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No More Animosity: One of Mediterranean's Primal Species in Jeopardy

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Key points

The Loggerhead Turtles are threatened by the occasional unsustainable tourism in Greek islands. This policy brief outlines the hazards that these sea creatures meet with in Greek coasts and the ecological contribution of this unique species to multiple ecosystems, as well as, the consequences of a potential extinction. It also suggests:

- The establishment of a legislation and the composition of local authorities that will secure the regional sustainable tourism
- The purchase of vital nesting sites for securing the reproduction of the species
- The creation of a new environmental course in schools

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Introduction

The *Caretta caretta*, one of the seven different species of sea turtles, nowadays, is in danger, because of the touristy expansion all over Greek islands, and especially in Zakynthos, southeastern and northern Aegean islands and Crete. The degradation of this animal population in Mediterranean Sea will bring great imbalance to the marine biodiversity and will affect both the rest of the marine species and humans. This specific species is protected by international, EU and national legislation and by many NGOs. According to IUCN Red List, this common effort of preservation has led from the “Endangered” status, which remained for more than 20 years, to “Vulnerable”. The situation of the Mediterranean subpopulation of *Loggerhead Turtles* actually has been improved and is listed as a “least concern” animal. Both WWF Global (with its marine turtle strategy 2012-2020), and EU (with its Natura 2000 Network) have conducted to this improvement. Nevertheless, this increasingly growth of its population will prove effective only by taking further measures.



Evidence & Analysis

The negligence of international, European and national institutions in Greek islands leads to the unsustainable regional tourism and therefore, great dangers loom for *Loggerhead Turtles*. Firstly, the nesting beaches are degraded because of the uncontrolled coastal development (touristy infrastructures and public works for the structure of beaches), but also because of the constant touristy occupancy of beaches during the reproductive period. According to a WWF Greece research, only 1 out of 1000 hatchlings survives in order to reach adulthood.

Similarly, the bright neon lights from the coastal hotels, restaurants or clubs produce a “false horizon” for nesting turtles and for hatchlings, disorienting them and preventing them from reaching the sea. Young turtles often become visible to their natural predators due to the light diffusion. What is more, tourists invade the beaches, using torches or flashlights, during the night, disturbing the surfacing of turtles from the sea.

Additionally, it is widely known that the augmentation of human nutritional needs in summer time of both locals and visitors leads to extensive fishing. As a result, turtles are accidentally captured, injured or killed in many kinds of fishing gear in coastal waters and out in the high seas. Besides, turtles are disturbed by speedboats used for recreational purposes, like water sports and are frequently injured fatally by propellers during the peak nesting period every summer.

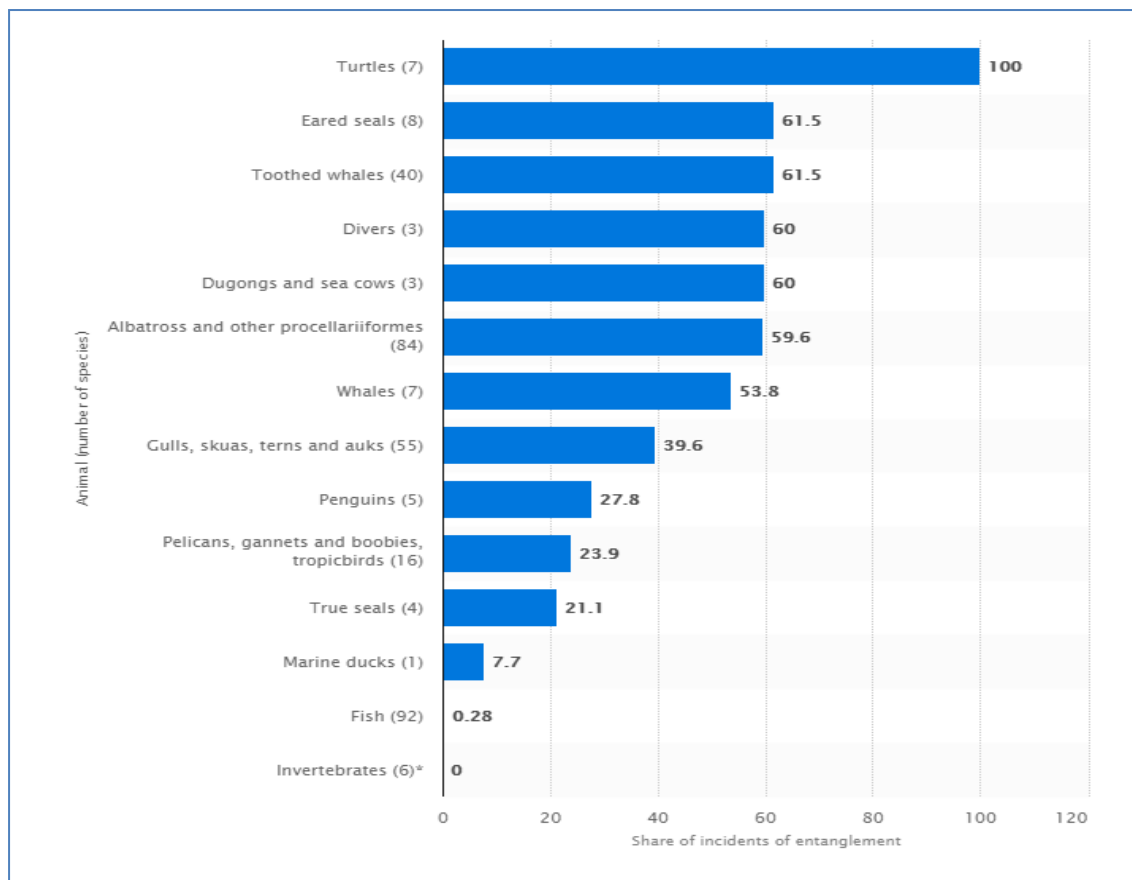
Furthermore, the waste produced by hotels and passenger boats comprises great jeopardy for *Caretta caretta*. The sea turtles often mistake the plastic bags for medusas, which play an important role in their nutrition. Consequently, these animals consume the plastic waste - a procedure that causes suffocation and undernourishment. As the statistical table below indicates, during 2014, of seven species of turtles, 100 % have recorded marine waste ingestions. Moreover, the hatchlings are often captured in the floating marine rubbish.

Last but not least, the deliberate killing of *Loggerhead Turtles* by the coastal hotel owners due to the complaints of bathers is a major threat. Consequently, all these parameters threaten the ecological contribution of this distinct animal.

It's vastly known that *Caretta caretta* sea turtles are pivotal in marine ecosystems considering that they contribute to the preservation and health of the sea beds and coral reefs. These animals dig and probe the ocean floor in order to find their food. This procedure leads to the “recycling” of vital nutrients and the balance and diversity of benthic species. The extinction of *Loggerhead Turtles* will result in the decrease of many marine species that humans harvest and will possibly be extinct as well. Additionally, sea turtles are consumers of jellyfish – a species that often creates problems to humans such as fishermen, bathers and divers. A potential extinction would



wreak havoc. Simultaneously, this animal plays a critical role in beach ecosystems. The vegetation of beaches is very sparse, because the sand does not maintain nutrients sufficiently. The unhatched nests, eggs and their shells, and trapped hatchlings that did not make it, provide these nutrients and contribute to the growth of beach plants and the stability of sand. Via this process, the avoidance of beach erosion is succeeded. The science community has concluded that *Loggerhead Turtles* often act as a keystone species and prove that everything is linked – the most important lesson of ecology! In the final analysis, it is comprehensible that there are still many things that need to be done for the survival and preservation of this unique species.



Recommendations

There are plenty of recommendations that have been suggested formerly for the preservation of the Loggerhead Turtles. We, at WWF Greece, suggest three solutions in order to assist this unique creature and ensure its eternal existence in the Greek seas both in the short and long term. Initially, it is important that the Ministry of Environment, Energy, and Climate Change, in association with the Ministry of Tourism, will establish a strict legislative framework identified with the requirements and suggestions of the UN



and EU. These legislations will be related with the rules that regional touristy associations will have to follow concerning the coastal public works and infrastructures, the activities in these certain areas and will regulate the behavior of hotel and business owners, locals and tourists. The composition of local authorities is critical, because they will supervise the compliance of rules from all sides, will secure the vital areas, with the support of NGOs and will report potential malpractices. The disciplinary actions like fines, confiscation of properties or imprisonment will be defined by the criticality of these violations.

Furthermore, back in the early 1990s, WWF proceeded to the purchase of the area surrounding Sekania beach, in Zakynthos, because of the uncontrollable tourism development that threatened the nesting turtles in Laganas Bay. This beach is known for having the highest number of nests of *Caretta caretta* sea turtles in the Mediterranean and hosts more than half nests on the island. For this reason, Sekania beach is part of the Marine National Park in Zakynthos, declared by the Greek government in 1999. In this way, WWF managed to appreciably diminish the immediate threat from touristy disturbance and helped the Mediterranean subpopulation of *Caretta caretta* to recover. That's why we believe, here in WWF Greece, that the purchase of other vital sites known for their high nesting density of sea turtles will aid the species even more. Crete and Kefalonia host many nesting turtles at their beaches as well. The northern beaches of Chania, from Chania city to Kolymbari, and Rethymno cities, and the Messara Bay, are well-known nesting sites for *Loggerhead Turtles*, with the last to be the most pivotal. ARCHELON and MEDASSET are already monitoring these sites, which are part of the Natura 2000 Network, offering great service. However, the lack of exclusive authorization in these nesting sites by these NGOs give people the right to frequently intervene, putting the sea turtles in jeopardy. The beach that is extended from Kommos to Kalamaki, is the most important breeding site for the *Caretta caretta* in Messara Bay, which has been exploited recklessly in the past, meaning beach parties. As for Kefalonia, the island is one of the northernmost nesting sites of sea turtles globally. The foremost nesting site is below Ratzakli at Mounda Bay, between Skala and Katelios. Thus, WWF, in association with ARCHELON and MEDASSET, can raise money through their donation programs and, with the license and funding of the state, proceed to the purchase of the most vital nesting sites in Messara Bay and Mounda Bay, assisting the species to thrive even more.

Lastly, the Ministry of Environment, Energy and Climate Change, in association with the Ministry of Education, Research and Religious Affairs and the Ministry of Tourism, should proceed to the creation of a new and more advanced environmental compulsory course of escalating difficulty as long as students pass on to the next grade and it will be part of the curriculum in every grade of Junior and Senior High School. The main goal will be the cultivation of students' environmental behavior, mentality and awareness



through lectures, public actions and volunteerism like beach cleaning, and donations. Schools will organize environmental excursions “Ecotours” in many different regions of Greece during the year, in cooperation with environmental NGOs that could plan the programs’ activities and guide the students. Students’ grade will be defined by exams that will test the level of basic knowledge and by their attendance in lectures and participation in excursions.



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