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CELEBRATING THE 20th ANNIVERSARY OF OUR GREEN SEA TURTLE MONITORING AND CONSERVATION PROGRAM IN AKYATAN, ADANA

Introduction and Milestone

In collaboration with the 7th Regional Directorate of Nature Conservation and National Parks (DKMP), WWF-Türkiye is celebrating the 20th anniversary of the Green Sea Turtle (*Chelonia mydas*) Monitoring and Conservation Program at Akyatan Beach, Adana. This beach is one of the most important nesting areas for this endangered species. This 20-year dedication is now crowned with **second-generation mothers** returning to nest.

THE WORLD'S OLDEST MARINERS: SEA TURTLES

- They have been inhabiting the seas for approximately 110 million years.
- Of the seven different species of sea turtles found in the world's oceans, two species nest in the Mediterranean Basin.
- A symbol of longevity, productivity, and resilience, the green sea turtle (*Chelonia mydas*) and the loggerhead sea turtle (*Caretta caretta*), which spend most of their lives in intercontinental seas, come to the coasts of Türkiye to nest. Our country is among the most important nesting areas for these two species in the Mediterranean.
- While the green sea turtle (*Chelonia mydas*) and the loggerhead sea turtle (*Caretta caretta*) lay their eggs on our shores every year between May and August, the leatherback sea turtle (*Dermochelys coriacea*) passes through our coastal waters, even though it does not nest in the Mediterranean.
- For the loggerhead sea turtle, the most important nesting areas in the Mediterranean are Türkiye and Greece; for the green sea turtle, they are Türkiye and Cyprus. More than 50% of green sea turtles lay their eggs on the coasts of Türkiye.
- The coasts of Mersin, Adana, and Hatay are critically nesting beaches for green sea turtles.

As WWF-Türkiye (World Wide Fund for Nature), we are happy and proud to have been a part of this miraculous cycle in Akyatan, Adana for 20 years.



OUR SEA TURTLE CONSERVATION EFFORTS CROWNED WITH SECOND-GENERATION MOTHERS

2025 marks the 20th anniversary of our monitoring, conservation, and awareness efforts carried out at Adana's Akyatan Beach—one of the crucial nesting areas for endangered green sea turtles—in collaboration with the 7th Regional Directorate of Nature Conservation and National Parks. Since 2006, through our continuous fieldwork conducted annually between June 1 and September 15 in the Akyatan Wildlife Development Area, we have been ensuring that thousands of hatchlings safely reach the sea.

Female green sea turtles come ashore at night during June and July to lay their eggs. They return to this beach, where they once opened their eyes to the world, approximately 15 to 20 years later to continue their life cycle.

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The efforts we have sustained with the DKMP 7th Regional Directorate in the Akyatan Wildlife Development Area since 2006 have become one of Türkiye's longest-running sea turtle conservation programs and are today crowned with second-generation mothers. This collaboration also stands as one of the most valuable examples of public and civil society partnership.

WHY ARE GREEN SEA TURTLES IMPORTANT?

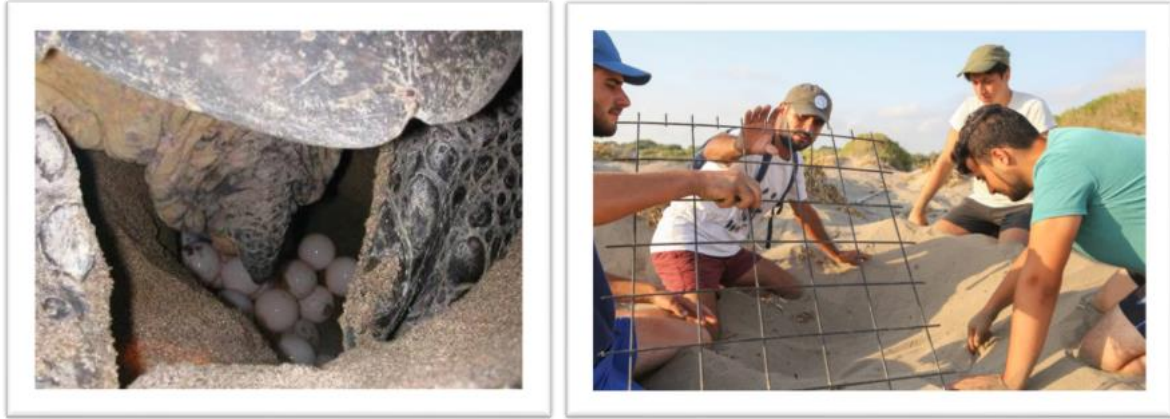
As members of the reptile family, green sea turtles:

- Support the healthy growth of seagrasses by grazing them; this, in turn, contributes to the ocean's oxygen production and carbon storage.
- Keep seagrass beds healthy, which consequently provides a habitat for numerous marine creatures.
- Support coastal ecosystems when they nest on beaches, as the nutrients they leave behind, such as eggshells, increase the fertility of the sand.
- Help balance the marine food chain, thereby ensuring that the marine ecosystem remains healthy.

THREATS

Adult female sea turtles lay an average of 100–150 eggs each time they come ashore to nest.

- Hatchlings, which emerge from the eggs after 45 to 60 days, usually come out of the sand at night or at dawn and try to reach the sea by heading toward the brightness of the horizon. However, coastal development and artificial lights behind the beach can cause them to become disoriented and die.
- Plastic bottles, bags, and other garbage discarded on the shore make it difficult for hatchlings to reach the sea. Such physical barriers can cause hatchlings to lose their way or become too exhausted to reach the water.
- Plastic waste can also reflect light, causing hatchlings to head toward the land, roads, or settlements instead of the sea.
- Ropes, net fragments, and similar debris on the beaches can entangle the hatchlings' flippers or bodies, restrict their mobility or trap them completely.
- Climate Change: Another threat to sea turtles is climate change. Sand temperatures rising above 30°C due to increasing overall nest temperatures can lead to a higher ratio of females among the hatchlings, disrupting the population balance. Additionally, rising sea levels increase the risk of coastal nests being flooded.
- In addition to all these threats, eggs and hatchlings are a natural food source for many predators (such as crabs, jackals, seabirds, and large fish). Because of this, out of every thousand eggs laid, only one or two manage to reach adulthood.



THREATS AT SEA

Hatchlings that manage to reach the sea face a long and arduous journey lasting 15 to 20 years until they reach adulthood. Sea turtles also face numerous threats in the ocean:

- Sea turtles may mistakenly eat plastic bags and waste, thinking they are jellyfish. This can damage their digestive systems and lead to fatal consequences.
- Sea turtles must regularly come to the surface to breathe. However, getting entangled in non-target (bycatch) nets or other fishing gear during fishing activities prevents them from surfacing, which results in drowning.
- Although the hunting and trade of sea turtles is prohibited in Türkiye and many other countries, the species is still illegally hunted in some regions for its meat, eggs, and shells.

CONSERVATION EFFORTS IN AKYATAN (Field Operations & Scientific Outputs 2006–2024)

Fieldwork & Direct Conservation

- Taking measurements of nesting female sea turtles and identifying individuals through tagging.
- Measuring nest temperatures to monitor sex distribution (since 2009).
- Protecting a portion of the nests with cages against jackal predation.
- Ensuring hatchlings safely reach the sea.

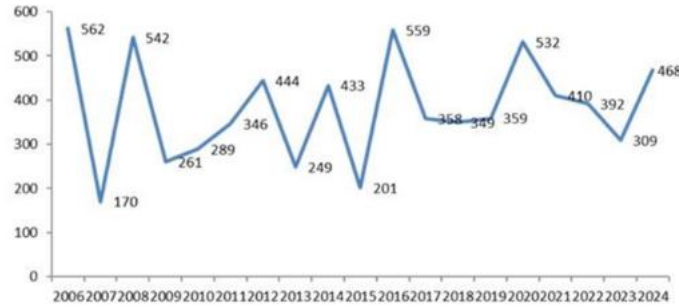
Scientific Research & Data Contribution

- Attaching satellite tracking devices to adult females to collect data on foraging grounds and map Mediterranean migration routes (**18** adult individuals tracked in 2018 and 2020).

- Providing data for the WWF Network, regional projects, and national/regional species conservation plans, including the development of 1 Species Conservation Action Plan (Jungle Cat, 2013).

Education, Awareness & Publications

- Publishing 19 technical reports (annual field study outcome reports) to share knowledge with decisionmakers.
- Presenting papers at 5 national and 5 international symposia.
- Producing 2 national documentaries through technical collaborations with broadcasting networks (TRT and İz TV).
- Organizing 4 Wildlife Observation Camps tailored for teachers, alongside technical briefing meetings and capacity-building initiatives.
- Issuing numerous press releases to raise public awareness.



TANGIBLE RESULTS OF OUR CONSERVATION EFFORTS

- A significant increase in green sea turtle (*Chelonia mydas*) nesting activity has been observed across the Mediterranean, particularly in recent years. This positive trend runs parallel to the recovery of the species' population and has been directly reflected in its international conservation status.
- At the end of 2023, the IUCN (International Union for Conservation of Nature) released its updated assessment results for the Mediterranean subpopulation of the green sea turtle. According to this assessment, the status of the species was upgraded from 4

"Critically Endangered (CR)" to "Near Threatened (NT)". This reclassification serves as scientific validation for the systematic conservation efforts sustained over decades.

- The conservation mobilization initiated in Akyatan—in collaboration with the 7th Regional Directorate of DKMP—has officially crossed a historic threshold as the second generation of nesting females returns to the site. The return of hatchlings, which once made their way to the sea from protected nests, back to the very same beach as mothers years later, tangibly demonstrates the transformative power of science, patience, and institutional commitment.

As WWF-Türkiye, we have been safeguarding this unique life cycle for 20 years through a philosophy rooted in science, collaboration, and sustainable conservation. We cordially invite your institution to become a partner in this deep-seated success and contribute to the vital conservation efforts in Akyatan. Join us in safeguarding this miraculous journey. Your support ensures that the next generation of hatchlings will always have a safe beach to call home.