

THE PANDEMIC

THE Covid-19 pandemic has posed "a great challenge" for Spot, which relies on the recruitment of approximately 70 interns annually and receives a lot of attention from tourists, who are deemed as a "critical" resource.

As a consequence, the Marine Turtle Conservation Project received emergency funds from the MAVA foundation, the British Chelonia Group and Roger de Freitas, a long-term supporter. Additionally, University of Exeter's crowdfunding platform was used in order to meet the basic running costs of the season. The crowdfunding project received £23,060 from 320 donors.

A campaign was set up in 2020 to recruit volunteers from the Turkish Cypriot community and the fee of participation was waived for international students and other foreign nationals based in the country.

A total of 300 applications were received but many could not commit to full-time work which brought a challenge of "maintaining a pool of well-trained volunteers". Volunteers and team leaders worked flat-out through the "busiest nesting season on record". This involved three weeks of night work during the peak nesting season, monitoring studies and litter clearance.

NATURAL THREATS

A VITAL task carried out by Spot teams during their daily patrols is to ensure that no nest is too close to the waterline. Even though relocation is substantially avoided due to its impact on the naturally selected incubation temperatures, thus sex ratios, it is carried out to protect the nests that are "certain to be either washed away or severely impacted by wash-over".

If beaches continue to be narrowed by commercial land use and recreational activities, this sort of intervention on nests, which volunteers eschew and consider a "last choice", could become more frequent.

Conservation teams also protect nests from storms and storm surges, which were experienced on August 8-9, 2020. Volunteers' efforts were focused on relocating as many nests as possible from high impact areas and "most nests were located within 24 hours". Another tactic that came into use was installing metal cages around nests to protect predation by dogs and foxes.

It is reported that predation by dogs and foxes was as high as "60 per cent" in past years, so despite caging, a lot of nests were lost to predation at the west coast beaches and fox disturbance also increased at Alagadi, likely due to reduced night patrols.

Since many hatchlings are preyed by foxes, which cause uncertainty around "whether any hatchlings reached the sea", it is recommended by Spot that red fox and stray dog populations are controlled better, without resorting to "the illegal use of poisoned meat often used, and killing off other native wildlife".

CARETTA FLAG CERTIFICATION SCHEME

SPOT initiated a scheme with the support of Civic Space and the MAVA foundation to award "Turtle Friendly" coastal businesses with a "Caretta Flag". This is to encourage local businesses to think about sea turtles as a flagship species and help protect coastal habitats.

The businesses awarded the flag are expected to have followed five guidelines: promoting awareness, providing space for nature, turning out the lights, joining the coastal businesses network to reduce plastics, and protecting the beach.

Two local businesses, Caretta Bar and Restaurant in Akdeniz and the Turtle Paradise Restaurant in Alagadi, were awarded the flag.

"We hope that the local community will choose to go and support these businesses more so that other businesses will want to follow the guidelines to be given the flag," Spot said.

The organisation will follow up with the actions of the businesses that were awarded the flag to ensure they are still adhering to the guidelines.



The owner of Caretta Restaurant in Akdeniz SPA and his family at their restaurant awarded a Caretta flag

A RECORD 2,408 turtle nests were recorded in the TRNC in 2020, according to a new Marine Turtle Conservation Project study from the North Cyprus Society for the Protection of Turtles (Spot), the Environmental Protection Department (EPD) and Exeter University's Marine Turtle Research Group.

The conservation project is carried out across five "Specially Protected Areas" between the Güzelyurt and Gazimağusa bays.

Green turtles and loggerhead turtles, widely known as Caretta-caretta among locals, are protected and researched as part of the project.

While the nest record is only slightly higher than the previous record of 2,401 in 2018, the good news is actu-

ally hiding a fragmented situation of comparatively low numbers of loggerhead turtles – whose nesting numbers are rising in Turkey and Greece – "which is concerning".

Overall, however, Spot, which has accumulated long-term nesting data since 1993, reports having seen a "significant increase in the number of turtles recorded" since 2017.

Whether this positive trend is the fruit of the detailed conservation efforts by Spot, which include awareness raising, or a natural phenomenon cannot fully be determined.

"Sea turtles of North Cyprus became a national emblem, many local companies use the sea turtle as their logo, and the sea turtle appears on citizens' TRNC ID [cards] and is the logo of



A 'record year' for turtle nest numbers

2020 has been declared a "record year" for the number of turtle nests recorded on the TRNC's shores, a new study has revealed. GÜLDEREN ÖZTANSU examines the report.

the Tourism Ministry," the report said.

Caretas, and of course all sea turtles, are a national treasure and, despite the valuable work put in by Spot and other conservationists, there is a plethora of dangers threatening sea turtles and perhaps disproportionately affecting the loggerhead species.

Of the 2,408 nests recorded last year 1,690 were green turtle nests, 641 were loggerhead nests and the remaining 77 were "not attributed to the species".

In Karşıyaka 81 loggerhead nests and three green turtle nests were recorded by the Karşıyaka Turtle Watch.

Eastern Mediterranean University's (EMU) sea turtle nest monitoring group spotted 191 loggerhead turtle nests in the Gazimağusa Bay and no green turtle nests, Dr Burak Ali Çiçek, who has led the team responsible from Gazimağusa Bay since 2006, informed *Cyprus Today*.

Dr Çiçek noted that it is the loggerhead species that generally visits Gazimağusa. These nests hosted roughly 11,000 hatchlings. All other nests were recorded by Spot.

Historic trend data reveal that the record number of turtles nests seen last year is boosted by the greatest number of green turtle nests recorded since 1993.

The 1,690 green turtle nests recorded in 2020 was more than eight times the 200 nests found 1993. It was noted that the Karpaz area is the most significant contributor to this trend

with "double the average number of nests recorded over the last three years".

Unlike the green turtle expansion though, long-term data shows that loggerhead nest numbers, which stood at 100 in 1993, have been on a largely negative trend since 1999.

Interestingly, green turtle success is also fed by Lake Bardawil on the northern coast of Egypt's Sinai Peninsula. Monitoring studies with satellite tracking and "stable isotope analysis" demonstrate that the rising green turtle numbers is related to young turtles that are "developing and foraging" in Lake Bardawil. As much as 70 per cent of turtles tracked from Karpaz – equivalent to 20 turtles – feed at this site. With the success of turtle conservation in Cyprus in mind, Spot strongly advocates "for support to conservation groups working in Egypt".

Ecological or human changes that may be linked to favourable green turtle population growth at the site as well as any threats to turtles should be explored by aquatic studies and work with local stakeholders so that "we don't lose all our eggs in one basket".

Meanwhile Spot is tackling a number of threats to sea turtles from local sources in Cyprus.

ESENTEPE BEACH

A collage of pictures first taken in 2003 (pictured above, right) illustrates the Esentepe beach area is being lost to concrete and recreation. Onshore land use is directly related to nesting suc-



cess. As such, as early as 2001 "calls were made for elevated protective status for this site as a significant green turtle nesting site" in an annual review report by Spot. Furthermore, a report was submitted to the EPD last year.

Nonetheless, sand dunes were lost to a restaurant in 2014 and after 2016 a wall was added along the back of the beach as well as a bungalow accommodation site. Finally, a further restaurant was built on the beach itself.

The problem does not end with merely the loss of nesting areas to human activities or the narrowing of the beach, which can lead to the inundation of the nests. In fact, restaurants and accommodation businesses bring with them invasive, often plastic mate-

where it was agreed that pontoons would be cleared and further development would be prevented – sand extraction, the construction of pontoons and the use of beach furniture continued.

According to the UK Centre for Ecology and Hydrology, sand dunes are important for the protection of biodiversity. As the green turtle is an endangered species, it should seriously be considered if such action should be allowed on the Esentepe beach before the eastern bay is "lost to development and sand extraction before the summer season".

GAZIMAĞUSA BEACH

Dr Çiçek brought to attention that, due to rampant coastal urbanisation, and as a member of teaching staff at EMU's Department of Biological Sciences, he submitted a report titled "Gazimağusa, Iskele, Yeniboğaziçi Zoning Plan" to the EPD.

Dr Çiçek, who suggested that five locations named Marinero, Onur, Iskele public beach, Dokuzevler and the Harup port are given "protected area status", is under the impression that the EPD is "sensitive" but that Covid-19 is dominating the agenda and delaying decisions.

For the time being, not only do buildings and settlements narrow the beach, increasing the risk of inundation, sea turtles turn back before getting to the shore if the coastal morphology of the beach is spoiled.

"Turtles prefer to get on beaches with a little bit of a slope and sand dunes," Dr Çiçek said. "Human activity can flatten

INCOMPETENT WASTE MANAGEMENT

"NORTH Cyprus beaches are among the most plastic-polluted in the world," the report judged. This problem drains the resources of Spot as increasingly more staff, volunteers and funds are set aside to manage beach pollution fed from both the land and the sea.

The Güngör solid waste collection facility, which opened in 2012, "reached capacity very early", the report says, and unregistered dump sites are created by municipalities, farms, industrial estates and construction companies which result in leaking of plastic across land or through water streams into the sea.

Littering or fly-tipping are "common offences that go unprosecuted". It is argued that municipalities do not have the capacity to deal with waste management.

Spot held nine beach clean-ups last year, clearing 3,193 kilos of litter from important nesting sites.

As reported by this paper in January, a young Spot volunteer who "saw a rope tangled around a baby caretta's throat" led a clean-up where 90 sacks of litter were collected from the Akdeniz beach. Spot informs that litter is a big problem as it can be swallowed by turtles and prevents them from feeding. Since waste management issues affect ecological systems, Spot calls for a national action plan to tackle the problem in a sustainable fashion.

A juvenile green turtle tied by its neck to a floating bottle with wire and rope



DELIBERATE PERSECUTION OF SEA TURTLES

DURING the 2020 nesting season, 265 turtles were reported caught or stranded or as by-catch, which is more than any other previous year. Of these, 182 were green turtles, 81 were loggerhead turtles and two were "unidentified".

Some 192 were reported dead and of the remaining 73 turtles 17 were sent to rehabilitation centres and 56 were released directly.

The increase is thought to be caused by more instances of reporting by fishers and the public, increasingly directly to Spot.

Thirteen turtles were found stranded on the Boğaz beach, which is an important loggerhead nesting beach that is undergoing intensive development. Five of the less decomposed loggerhead turtles were mutilated with wounds to the neck and flippers. It was initially assumed that the large stray and loose dogs in the area had attacked the turtles. Nonetheless, when two fresh specimens were inspected, it was revealed that the turtles suffered from clean slashing wounds. This opened the suspicion that fishers might have killed the turtles through a cut to the neck after they got caught in fishing nets, later abandoning them on the beach and subsequently their wounds were further opened by stray dogs.

Spot asked Iskele police to investigate the matter but their complaint was turned down by the police who claimed that "they did not have the resources to pursue such a case". Spot notes that cases of deliberate mutilation or persecution are "scarce" in North Cyprus.

HARM CAUSED BY VEHICLES

QUAD bikes, beach buggies and other types of similar leisure vehicles "are seen more each year on turtle nesting beaches".

These vehicles "often drive over and destroy the nests" and can end up causing damage to equipment used by sea turtle nest monitoring groups, which indirectly impairs the safety of turtles.

Alagadi beach in Girne, which is closely watched and patrolled by the EPD, differs starkly to the rest of the beaches where patrols and on-the-spot fines are needed as the problem is quite serious. Spot suggests that they "may have some budget" for restricting vehicular access to "some nesting beaches" within the Specially Protected Areas, however they do not have authority to issue fines, therefore preventative measures must be taken.



Quad bikes illegally ridden on the turtle nesting beach. Head of the EPD (left) Osman Bora Çağakan asking the riders to leave.

out the shore, which makes the beach an unattractive destination to turtles and is something we are struggling with at the Dokuzevler area.

"Houses are putting up walls against the shore. It should not be for-

gotten that sand dunes are not only home to sea turtles; this ecology is important to other endangered species such as the ghost crab (*Ocypode cursor*) and the sea daffodil (*Pancratium maritimum*)."