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CONVENTION ON THE CONSERVATION OF EUROPEAN WILDLIFE
AND NATURAL HABITATS

Standing Committee

36th meeting
Strasbourg, 15-18 November 2016

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

- REPORTS BY THE NGO -

*Document prepared by
MEDASSET - The Mediterranean Association to Save the Sea Turtles*

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

Submitted to: the 37th 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 339-360 green adult females nest in the region, laying 1,500 nests per year. The species is listed in the Bern Convention Appendix II 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). Since the Recommendation's adoption, progress is considered slow and significant issues remain.

MEDASSET calls upon the Bern Convention Standing Committee to:

- Discuss the case file at the 37th Meeting of the Standing Committee.
- Urge Turkish authorities to implement Recommendation No. 95 (2002)
- Encourage and assist Turkish authorities to implement management and conservation measures.

MEDASSET calls upon the Turkish authorities to:

- Urgently implement Recommendation No. 95 (2002).

MEDASSET particularly reiterates its concern about lack of implementation of:

Measure No. 1 for erosion control which continues at an appalling 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 1.7 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 hereby submits an update report to the second Bureau Meeting of the Bern Convention (October 2017) on the conservation status of the sea turtle nesting beach in Kazanlı, Turkey.

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SUMMARY

Conservation of Marine Turtles in Kazanli

Green sea turtles, *Chelonia mydas*, are regarded as globally endangered.¹ In the Mediterranean, researchers estimate that there are only 339-360 green adult female turtles nesting in the region, laying about 1,500 nests per year.²

The beach of **Kazanli** 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.³ 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 2006-2011.⁴ Part of Kazanli 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 Kazanli 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, is a Soda Chrome Factory that has deposited 1.5 million tons of hazardous toxic waste, covered with plastic sheeting, directly next to the Kazanli 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. 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 natural 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 CaCO₃.

Bern Convention & the Kazanli Case

The situation at Kazanli 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 20th 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 Kazanli 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 24th 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 Kazanli in 2005, and no delegation attended the **2005** Standing Committee Meeting. In **2006**, the Turkish Government submitted a brief report,

¹ IUCN Red List of Threatened Species, Version 2011.2. www.iucnredlist.org

² Broderick *et al.* 2002, Casale & Margaritoulis 2010

³ Baran & Kasperek 1989, Yerli & Demirayak 1996

⁴ Kasperek *et al.* 2001, Casale & Margaritoulis 2010, Turkozan *et al.* 2015

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 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 Kazanli 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 30th Standing Committee Meeting in **2010**, though Kazanli was not on the Meeting's agenda, and following MEDASSET's intervention during the Meeting, the Turkish delegate briefly informed that nest monitoring continued in 2010 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 they are 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 Kazanli, 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 report has been submitted since 2009.

At the **2013** Standing Committee, the Turkish delegate informed the meeting about measures, including: awareness raising programmes 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 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; periodical cleanups in the summer are preferable and important in order to remove seaborne and visitors' litter. 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 has not progressed but is pending an ongoing shoreline delimitation court process. Lastly, the complete lack of measures to monitor or manage erosion is of concern. 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 (as has been suggested in MEDASSET's reports) and provided some general guidance on potential measures.

At the **2015** Standing Committee, the Turkish delegate informed the meeting on the 14th points of the Recommendation No. 95 (2002); it reported among others on the preliminary work regarding a beach erosion project, and that 46.593 tons out of the 1.7 million tons of the neutralised chemical waste stored in the ETAN facilities had been transferred to a permanent landfill (for details see T- PVS/Files (2015) 49).

UPDATE

Survey observations on the implementation of Recommendation No. 95:

- 1. Removing 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:*

Some greenhouses remain in the K3 section of the beach, and the ones next to sea appear abandoned. The erosion problems are severe and little of the former beach front remains (Figure 1, Figure 2); large stones have been placed to tackle the coastal erosion and the entire area in front of the greenhouses has been concreted over (Figure 3 - Figure 6).



Figure 1: coastal erosion progress (Google earth aerial photograph, 2007)



Figure 2: coastal erosion progress (Google earth aerial photograph, 2017)



Figure 3: rocks at the beach in front of greenhouses in section K3



Figure 4: greenhouses next to the beach



Figure 5: rocks at the beach in front of greenhouses in section K3



Figure 6: greenhouses next to the beach

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

Although no taxi parking area longer exist, many small buses park next to a wedding hall at the K2 section.

3. Periodically removing the plastic debris from the beach:

Marine debris was observed throughout the entire coast (Figure 7, Figure 8). Some effort for beach clean-ups was apparent, however the collected garbage remained at the beach and was not removed regularly (Figure 9, Figure 10). Many of the plastic debris that end up at the beach such as styrofoam boxes and greenhouse nets, come from the greenhouses of the area (Figure 11, Figure 12). Better waste management is advised.



Figure 7: Marine debris presence, mainly plastic debris



Figure 8: Marine debris presence, mainly plastic debris



Figure 9: Garbage collected but not removed from the beach



Figure 10: Garbage collected but not removed from the beach



Figure 11: Discarded greenhouse nets (plastic debris)



Figure 12: Discarded greenhouse nets (plastic debris)

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

Photopollution at the beach is evident; at night the Soda-Chrome factory at the K2 section is illuminated at a great intensity (Figure 13), the football court uses intense lighting and the wedding hall becomes also illuminated when there is a wedding reception (Figure 14, Figure 15). Sources of artificial light also come from the two restaurants (Figure 16) and the summer house complex present at the beach (K1 section).



Figure 13: Soda-Chrome factory at night (K4 section)



Figure 14: Artificial light from the wedding hall (K2 section)



Figure 15: Artificial light from the football court (K2 section)



Figure 16: Restaurant next to the beach with strings lights



Figure 17: Football court next to the sea

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

Coastline erosion has progressed significantly over the years (Figure 1, Figure 2); especially, the beach front at area K3 has decreased dramatically and it cannot sustain any turtle nests (Figure 22). Furthermore, the arbitrary use of rocks and concrete boxes hasn't provided efficient protection against the erosion of the coastline (Figure 18-Figure 24). Effective remedial measures need to be applied as a matter of great urgency.



Figure 18: coastal erosion



Figure 19: use of rocks and concrete boxes to halt and control the erosion of the coastline



Figure 20: effects of coastal erosion



Figure 21: The erosion of the coastline effecting the concrete wall of the local school yard.



Figure 22: effects of coastal erosion at the K3 section of the Kazanli beach



Figure 23: Coastal erosion in K3 area; use of rocks and concrete boxes to halt and control the erosion of the coastline



Figure 24: use of rocks and concrete boxes to halt and control the erosion of the coastline

6. 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; two information signs exist, one at the K1 section, next to the drainage channel (Figure 25) and one next to the coffee place/restaurant at the K3 section (Figure 26). The NGO *Akdeniz Üçüncü Göz Eğitim Ve Gençlik Derneği* has published online information about its activities at Kazanlı, which include beach clean-ups, awareness events and presentations at schools.



Figure 25: information sign at the K1 section



Figure 26: information sign at the K3 section

7 Removing the illegal building in beach section K1

The illegal building though abandoned, still remains on the beach.



Figure 27: abandoned building in beach section K1

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

Little progress has been made over the years towards removing the neutralised waste accumulated at beach section K4 next to the Soda chrome factory (Figure 28- Figure 30) In 2015 the Turkish Delegate informed the Standing Committee Meeting, that the company plans to neutralize all the chemical waste, which is 1.7 million tons, in 8 years and has started transferring the neutralized chemical waste to the permanent landfill. Further information on the progress is required and environmental rehabilitation efforts need to be intensified.



Figure 28: Google earth aerial photograph of the inert waste slopes in 2007



Figure 29: Google earth aerial photograph of the neutralised waste slopes in 2017



Figure 30: View of the neutralised waste slopes in 2017

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

Despite appearances, the wedding hall is active, and its artificial lighting during the night continues to be a problem for the nesting beach.



Figure 31: wedding hall at the K2 part of the beach



Figure 32: artificial light from the wedding hall

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

According to the 2015's Government report, analysis reports of waste water treatment are published on the website of Mersin municipality. (<http://www.meski.gov.tr/Kurumsal9.aspx>). However, no relevant file or URL was found at the Municipality's site.

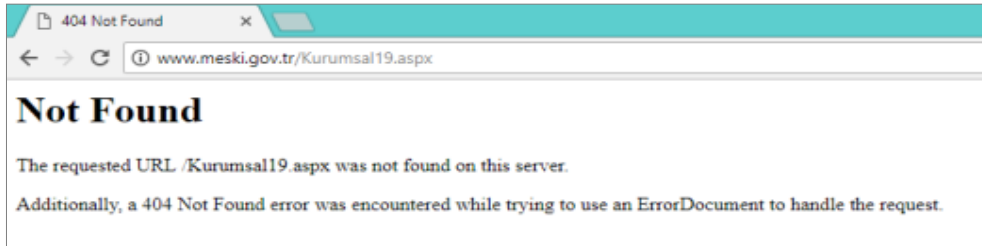


Figure 33: the <http://www.meski.gov.tr/Kurumsal9.aspx> url does not fuction

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

The summer house complex remains at the K1 section of the beach (Figure 34- Figure 36) and the beachfront apartments are illuminated at night.



Figure 34: summer house complex at the K1 section of the beach



Figure 35: summer house complex at the K1 section of the beach



Figure 36: summer house complex at the K1 section of the beach

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- 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

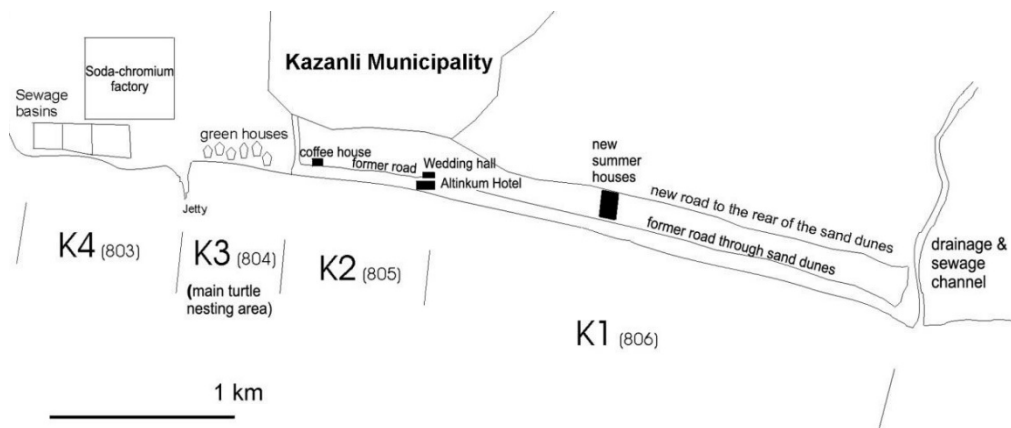
The following Recommendations of the Standing Committee are relevant to Kazanlı:

- 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 Kazanli 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 T-PVS reference (2008)	MEDASSET Update on Green Turtle (<i>Chelonia Mydas</i>) Conservation Monitoring in Kazanli, Turkey
T-PVS (2009) 7	Report of the 1 st 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 Kazanli, Turkey
T-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

MAPS



Drawing 1: Plan of Kazanlı nesting beach (Source: Kasparek et al., 2001)



Drawing 2: Location of Kazanlı, Turkey (Source: Kasparek et al., 2001)