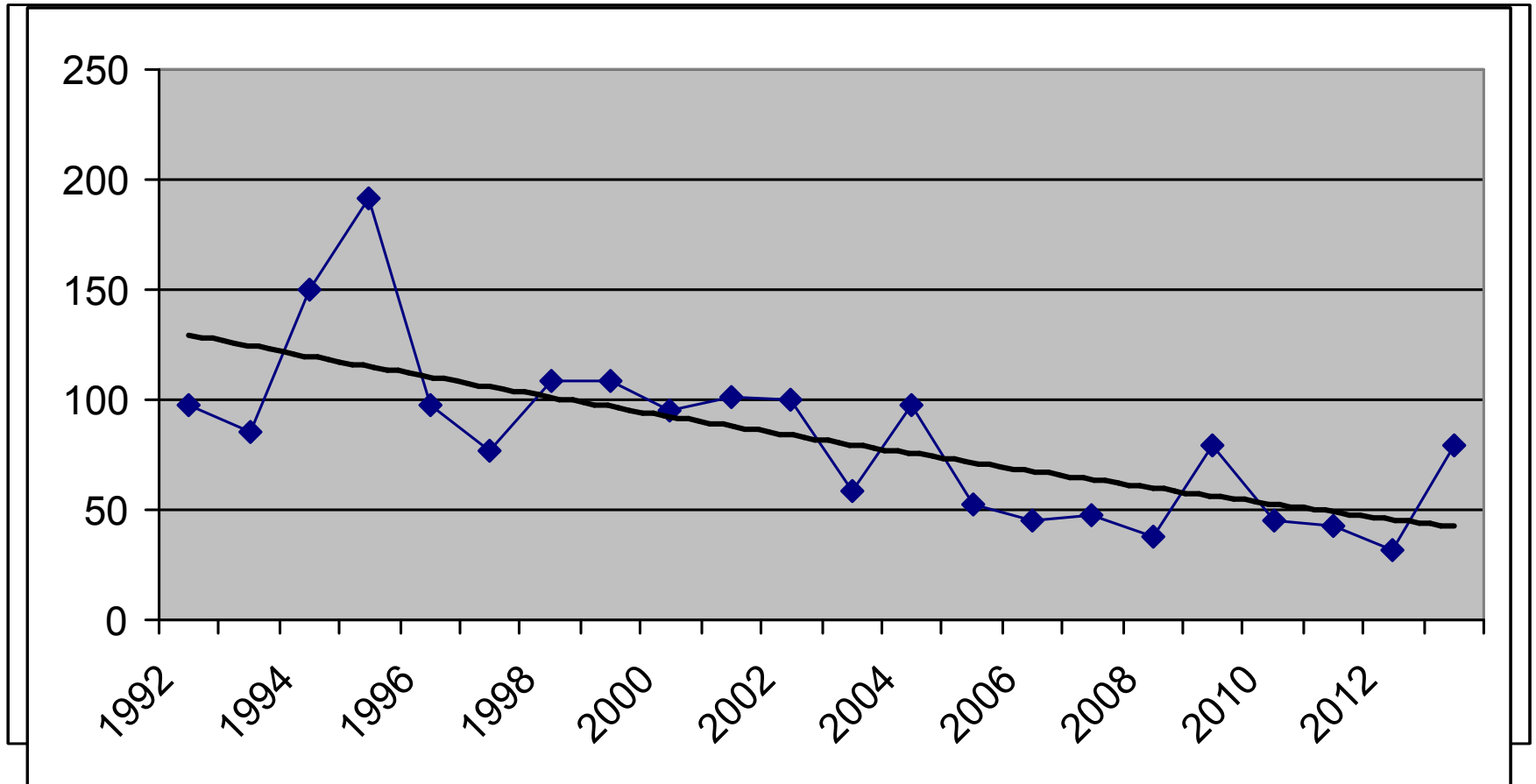
Since 2006 the number of nests has continuous shown an upward trend and on at the same time the number of “new” mothers has increased



KYP
ZAK

On the contrary in north Crete appear significant declines:

- Rethymno Bay: decrease of the annual average number of 46% (period 2000- 2015 compared to period 1990-1999)
- Chania Bay: decrease of the annual average number of 50% (period 2003-2015 compared to period 1992-2002)



Habitat protection & management:

Cooperation with: national, regional & local authorities, local communities, businessmen & other stakeholders for the implementation of management measures and restoration actions.



Public awareness & environmental education:

- At the nesting & feeding areas 200,000 visitors & residents are informed/year
- At the Rescue Center 20,000 students & groups are informed/year



Rescue & Rehabilitation:

ARCHELON Rescue Network & Rehabilitation Center (founded in 1994)

- Over 70 sick & injured turtles are treated annually
- About 600 stranded turtles are recorded annually all over Greece



ARCHELON's "army": 500 volunteers from all over the world/year





Life Euro Turtles

www.euroturtles.eu



Collective actions for improving the conservation status of the EU sea turtle populations (LIFE15 NAT/HR/000997)
Project is carried out with the assistance of LIFE financial instrument of the European Union / info@euroturtles.eu



NATURA 2000
ec.europa.eu/life

New LIFE project:

Project Title: COLLECTIVE ACTIONS FOR IMPROVING THE CONSERVATION STATUS OF THE EU SEA TURTLE POPULATIONS

Project Acronym: LIFE EUROTURTLES

Project Code: LIFE15 NAT/HR/000997



6 countries
9 partners

Thematic units in Greece:



Nest protection & location of marine hotspots



Mitigation of fisheries interaction



Improvement of rescue network



National action plan



Public awareness

Brief history & achievements:



Systematic beach monitoring starts in Zakynthos and Kyparissia Bay.



Bern Convention issues Recommendation No. 9 for the conservation of Zakynthos sea turtles.

1983

The Sea Turtle Protection Society of Greece (STPS), now ARCHELON, was founded.



1984

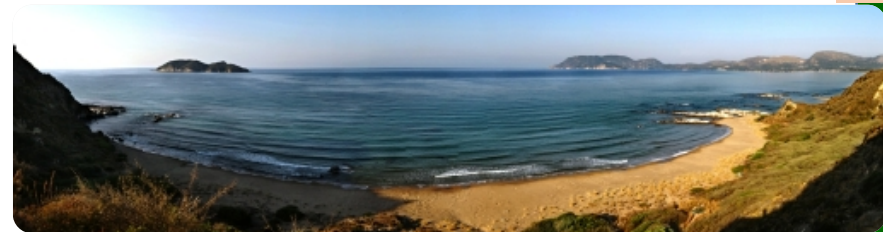
1985

Environmental Education Program starts in the schools of Zakynthos. It is soon extended to the whole of Greece and makes Loggerhead an emblematic species for the protection of nature.

1987

ARCHELON appeals to Dr Luc Hoffmann (Vice President, WWF International) and proposes the possibility of purchasing the private land behind Sekania beach in Zakynthos and protect it. Dr. Hoffmann accepts the challenge and ARCHELON supports WWF-Greece to develop and implement the plan to purchase Sekania.

1992



Brief history & achievements:

Purchase of Sekania beach by WWF Greece finalized. The Sea Turtle Rescue Centre was established in Glyfada.

1994



1999

The Presidential Decree for the establishment of the National Marine Park of Zakynthos was signed.

The Management Agency of the National Marine Park of Zakynthos was established.

2000

2006

All major nesting sites of Greece are designated as Sites of Community Importance (SCI) and included in the Natura 2000 Network.

A significant increase in nest numbers is recorded in Kyparissia Bay, as a result of the long term protection applied by ARCHELON

2008



Brief history & achievements

European Commission opens case file against Greece for violation of Habitats Directive, due to the lack of protection in the Kyparissia Bay.



The European Court condemns Greece for the inadequate protection of sea turtles in Kyparissia Bay (C-504/14). The first Ministerial Decision for the protection of the habitat is issued.

2012

2014

2016

2017

Bern Convention issues Recommendation No. 174 for the conservation of sea turtles in Kyparissia Bay (after an on the spot appraisal). The European Court condemns Greece for the operation of an illegal landfill site within the National Marine Park of Zakynthos (C-600/12).

The Joint Ministerial Decision prescribing beach use includes management measures for the protection of sea turtles in all nesting sites.



Still many challenges to face:

Illegal road construction in zone $\Phi 1$ of the National Marine Park of Zakynthos (between the nesting beaches of Gerakas and Daphni) in December 2015.



Still many challenges to face:

Pressure for permanent elimination of the illegal landfill site that is still active in the boundaries of the NMPZ.



Still many challenges to face:

Pressure to all competent authorities to provide solutions for the case of Daphni beach in Zakynthos.



Still many challenges to face:

Urgent need for legislation update and implementation of a specific management framework for the Turtle-Spotting activity in the NMPZ.



Still many challenges to face:

Implementation of existing Presidential Decree restrictions regarding beach furniture.



Still many challenges to face:

Pressure for the creation of a National Park in Kyparissia Bay.



Still many challenges to face:

Confrontation of nesting beaches' erosion in north Crete.



Still many challenges to face:

Mitigation of fisheries interaction.



Thank you for your attention!



Photo: ARCHELON/Merlin Potter Adams

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