



Strasbourg, 04 September 2019  
[files41e\_2019.docx]

**T-PVS/Files(2019)41**

CONVENTION ON THE CONSERVATION OF EUROPEAN WILDLIFE  
AND NATURAL HABITATS

**Standing Committee**

39<sup>th</sup> meeting  
Strasbourg, 3-6 December 2019

---

**Follow-up of Recommendation No. 95 (2002)  
on the conservation of marine turtles in Kazanlı  
beach (Turkey)**

**- REPORT BY THE COMPLAINANT -**

*Document prepared by  
MEDASSET*

**MEDASSET - The Mediterranean Association to Save the Sea Turtles****UPDATE REPORT****Follow-up of Recommendation No. 95 (2002) on the conservation of marine turtles in  
Kazanlı beach (Turkey)**

**Submitted to  
the 39th Meeting of the Standing Committee of the Convention on the Conservation of European  
Wildlife and Natural Habitats (Bern Convention)**

Green turtles *Chelonia mydas* are globally endangered and in the Mediterranean researchers estimate that only 784 green adult female turtles nesting in the region, laying about 1.164-2.674 nests per year. The species is listed in the Bern Convention Appendix II as strictly protected fauna species for which Contracting Parties are required to take legislative and administrative measures to ensure their special protection.

Kazanlı in southern Turkey is among the top three most important green turtle nesting beaches in the Mediterranean. The habitat had been subject to gradual degradation since the 1980's. Conservation problems were first reported to the Bern Convention in 1999 and have since been discussed regularly at the annual Standing Committee Meetings. A case file was opened in 2000 followed by Recommendation No. 95 (2002) on the conservation of marine turtles in Kazanlı beach (Turkey).

MEDASSET visited Kazanlı in August 2019 to assess and document the conservation situation on the nesting beaches and hereby submits an update report on the conservation status of the sea turtle nesting beach in Kazanlı, Turkey.

In summary, though 19 years have passed since the adoption of Recommendation No. 95 (2002), there has been limited progress and significant issues remain. **Six measures under Recommendation No. 95 have not been implemented to date (No. 1, 6, 9-11, 13) and seven measures should be continually implemented (No. 3-5, 7-8, 12, 14).**

**MEDASSET particularly reiterates its concern about the lack of implementation of:**

**Measure No. 1** for erosion control which continues at an alarming speed and represents a major threat which can undermine all other conservation efforts. Significant loss of beach calls for urgent and drastic measures that have yet to be taken.

**Measure No. 10** for the removal of the 1.5 million tons of highly toxic solid waste located right next to Kazanlı's green turtle nesting beach, posing a severe hazard for the habitat, the sea turtle nesting population, human health and the entire Mediterranean.

***MEDASSET calls upon the Bern Convention Standing Committee to:***

- Follow-up Recommendation No. 95 (2002) at the 39<sup>th</sup> Meeting of the Standing Committee.
- Urge Turkish authorities to fully implement Recommendation No. 95 (2002) with no further delay.

***MEDASSET calls upon the Turkish authorities to:***

- Urgently implement all outstanding measures under Recommendation No. 95 (2002).

## BACKGROUND SUMMARY

**Green sea turtles**, *Chelonia mydas*, are regarded as globally endangered.<sup>1</sup> In the Mediterranean, researchers estimate that there are only 784 green adult female turtles nesting in the region, laying about 1.164-2.674 nests per year.<sup>2</sup>

The beach of **Kazanlı** in southern Turkey is one of the most important green turtle nesting areas in the Mediterranean. In 1988, it boasted the highest density of green turtle nesting in the Mediterranean.<sup>3</sup> More recently, it was listed as among the top three most important green turtle nesting beach in the Mediterranean, together with Akyatan and Samandag beaches. In 1988-2006, 43-403 nests/year were recorded and 176-562 nests/year in 2006-2011.<sup>4</sup> Part of Kazanlı nesting beach is nationally designated as a 1st Degree Natural 'SIT' Protected Area. The total length of the beach is 4.5 km (see map at the end of this annex). Surveys in the 1980's identified a number of serious **threats**, which increased in subsequent years and although confirmed and reported by numerous researchers and conservationists, the responsible authorities failed to take action for several years. As a result, the nesting beach is subject to serious deterioration.

MEDASSET has been monitoring Kazanlı nesting beach and reporting on conservation problems since 1999. Main threats identified are: erosion, wastewater and toxic waste pollution, litter, sand extraction, light pollution, agriculture (greenhouses) on the rim of the nesting beach, coastal fishing during the nesting season, disturbance to the species during nesting and lack of public awareness. To the rear of the beach, sits the Kromsan Soda Chrome Factory that has deposited 1.5 million tons of hazardous toxic waste, directly next to the Kazanlı nesting beach. The waste has a high concentration of toxic chromium (Cr 3+/6+) compounds, and is a by-product of the factory's activities in the 1990s. This mountain of waste is covered with a plastic sheet (in reaction to Recommendation No 95), directly next to the Kazanlı nesting beach. The removal of this hazardous waste from the beach is of high priority for environmental and human health. In 2000 and 2001, MEDASSET alerted about the release of toxic waste into the sea off the nesting beach from the beachside factory. Seawater samples, which MEDASSET analysed, were found to contain chromium concentration 13,500 times higher than permitted levels. More than 23 green turtles were found dead. Discharges into the sea resulted in turtles emerging to nest with their body encrusted with white CaCO<sub>3</sub>.

### Bern Convention & the Kazanlı Case

The situation at Kazanlı has been reported several times in the Recommendations of the Bern Convention Standing Committee. In **1998** the Standing Committee adopted **Recommendation No. 66** *on the conservation status of some nesting beaches for marine turtles in Turkey*, and urged the Government of Turkey to "take urgent measures to restore the beach, remove the adjacent greenhouses and the solid waste, particularly plastics; and resolve the pollution problem from the soda chrome factory". To encourage conservation action, the Standing Committee opened a case file (No. 2000/1) at its 20<sup>th</sup> Meeting in **2000**. Further concerns about inadequate protection of the sea turtle population and discharge of toxic waste into the sea, finally led to an **on-the-spot appraisal mission in 2002**, following which the Standing Committee issued a specific **Recommendation No. 95 (2002)** *on the conservation of marine turtles in Kazanlı beach (Turkey)*, with 14 conservation measures. As some of the measures were implemented by the Turkish authorities, and considering that a better overall protection of the area had been achieved, despite MEDASSET's call to maintain the case file open, the Standing Committee at its 24<sup>th</sup> Meeting in **2004** provisionally closed the file, requesting that the Turkish Government continues to report on progress on the implementation of the 14 recommended conservation measures. However, the Turkish Government did not report on the conservation status of Kazanlı in 2005, and no delegation attended the **2005** Standing Committee Meeting. In **2006**, the Turkish Government submitted a brief report, but again did not send a delegate to the Standing Committee meeting. In **2007**, the issue was discussed at the Standing Committee, which decided not to re-open a file, but to request that the Turkish Authorities submit a report in 2008. At the **2008** Standing Committee

<sup>1</sup> IUCN Red List of Threatened Species, [www.iucnredlist.org](http://www.iucnredlist.org)

<sup>2</sup> Hochscheid et al. (2018). Sea Turtles in the Mediterranean Region: MTSG Annual Regional Report.

<sup>3</sup> Baran & Kasperek 1989, Yerli & Demirayak 1996

<sup>4</sup> Kasperek et al. 2001, Casale & Margaritoulis 2010, Turkozan et al. 2015

Meeting, the Turkish Government reported on progress to implement measures listed under Recommendation No. 95 and further informed that the Soda Chrome Factory's plan to set up a landfill site had been delayed, and that the solid waste treatment would commence in July 2009, while the operation of the landfill was set to begin in November 2009. MEDASSET called on the Government of Turkey, to start implementing without delay plans to put the hazardous waste in a safe location, far from the green turtle nesting beach and the sea.

According to the March **2009** Bureau Meeting Report, the Turkish authorities reaffirmed their intention to remove the hazardous waste from Kazanlı Beach, but notified that "it would take some time". They confirmed that the construction of the waste neutralisation facility was underway and was expected to be completed as planned. EIA studies were being carried out for the waste storage site. According to the report submitted by the Government to the 2009 Standing Committee Meeting, the waste disposal facility was to be finished by October 2009. At the 2009 Meeting, the delegate of Turkey reported on progress on the implementation of Recommendation No. 95, and informed that the removal of the toxic waste was to start soon, an investment had been made to establish a neutralization plant, and that waste removal will take eight or ten years. MEDASSET welcomed progress made, and highlighted that together with the toxic waste management several points remain unsolved, such as the severe coastal erosion which requires more drastic measures by the authorities.

During the 30<sup>th</sup> Standing Committee Meeting in **2010**, though Kazanlı was not on the Meeting's agenda, and following MEDASSET's intervention, the Turkish delegate briefly informed that nest monitoring continued and that the toxic waste neutralisation facility was established within the chromium factory's grounds and that the process has started (see 2010 MEDASSET Announcement). Two hundred thousand tons of chromium had been neutralised and were kept within the Factory's grounds, until transferred to a landfill site, which had not yet been defined. MEDASSET called upon the Turkish Government to continue reporting regularly to the Convention on all issues concerning Kazanlı, especially on the toxic waste management and erosion problems. The request was reiterated via email to the Secretariat in **2011** and through an intervention during the **2012** Standing Committee. To our knowledge, no government report had been submitted since 2009.

At the **2013** Standing Committee Meeting, the Turkish delegate informed about measures, including: awareness raising targeted at visitors; local volunteer beach cleaning activities; light screening by the municipality; seasonal vehicular traffic bans; chemical analysis showing waste compounds from the chromium factory to be well below standard values. Illegal buildings and greenhouses remain on the beach. No information was provided on the remaining measures, such as the severe beach erosion problem. Information reported on the removal of the toxic waste was the same as reported in 2010, therefore, there seemed to be no tangible progress (for details see T- PVS/Files (2014) 58).

In **2014**, the Turkish delegate's oral statement at the Standing Committee Meeting addressed all measures under Recommendation No. 95. MEDASSET welcomed the continuation of awareness raising, nest monitoring, efforts to reduce agrochemical pollution, municipal sewage and industrial wastewater discharge monitoring. A single beach cleanup before the nesting season was reported. The report was unclear regarding whether light pollution reduction measures were indeed taken or if there were only discussions with the municipality and factory about this issue. The 1.5 million tons of solid toxic waste remain next to the nesting beach, there was no update on the amount of waste neutralised during 2011-2014 and the only positive news was that the permanent landfill for the neutralised waste should start to operate in 2015, as the EIA was completed in 2014. Regrettably, removal of greenhouses and illegal buildings had not progressed, pending an ongoing shoreline delimitation court process. Lastly, there was a complete lack of measures to monitor or manage erosion. As announced in the delegate's oral intervention, in Dec. 2014 the Ministry made a study visit to ARCHELON (Athens, Greece) regarding the management of nesting sites. During the visit, MEDASSET participated in a discussion session on beach erosion and invited an expert geologist who, after noting the severe erosion in Kazanlı using satellite imagery, identified the river dams in the surrounding area as the possible key source (as has been suggested in MEDASSET's reports) and provided some general guidance on potential measures.

At the **2015** Standing Committee meeting, the Turkish delegate presented a report on the 14 points of Recommendation No. 95 (2002): preliminary work was underway regarding a beach erosion project

and 46.593 tons of the neutralised chemical waste stored in a temporary landfill facility in the factory, had been transferred to a permanent landfill (for details see T- PVS/Files (2015) 49).

At the **2017** Standing Committee meeting, the Turkish delegate informed that the beach erosion project was not launched and no action has been taken to deal with the erosion problem, and that 183 thousand tons out of the 1.5 million tons (only 12.2%) of the neutralised chemical waste stored in the temporary facilities had been transferred to a permanent landfill. MEDASSET's survey and report confirmed that the huge amount of toxic waste remains next to the nesting beach and erosion is accelerating at an alarming speed. Despite government reports, light pollution is still a major problem, abandoned buildings and greenhouses are still present on the beach, summerhouses and a wedding hall continue to operate in the nesting area, and information signs are severely lacking.

### **UPDATE: 2019 Survey on the implementation of Recommendation No. 95**

*See Maps 1 -3 in Annex for the location and sub-sections of Kazanlı.*

***1. Remove as a matter of urgency, the row of greenhouses closest to the sea in beach section K3; remove, as soon as feasible, other greenhouses in beach section K3 through the appropriate legal and administrative procedures and restore that space to favour turtle nesting:***

Greenhouses in beach section K3 have not been removed, and the problem of coastal erosion continues, leaving hardly any nesting space for sea turtles (Fig. 1) although there are still nesting attempts (Fig. 2). Greenhouses on the western side of the section are abandoned, but now entirely embanked with a stone wall. The complete absence of a beach in front of them makes it impossible to reach the area via the coast (Fig. 3-4). All of the remaining greenhouses have white plastic sheets covering the soil inside, indicating at least partial usage. Greenhouses in the middle part also have large stones piled in front of them, possibly to cope with the effects of erosion (Fig. 5-6). Tall reeds in front of the greenhouses towards the eastern border of the section (Fig. 7) may be helpful in preventing further beach loss with their roots, but a full restoration of section K3 will also require the removal of the old, dirt road passing too close to the sea (Fig. 8).



*Fig. 1: General view of the greenhouses and the beach in section K3*



*Fig. 2: Sea turtle tracks and a nesting attempt (red circle) in front of the greenhouses in section K3*



*Fig.3: Stone wall in front of the abandoned greenhouses at the western side of section K3*



*Fig.4: Close-up of the stone wall*



*Fig. 5: Rocks and the beach area in front of greenhouses in section K3 in 2017*



*Fig. 6: The same location in 2019 in front of greenhouses in section K3*



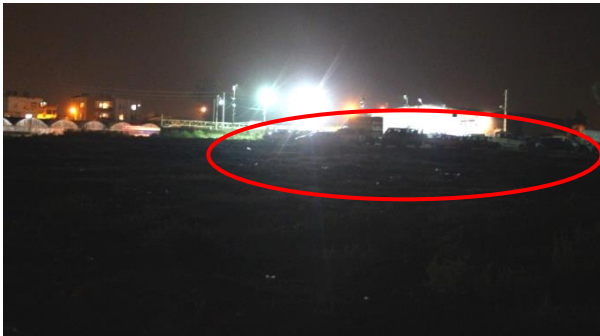
*Fig. 7: Reeds and other vegetation in front of the greenhouses in section K3*



*Fig. 8: The road that is too close to the sea, and a nesting attempt in K3*

## ***2. Moving the taxi parking area away from the beach as a matter of urgency:***

There is no designated taxi parking area close to the shore in any beach section, except for a public transport parking area next to the summer houses in K1. A number of vehicles park next to and in front of the wedding hall in section K2, especially when there is a reception (Fig. 9). Several other entry points exist in all sections, resulting in random vehicle presence very close to the beach at night.



*Fig. 9: Vehicles (red circle) parked next to and in front of the wedding hall at night, section K2*



*Fig. 10: Vehicle parking near greenhouses in section K3*

## ***3. Periodically removing the plastic debris from the beach:***

Plastic debris was observed in all beach sections, with varying density. Sections K4 and K3 were more littered, whereas some effort for beach clean-ups was apparent in sections K2 and K1. As per previous years, two beach clean-ups are mentioned online, which were also confirmed during talks with local people. The first clean-up took place on May 7<sup>th</sup>, 2019<sup>5</sup>, with the efforts of the Third Eye Mediterranean Society (Akdeniz Üçüncü Göz Eğitim ve Gençlik Derneği) of Akdeniz Municipality -which also includes Kazanlı-, along with the contributions from two national associations (AFAD and AKUT), and foreign volunteers from other Mediterranean countries. The second clean-up was conducted by the

<sup>5</sup> [www.haberler.com/deniz-kaplumbagalarinin-yuvalama-alani-temizlendi-12263830-haberi](http://www.haberler.com/deniz-kaplumbagalarinin-yuvalama-alani-temizlendi-12263830-haberi)

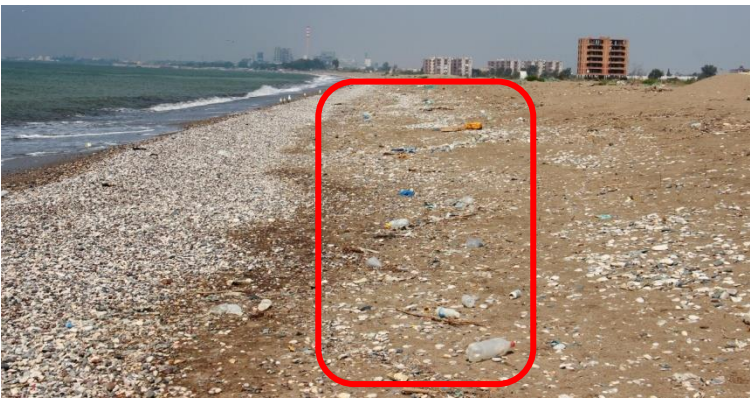
Soda-Chrome factory on July 20<sup>th</sup>, 2019<sup>6</sup>. However, the presence of plastic debris on all sections (mostly greenhouse nets, plastic bags, and empty bottles) (Fig. 11-15) indicate the need for more frequent litter removal within the season and better waste management.



*Fig. 11: Discarded greenhouse nets (plastic debris) in front of the greenhouses in section K3*



*Fig. 12: Plastic bags and other debris in section K3*



*Fig. 13: Plastic bottles, all along the shore in section K1*



*Fig. 14: Plastic debris near the restaurant in K2*



*Fig. 15: Close-up of the plastic debris in section K2*

#### ***4. Screening the lights of the municipality of Kazanlı and the Soda-Chrome factory so as to avoid photopollution on the beach:***

Light pollution at the beach is evident on all sections except K3 and the far eastern end of K1. In section K4, the Soda-Chrome factory is heavily illuminated at night (Fig. 16) and can be seen from all sections, even from neighbouring beaches beyond K1-K4. Clearly, discussions between the municipality and the factory, mentioned in previous years' reports have resulted in no tangible progress. The dirt road in K4 passes very close to the sea, causing photopollution from cars passing by and parking near the shore.

In section K2, both the football court (Fig. 17-18) and the wedding hall (Fig. 9, 19) spread intense light for extended hours at night. The two small restaurants near the beach are also sources of artificial light (Fig. 17) although they all close at 12.00 pm and become completely dark, along with the coffee house

<sup>6</sup> [www.sisecamkimyasallar.com/tr/basin-odasi/basin-bultenleri/geleneksel-kazanli-sahil-temizligi-ve-cocuk-senligi](http://www.sisecamkimyasallar.com/tr/basin-odasi/basin-bultenleri/geleneksel-kazanli-sahil-temizligi-ve-cocuk-senligi)

that uses orange lights after midnight (Fig. 18). Artificial light sources from the summer house complex “Onur Sitesi” are dimmed after 12.00 pm, except for a few balcony lights. However, the waste water pumping facility and the small minibus parking place on both sides of the summer house complex are intensely illuminated throughout the night. In section K1, there is a public transport parking area behind K1 that is heavily illuminated at night. The abandoned building in the far eastern part of section K1 is completely dark, with only one streetlight facing sideways and emitting dim orange light. The large strand between K2 and K1, where there are no buildings, is entirely dark during the night and seems to have become the densest nesting area.

All the streetlights are fitted with orange lights by Akdeniz Municipality (Fig. 16-19), although wavelength measurement is necessary in order to assert whether they emit true orange colour that minimize disorientation effects on wildlife.



*Fig. 16: Soda-Chrome factory and orange street lights at night*



*Fig. 17-18: Light pollution from the football court, a small restaurant in front of it, random car parking, and the municipality's orange streetlight (section K2)*



*Fig. 19: Light pollution from the wedding hall at night, and the municipality's orange streetlights at the back (section K2)*

**5. Maintain monitoring of the chemical waste discharge into the sea by the chrome factory; establish a reliable and permanent monitoring of nesting activities in the beach and make an independent assessment of potential burden of the natural environment of Kazanlı, with substances released by the soda-chrome factory; assess the potential risk of effluents of the soda-chromium factory to wildlife;**

#### *Chemical waste discharge*

According to the 2017 government report, chemical waste from the soda-chrome factory is treated in two different industrial waste treatment facilities that belong to the factory. Although this was confirmed by the local people, it was not possible to locate the treatment facilities from outside during the present field survey. The factory's website states that "All recyclable wastes from processes are fed back into the production process through recycling plants, while the remaining wastes are processed at licensed plants".<sup>7</sup> The same report also states that waste are analysed by an accredited laboratory and the latest analysis, made in June 2017, reveals that chromium and other chemical compound levels are below the limits. However, the latest analysis results cannot be found anywhere online. The screen in Kazanlı town, which used to show effluent analysis, is no longer operational. The board is still in place, but is inactive.

#### *Nest monitoring*

According to the factory's website the nest monitoring project is supported by the industry, though this was not confirmed via the field survey<sup>8</sup>.

A local NGO called "Akdeniz Üçüncü Göz Eğitim ve Gençlik Derneği" (Mediterranean Third Eye Education and Youth Association<sup>9</sup>) is currently monitoring the sea turtle nests on the beach, with the help of volunteers from other Mediterranean countries. One of the small restaurants in section K2 is also helping and is using light-screening green nest covers to surround some nests in front of their area (Fig. 20-21). The owner of the restaurant stated that they are obliged to turn off all lights after 12.00 pm, and they sometimes collect the hatchlings from the nest mouth and guide them towards the sea by using flashlights –otherwise all hatchlings go directly towards the football field right behind the restaurant. He also mentioned that Mersin University was involved at the beginning of the nesting season, to mark all the nests and to provide the green nest covers. However, the material used for these covers are not suitable for blocking the light in the background and prevent their negative effects on sea turtle hatchlings. These covers were also only seen in front of the restaurant and no other location in any of the sections.

Although locals said the teams patrol the beach every morning and night, no team members were encountered during the present two-day field survey. A number of tracks were marked with long sticks, even though some did not result in a nest (Fig. 22). Dog footprints and crab tracks were detected on all sections, along with a couple of predated nests (Fig. 23-24). A few excavated spots were seen in sections K4 and K3, all empty holes, although it was not possible to determine whether they are unsuccessful trials by nesting females or dug by the monitoring team for control purposes (Fig. 25). A few dead, stranded adults (Fig. 26) and some hatchlings, dried and dead under the sun (Fig. 27), were also detected during the survey, pointing towards the need for improved monitoring on all sections.

<sup>7</sup> [www.sisecamkimyasallar.com/en/sustainability/environment-and-energy](http://www.sisecamkimyasallar.com/en/sustainability/environment-and-energy)

<sup>8</sup> [www.sisecamkimyasallar.com/en/sustainability/corporate-social-responsibility](http://www.sisecamkimyasallar.com/en/sustainability/corporate-social-responsibility)

<sup>9</sup> [www.facebook.com/3rdeyemed](https://www.facebook.com/3rdeyemed)



*Fig. 20: Nests surrounded by light-screening green covers, in front of the small restaurant in K2*



*Fig. 21: Close-up of the nest covers; the material is not suitable to block light (section K2)*



*Fig. 22: Turtle tracks marked with long sticks in section K1 (red circles)*



*Fig. 23: Footprints of dogs (possible predator) in section K2*



*Fig. 24: A predated nest in section K2*



*Fig. 25: Excavated spot (possible abandoned nesting attempt) in section K4*



*Fig. 26: Dead adult sea turtle, missing its front flippers (section K4)*



*Fig. 27: A dead Chelonia mydas hatchling, dried under the sun, with its track (section K3)*

**6. Setting in place a monitoring of beach erosion, so as to take remedial measures as needed:**

An update on the beach erosion project mentioned in the Government report of 2015, which was delayed due to budgetary issues, is necessary. Coastal engineering studies should also be immediately launched. More effective remedial measures are urgently needed to stop further damage of the nesting sites from coastal erosion. The arbitrary use of rocks and concrete hasn't provided efficient protection against the erosion of the coastline. Coastline erosion is still a critical problem, severely affecting the sections K4 and K3, though satellite images also indicate reduction of beach in sections K2 and K1 (Fig. 28-29).

In section K4, the small beach section in front of the soda-chrome factory is still non-existent. Instead, this section is entirely bordered with large rocks (Fig. 30-31).

In section K3, there are large rocks piled up in front of the wall of a school at the eastern end of section K3 ("Abdülkadir Perşembe Vakfı Mesleki ve Teknik Anadolu Lisesi"), to tackle the effects of coastal erosion (Fig. 32-33). The school looks abandoned (Fig. 34) and could be removed to provide more sea turtle nesting space. However, the drainage channel right next to it (Fig. 35) might be contributing to erosion. Though beach K3 is heavily eroded in most parts, a small section seemed wider in comparison to 2017 (Fig. 37). Piles of sand and soil stand behind the beach, to the west of greenhouses (Fig. 36). It is unclear if the material is being used for beach nourishment or other purposes, and this requires clarification by officials.



*Fig. 28: Coastal erosion progress in K3. Top: Satellite image 2007. Bottom: Satellite image 2018 (Source: Google Earth)*



Fig. 29: Coastal erosion progress in K2 via Google Earth Satellite image Top: 2007. Bottom: 2018)



Fig. 30: Large rocks bordering the shore of soda-chrome factory (section K4)



Fig. 31: Close-up on large rocks, a construction machine (red circle) is in operation though its purpose is unclear.

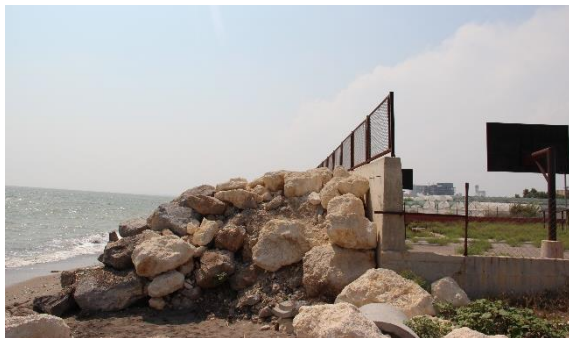


Fig. 32: Large stones in front of the school wall (end of section K3)



Fig. 33: The beach in front of the school wall (end of section K3)



Fig. 34: The school yard looking abandoned (end of section K3)



Fig. 35: Drainage channel near the school building (end of section K3)



Fig. 36: Piles of sand and soil behind the beach, near the greenhouses in section K3.

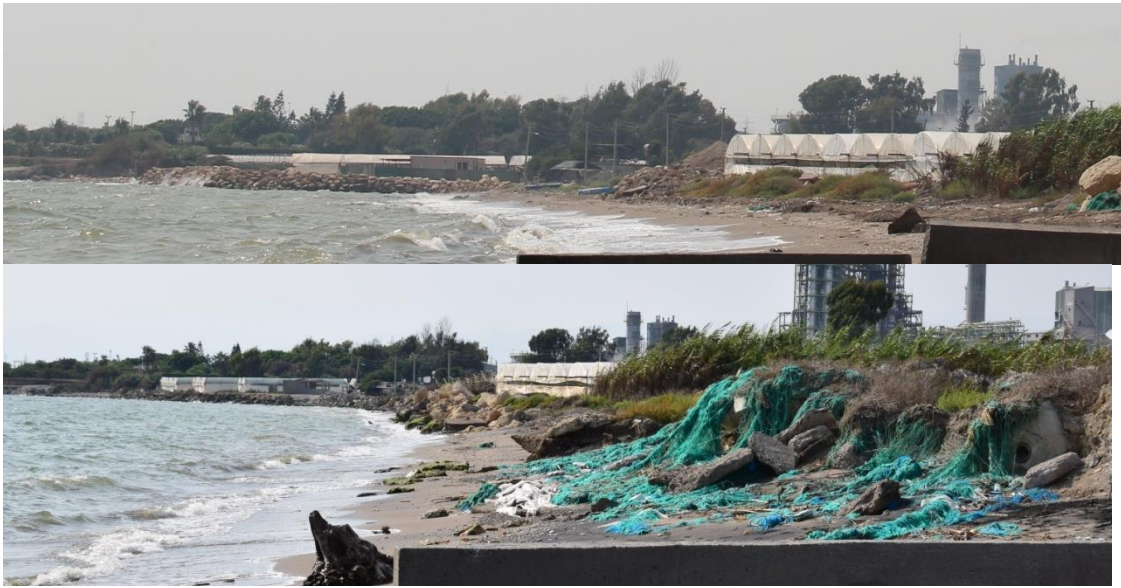


Fig. 37: The effects of coastal erosion in section K3. Top: 2019. Bottom: 2017.

**7. Promote public awareness on the presence and interest of marine turtle nesting in Kazanlı, addressed in particular to local population:**

The nesting beach in Kazanlı is not clearly demarcated. There are only two information signs: one at the beginning of section K1, next to the drainage channel (Fig. 38) and another next to the coffee house/restaurant (“Cemre Kır Bahçesi”) in section K2 (Fig. 39). The sign in section K2 is missing the information related to sea turtles. No other information signs were spotted in the region during the survey. More signs are necessary, and they need to be more informative.

The NGO “Akdeniz Üçüncü Göz Eğitim ve Gençlik Derneği” works in the region in a voluntary fashion, semi-regularly publishes online information about its activities in Kazanlı, which include beach clean-ups, awareness events and presentations at schools.

The mayor and the Municipality head both acknowledge the importance of Kazanlı as a sea turtle beach, mentioning the subject on several occasions<sup>10,11</sup>.

<sup>10</sup> [www.mersin.gov.tr/caretta-carettalar-denizle-bulustu](http://www.mersin.gov.tr/caretta-carettalar-denizle-bulustu)

<sup>11</sup> [www.mersin.gov.tr/vali-su-dunya-sulak-alanlar-gunu-munasebetiyle-bir-dizi-etkinlik-ve-ziyaret-gerceklestirdi](http://www.mersin.gov.tr/vali-su-dunya-sulak-alanlar-gunu-munasebetiyle-bir-dizi-etkinlik-ve-ziyaret-gerceklestirdi)



Fig. 38: Information sign in section K1



Fig. 39: A similar information sign in section K2, entirely missing sea turtle related information

### **8. Fully implementing the existing environment plan and assure the necessary financial and human resources to this end**

There is no information on this subject.

The entire Kazanlı area, including the neighbouring beaches, seem part of the recently announced Kazanlı Tourism Development plan (similar plans have been announced in the past but have not materialised). Turkey's President recently remarked that the Kazanlı Tourism Development area plan is completed.<sup>12</sup> Çukurova regional airport is about to become operational, which is 40 km from Kazanlı.<sup>13</sup> Tourism development in the region may pose a serious threat to the nesting beaches. Further information, maps and details need to be provided by the government, as no such information is available online.

Legal protection statuses of all sections and the existing environment plan (adopted in 2004) should be revised, in view of the new development plan and taking into account updated longterm sea turtle nesting data, with the necessary resources allocated to ensure full implementation of the final plan.

### **9. Removing the illegal building in beach section K1**

The illegal building still remains on the beach (Fig. 40). Although it looks abandoned, there are clearly people inhabiting the first floor (Fig. 41). The building is not illuminated at night. However, there is one orange streetlight near the building, facing sideways.



Fig. 40: The illegal, abandoned building, with the summer houses in the background (section K1)



Fig. 41: Close-up of the abandoned building, first floor occupied, note orange streetlight

<sup>12</sup> [www.mersin.gov.tr/cumhurbaskanimiz-sayin-recep-tayyip-erdogan-mersinde1](http://www.mersin.gov.tr/cumhurbaskanimiz-sayin-recep-tayyip-erdogan-mersinde1)

<sup>13</sup> [www.haberler.com/deniz-kaplumbagalarinin-yuvalama-alani-temizlendi-12263830-haberi](http://www.haberler.com/deniz-kaplumbagalarinin-yuvalama-alani-temizlendi-12263830-haberi)

***10. Removing as appropriate the hazardous waste accumulated over the years close to the beach as a result of industrial activities:***

The process of neutralizing and landfilling the 1.5 million tons of toxic waste accumulated at beach section K4 next to the soda-chrome factory started in 2010 but despite commitments, it has yet to be completed. It is unclear if more toxic waste is being accumulated, or if the piles really consist of neutralized waste. Further information on progress is required and environmental rehabilitation efforts need to be intensified.

All the waste deposits are inside the factory's building complex. The west side of the complex, which is near the road, is surrounded by a solid wall, making it hard to take good and closer photographs of the deposit piles from outside. Nonetheless, the waste piles are still present, in huge hills covered with thick plastic (Fig. 42-45). The situation is a definite threat to the environment and is also a cause of concern among the local people (personal comm. during survey).



*Fig. 42: View of the waste deposits and the soda-chrome factory*



*Fig. 43: Close-up of the waste deposits (section K4)*



*Fig. 44: Close-up of the waste hills closest to the sea, with the watch tower by the shore, and the stone wall (section K4)*



*Fig. 45: Google Earth satellite images of the waste hills in 2007 (top) and 2018 (bottom)*

**11. Considering the removal of the wedding hall of Kazanlı from the beach, to be relocated elsewhere:**

The wedding hall in section K3 (Fig. 46-47) is very active despite the government's statements in previous reports, and is causing severe sound and light pollution during the night, posing a serious threat to nesting. It is also leading to human presence on the beach at night as well as cars parking next to and in front of the hall that further contribute to photopollution.



Fig. 46: Wedding hall in section K2



Fig. 47: Close-up of lights of the wedding hall

**12. Applying appropriate treatment to sewage waters from Kazanlı, so as to free the back of the beach from pollution:**

Akdeniz Municipality mentions the need for measuring chemical levels in sea water and aquatic plants, in their strategic plan for 2018-2022<sup>14</sup>. This plan is currently not accessible online, as the municipality's website is being updated and the URL no longer works.

The legislation on wastewater treatment facilities clearly states that any waste containing heavy metal is strictly prohibited from entering the system and that facilities violating this regulation are subjected to a fine called "KÖP", a cease and desist order, and a lawsuit that may be filed by any local authority. The wastewater treatment facility of Karaduvar seems to lack the proper means of clearing heavy metals. It is designed to remove carbon, nitrogen, phosphorus, and mud.

Analysis reports of wastewater treatment are published on the website of Mersin municipality.<sup>15</sup> MESKİ (Mersin Su ve Kanalizasyon İşleri Müdürlüğü - Mersin Water and Sewerage Administration) is the main body in charge of dealing with wastewater, and Karaduvar Wastewater Treatment Facility is where the wastewater from Kazanlı is processed.

There are a few drainage channels reaching the sea in sections K4 and K3 (Fig. 35, 48-49), and the discharge smells like grey water rather than heavily polluted water.



Fig. 48: Small drainage channel to the west of the soda-chrome factory in section K4



Fig. 49: Larger drainage channel in the middle of section K4

<sup>14</sup> [www.akdeniz-bld.gov.tr/2018-2022\\_STRATEJIK\\_PLANI.pdf](http://www.akdeniz-bld.gov.tr/2018-2022_STRATEJIK_PLANI.pdf)

<sup>15</sup> <https://www.meski.gov.tr/Analiz-Sonuclari/2/karaduvar-atik-su-aritma-tesisi.html>

### ***13. Looking for an appropriate solution to remove houses on the beach that were constructed legally:***

The summer house complex (“Onur Sitesi”) remains at the K1 section of the beach (Fig. 50-51) though they were minimally illuminated at night, in contrast to 2017. After 11-12.00 p.m. there are a few balcony lights on. Foreign volunteers that help the local NGO to monitor and protect the sea turtles also stay in these apartments, which may be related to why the light usage is limited at night.



*Fig. 50: Summer house complex “Onur Sitesi” in section K1, and abandoned building in background*



*Fig. 51: Close-up of the summer house complex “Onur Sitesi” in section K1*

### ***14. Reducing the impact of agrochemical products in the area around Kazanlı:***

Drainage channels reaching the sea are a common sight in Kazanlı, especially in sections K4 and K3. The two drainage channels near the greenhouses in section K3 (Fig. 48-49) are possible sources of agrochemical contamination, but analysis reports are required. An update on the bio-farming attempts (especially the project “Integrated pest management in undercover vegetables and fruits”) and their current extent is also needed. There is also a pipe structure next to the Kazanlı nesting beaches, to the west of section K4, which looks like a drainage pipe; if functional, it may be another source of agrochemical discharge (Fig. 52).



*Fig. 52: Possible drainage pipe beyond the west border of Kazanlı nesting beach (west of section K4)*

### ***Additional information and observations:***

- Random entrance by humans, flashlight and camera flash usage was observed.
- There seems to be an almost intact beach beyond and to the east of Kazanlı, called Adanaloğlu. Although local people emphasize that it is up for rental, it would be worthwhile re-surveying to verify if it does or does not host any sea turtle nests (due to a possible population shift as a result of anthropogenic activities in Kazanlı or climate change).

## REFERENCES

- Baran, I. & M. Kasperek. 1989. Marine turtles Turkey. Status survey 1988 and recommendations for conservation and management. WWF. Heidelberg. ISBN 3-925064-07-9
- Broderick, A.C., F. Glen, B.J. Godley BJ, G.C. Hays. 2002. Estimating the number of green and loggerhead turtles nesting annually in the Mediterranean. *Oryx* 36:227-235.
- Casale P. & D. Margaritoulis (Eds.) 2010. Sea Turtles in the Mediterranean: Distribution, Threats and Conservation Priorities. IUCN/SSC Marine Turtle Specialist Group. Gland, Switzerland: IUCN, 294 pp.
- Kasperek, M., B. J. Godley & A. C. Broderick. 2001. Nesting of the Green Turtle, *Chelonia mydas*, in the Mediterranean: a review of status and conservation needs. *Zoology in the Middle East* 24: 45-74.
- Yılmaz C., Oruç A., Türkozan O. 2015. Marine turtles (*Chelonia mydas* and *Caretta caretta*) nesting along the eastern Mediterranean coast of Turkey: Results from six years of surveying. *Herpetological Journal* Volume 25, Number 4, 197–204.
- Yerli, S. and F. Demirayak. 1996. Marine turtles in Turkey: a survey on nesting site status. DHKD. CMS Report No. 96/4 133pp.

## REPORTS & DOCUMENTS

**The following Recommendations of the Standing Committee are relevant to Kazanlı:**

- No. 7 (1987) On the protection of marine turtles and their habitat;
- No. 8 (1987) On the protection of marine turtles in Dalyan and other important areas in Turkey;
- No. 12 (1988) Concerning the protection of important turtle nesting beaches in Turkey;
- No. 13 (1988) Concerning measures for the protection of critical biotopes of endangered amphibians and reptiles;
- No. 24 (1991) On the protection of some beaches in Turkey of particular importance to marine turtles;
- No. 66 (1998) On the conservation status of some nesting beaches for marine turtles in Turkey;
- No. 95 (2002) On the conservation of marine turtles in Kazanlı beach (Turkey).

**A number of documents describe the Kazanlı issue in detail. These include:**

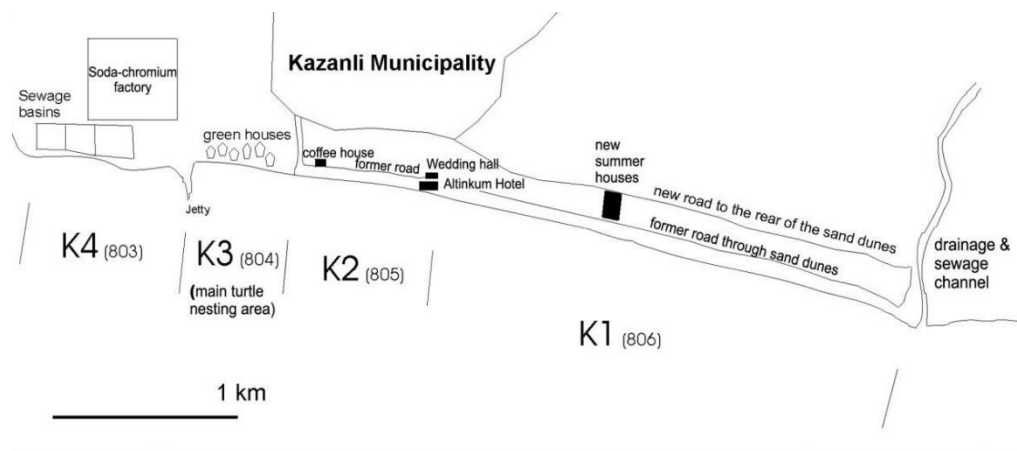
T-PVS (1999) 74	Report by the NGO: MEDASSET
T-PVS (2000) 56	Report by the NGO: MEDASSET
T-PVS (2000) 73	Report from the Government
T-PVS (2001) 39	Report by the Secretariat of the Bern Convention
T PVS (2001) 70	Report by the NGO: MEDASSET
T PVS/Files (2002) 2	Report of on the spot appraisal undertaken for the Council of Europe
T PVS/Files (2002) 17	Report by Turkish Government
T PVS/Files (2002) 20	Report by the Secretariat of the Bern Convention
T PVS/Files (2003) 14	Report by the NGO: MEDASSET
T PVS/Files (2004) 10	Report of the Meeting of the Bureau
T PVS/Files (2004) 11	Report by the NGO: MEDASSET
T PVS/Files (2004) 16	Report by the Secretariat
T PVS/Files (2005) 10	Report by the NGO: MEDASSET

T PVS/Files (2006) 3	Report by the Government
T PVS/Files (2006) 13	Report by the NGO: MEDASSET
T PVS/Files (2007) 29	Report by the Government
T PVS/Files (2007) 16	Report by the NGO: MEDASSET
T PVS/Files (2008) 10	Report from the Government
No TPVS reference (2008)	MEDASSET Update on Green Turtle ( <i>Chelonia Mydas</i> ) Conservation Monitoring in Kazanlı, Turkey
T PVS (2009) 7	Report of the 1 <sup>st</sup> Meeting of the Bureau
T PVS/Files (2009) 11	Report from the Government
No T PVS reference (2009)	MEDASSET Update on Green Turtle ( <i>Chelonia Mydas</i> ) Conservation Monitoring in Kazanlı, Turkey
T-PVS (2012)22 PVS (2010) 25	Standing Committee Meeting Report
No T PVS reference (2010)	MEDASSET Announcement. 14/12/2010, Bern Convention, Council of Europe: Sea Turtle Conservation Problems in Cyprus & Turkey
T PVS (2012) 22	Standing Committee Meeting Report
T PVS/Files (2013) 52	Report by the NGO: MEDASSET
T PVS (2013) 15	Standing Committee Meeting Report
T PVS/Files (2014) 58	Report by the NGO: MEDASSET
T PVS (2014) Misc	Standing Committee List of Decisions & Adopted Texts
T PVS/Files (2015) 45	Report by the NGO: MEDASSET
T PVS/Files (2015) 49	Report from the Government
T PVS/Files (2017) 34	Report by the NGO: MEDASSET
T-PVS/Files (2017) 45	Report from the Government

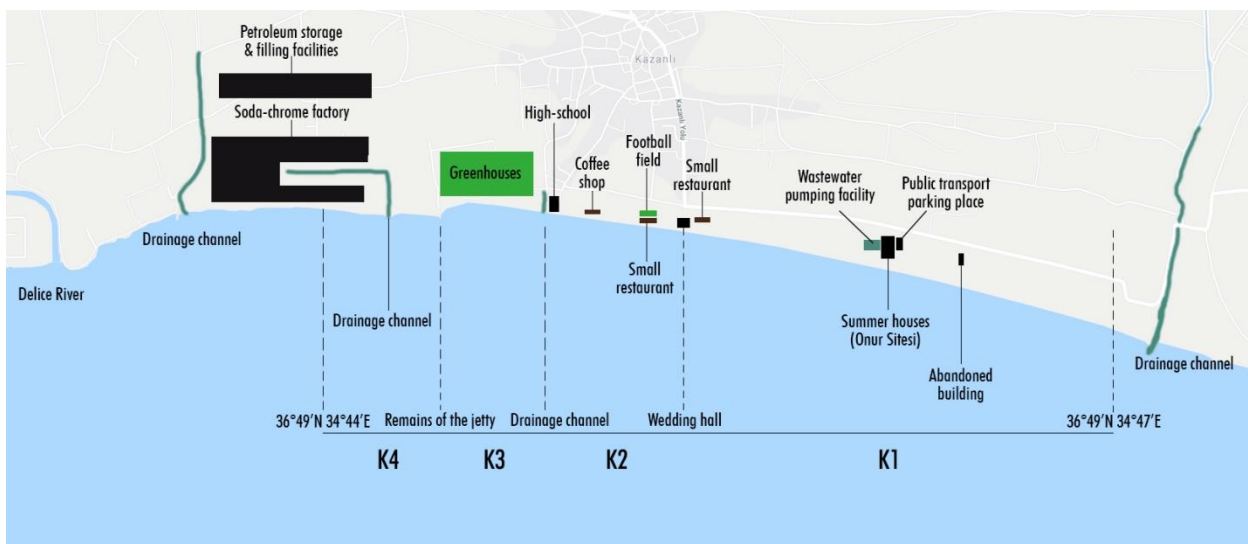
## MAPS



Map 1: Location of Kazanlı, Turkey, among major nesting sites (Source: Kasparek et al., 2001)



Map 2: Kazanlı nesting beach sections and coastal infrastructure (Source: Kasparek et al. 2001).



Map 3: 2019 updated map of Kazanlı nesting beach sections and coastal infrastructure