

Strasbourg, 15 September 2003
[files14e_2003.doc]

T-PVS/Files (2003) 14

CONVENTION ON THE CONSERVATION OF EUROPEAN WILDLIFE
AND NATURAL HABITATS

Standing Committee
23rd meeting

Strasbourg, 1-4 December 2003

Document for information

**Conservation status of Green turtle (*Chelonia mydas*)
in the eastern Mediterranean:
Kazanli, Akyatan, Samandag (Turkey)**

Report by the NGO

*Document prepared by
MEDASSET (The Mediterranean Association to Save the Sea Turtles),
From information supplied by Dr Max Kasperek*

Marine Turtle Conservation in the Mediterranean

CONSERVATION STATUS OF GREEN TURTLE (*Chelonia mydas*) IN THE EASTERN MEDITERRANEAN: KAZANLI, AKYATAN, SAMANDAG (TURKEY)

Report to the 23rd Meeting of the Standing Committee of the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention)

MEDASSET

The Mediterranean Association to Save the Sea Turtles

Prepared by

Dr. Max Kasparek

INTRODUCTION.

The green turtle is globally endangered. In the Mediterranean Green turtles are critically endangered. A small distinct population separated from all other nesting populations survives there. It is estimated that 350 to 1750 clutches are laid per year, from which an annual nesting population of 115 to 580 females can be estimated: 99% of all recorded nesting occurs in Cyprus and Turkey, and 78% of all nests are concentrated at only five key nesting beaches, thus making the Mediterranean population **highly vulnerable** (Kasparek & al 2001). A case file was opened at the 20th meeting of the Standing Committee of the Bern Convention (27/11-1/12/2000), so as to encourage conservation action.

As part of long-term monitoring of the Mediterranean turtle nesting beaches, in summer 2003 MEDASSET in cooperation with Cukurova University (Institute for Landscape Architecture, EU-Life Project) carried out a survey of the three most important green turtle nesting beaches in Turkey, namely Kazanli, Akyatan and Samandag. The aim of the survey was to assess the human threats to the nesting beaches and to identify changes in the conservation status.

Past commercial exploitation for food exports (1930 – 1983) led to a massive decline in its breeding stocks which has been worsened recently by the adverse pressures from fishing (particularly trawling) by-catch, pollution, and loss or deterioration of its nesting beaches. Its breeding is now essentially confined to beaches in western and north-eastern Cyprus, and to Turkey's eastern Mediterranean coast.

Its shallow water feeding areas of sea grass beds and its over wintering localities remain equally at risk.

It is a long-lived animal requiring upward of 30 years for maturity and hence for population recruitment. Any hope of preventing the slide to extinction of this unique Mediterranean reptile must now depend on prompt conservation actions directed particularly towards its few remaining mature females (Now probably less than 500).

Concern for the conservation plight of the Mediterranean's marine turtles by the Bern Convention led in the early 80s to their initiation of an Expert Working Group on the problem. Their work and the 1988 WWF survey of nesting beaches on the Turkish coast lead to a series of formal Recommendations that covered the needs of the green turtle and its habitats. Soon after, the Barcelona Convention also addressed the problem and more recently arrived at a specific protocol.

But, despite all these efforts, meetings and fine words, **very little has changed regarding its Turkish habitats, apart from some serious instances of worsening situations.** Bern Recommendations Nos. 7 (87), 8 (87), 12 (88), 24 (91) & 66 (98) should have helped to restore populations had they only been better implemented, but in too many and current aspects they have remained unfulfilled.

KAZANLI (4.5 km.)

FOR DETAILED BACKGROUND INFORMATION, REFERENCE SHOULD BE MADE TO THE FOLLOWING RECENT DOCUMENTS:

- T-PVS (1999) 74 Report by the NGO: MEDASSET.
- T-PVS (2000) 56 Report by MEDASSET.
- T-PVS (2000) 73 Report by Turkish 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 by the Council of Europe (on-the-spot appraisal by M. Kasperek).
- T-PVS/Files (2002) 20 Report by the Secretariat report of the Bern Convention.
- T-PVS/Files (2002) 17 Report by Turkish Government.

Within the frame of a “green turtle file” opened in 2001, the Standing Committee of the Bern Convention has been focusing its attention on the situation on the Kazanli nesting beach, where the presence of a chrome factory and other developments may represent a risk to the long-term conservation of this nesting site. An on-the-spot appraisal on behalf of the Standing Committee was carried out in May 2002 by M. Kasperek, and the Committee subsequently adopted Recommendation No. 95 (2002) and decided in its meeting 2-5 December 2002 to keep the file open.

Since 2001 the chrome factory has made significant progress in reducing its environmental impact. New facilities for the industrial treatment of toxic liquids have been installed and the factory puts significant effort into acting in a more transparent way: The results of waste water monitoring are made public and are published in a real-time manner on a computerised system (screen with public access in Kazanli).

Still no serious attempts have been made to find a solution for the **1.5 million tons of hazardous waste** which has been produced by the chrome factory in the past and **which are deposited on the beach in front of the factory**. Apparently **no pre-feasibility study has yet been commissioned by the factory to identify options for long-term solutions**.

THE CHROME FACTORY HAS BEEN FUNDING SEA TURTLE MONITORING WORK AT THE KAZANLI BEACH IN 2003, CARRIED OUT BY HACETTEPE UNIVERSITY. NEARLY 200 NESTS WERE LAID ON BEACH SECTIONS K1-K3 DURING THE 2003 NESTING SEASON (ROUGH ESTIMATION/INTERPOLATION DONE BEFORE THE END OF THE SURVEY), THUS INDICATING THAT THE BEACH HAS NOT LOST ITS IMPORTANCE AND IS STILL THE SECOND MOST IMPORTANT NESTING GROUND FOR GREEN TURTLES IN THE MEDITERRANEAN.

It is interesting to note that the nesting survey was carried out in 2003, but no attempts were made to protect nests (dogs are important predators at Kazanli) or to clear debris from the nesting beach. Future work must be much more conservation-orientated rather than science-orientated.

Recommendation 95 (2002) lists fourteen points needing special action. The following table examines whether these Recommendations have been implemented since then. The table only briefly describes the Recommendation, for the full description; see Recommendation 95(2002).

Recommendations	Implemented			Remarks
	yes	partly	no	
1) Remove greenhouses in beach section K3.			no	According to the Mayor of Kazanli, no funds for compensation payments are available.
2) Remove taxi (dolmus) parking area.			no	Steps have been undertaken to prepare a new parking place.
3) Remove plastic debris.			no	
4) Screen lights.		partly		
5) Monitoring of chemical waste discharge.	yes			
6) Monitoring of beach erosion.	yes			
7) Promote public awareness.	yes			
8) Implement environmental plan.				No information.
9) Remove illegal building in K1.	yes			Demolition of the old shingle and gravel installation.
10) Remove hazardous waste.			no	No study prepared on potential options for action.
11) Relocate wedding hall.			no	
12) Construct sewage treatment plant for Kazanli.			no	Channels under construction, no funds set aside for sewage treatment.
13) Look for appropriate solutions for houses built legally on the beach.			no	People have started living in the houses, no light screening.
14) Reduce impact of agrochemicals.		partly		Some attempts towards bio-agriculture undertaken.

Some important achievements were thus reached in 2002/2003, in particular in respect to the control of toxic wastewater from the chrome factory. However, it is worrying that the (illegal) greenhouses in beach section K3 are still present, that the taxi (dolmus) station was not relocated away from the beach, and that no clean-up activities were organized for the beach. **These matters have a high priority on the one hand, and are relatively easy to solve on the other. The implementation of these particular Recommendations do not require heavy investment.**

AKYATAN (21.7 km.)

For detailed background information, reference should be made to the following recent documents:

- T-PVS (2000) 56 Report by MEDASSET.
- T-PVS (2000) 73 Report by Turkish Government.
- T-PVS (2001) 39 Report by the Secretariat of the Bern Convention.
- T-PVS (2001) 70 Report by the NGO: MEDASSET.

Akyatan is by far the most important green turtle nesting beach in the Mediterranean. Up to 735 nests have been counted at the beach, which means that **43% of the entire Mediterranean population nests there** (Kasperek et al. 2001). The beach is relatively remote, but nevertheless suffers from pollution and predation. Illegal tourism development may become another threat to the area in the future.

The survey in 2003 revealed that the situation remained more or less unchanged compared to previous years:

- The area is relatively well protected from direct human interference. There is only limited access to the area, and the local Forestry Mission controls visitors.
- There is still a very high predation rate of turtle nests by jackals. It was found that roughly two thirds of all nests are predated. Many nests seen during the 2003 survey were predated, apparently most of them by jackals. Some predation by stray dogs seems to occur, but these instances are rare compared to those caused by jackals. The jackal population seems to be at a relatively high level and rising, due to the fact that hunting is forbidden and effectively controlled both in the sand dunes and in the nearby areas (hunting reserve). **There were no attempts at nest protection in order to reduce the predation rate in 2003.**
- **The beach and the sea in front of the beach are heavily polluted with litter**, mainly plastic debris. This includes e.g. waste from hospitals (infusion bags, syringes), which is apparently dumped into the sea at Yumurtalik.
- There is some tourism development at the north-western end of the beach (holiday houses by local people), but this is outside the main nesting area and there were no new construction activities in 2003.
- The legal protection status is insufficient. The area is protected as a “hunting area” and a “Natural SIT area (1. Degree)”, and the nearby Akyatan lagoon has been designated a Ramsar Site.

For the future protection of the nesting beach, it is recommended:

- **To protect the nesting area as a “Biosphere Reserve”** for which the Cukurova University (Department for Landscape Architecture) in the frame of a EU-Life project (LIFETCY/99/TR-087) has carried out the basic studies and has made the necessary preparations. The proposed Biosphere Reserve would give the entire delta area an overall protection status and would help to draw international attention to this vast area that combines nearly all Mediterranean lowland habitats.
- To collect the plastic debris from the beach at least in yearly intervals outside the green turtle’s nesting and hatching period.
- To monitor the nesting activities of green turtles at Akyatan by annual surveys. A monitoring programme should be set up for local volunteers under the auspices of the Ministry of Forestry and Environment and the Cukurova University. Turtle conservation experts should provide training for the participants.
- To establish regular measures for protecting turtle nests from predation by mammals. The application of metal grids is seen as an appropriate measure that takes into account that the population of the jackal is also endangered on a Mediterranean level.

SAMANDAG (10.3 km.)

For detailed background information, reference should be made to the following recent documents:

- T-PVS (1999) 74 Report by the NGO: MEDASSET.
- T-PVS (2000) 56 Report by MEDASSET.
- T-PVS (2000) 73 Report by Turkish Government.
- T-PVS (2001) 39 Report by the Secretariat of the Bern Convention.

- T-PVS (2001) 70 Report by the NGO: MEDASSET.
- Addendum to T-PVS (2001) 70: MEDASSET.

Samandag is the fifth most important green turtle nesting beach in the Mediterranean. According to a study undertaken by Mustafa Kemal University in 2003, the total number of green turtle nests was estimated to be approx. 100, plus some 10-20 loggerhead turtle nests (interpolation of figures received before the end of the season). The numbers in 2003 are thus well within the range of previous years. The maximum number recorded previously was 113 nests. Many dead sea turtles – altogether approximately 24 – were washed onto the beach during the nesting season 2003. Most of them were immature. The main reason was reported to be interaction with fishing nets and fishermen.

- Extraction of sand from the nesting beach was not noted during the survey, but is still ongoing according to information received from local people, albeit at a lower level than in previous years.
- Pollution is still a serious problem. **The beach is heavily polluted** with plastic and other debris, and the inscriptions on various litter items indicate origins from practically all eastern Mediterranean countries! The Municipality of Samandag has hired several persons to clean the beach on a daily basis, and a large part of the beach is thus clear of the litter. However, **the beach sections that benefit from the clean-up activities are mostly those which are intensively used by humans, and which have a low turtle nesting density. Those beach sections where most of the turtles are nesting are not cleaned.**
- **The Municipality is continuing to discharge untreated sewage into the sand dunes close to the sea.** It is thought that this is a major source of pollution of the seawater, which is polluted in a way visible to the naked eye (greyish colour). A sewage treatment plant is being constructed, but it will apparently still take considerable time to get it operational.

Recommendation 65 (1998) lists four points that need special action. The following table examines whether these recommendations have been implemented since then. The table only briefly describes the recommendation, for the full description; see recommendation 66 (1998).

Recommendations	Implemented			Remarks
	yes	partly	no	
1) Protect the area as a natural SIT or give it any other appropriate equivalent protection.			no	
2) Reverse erosion caused by illegal sand extraction.			no	According to information received by local people, sand extraction of whatever sand is left is still taking place.
3) Regularly remove waste.		partly		Clean up of the beach only takes place in sections that are intensively used by humans. Those beach sections where most of the turtles nest are not cleaned.
4) Running awareness and education campaigns.		partly		Some activities started by University people, but still insufficient.

For the future protection of the nesting beach, it is further recommended:

- To give the area legal protection, in particular the beach sections to the north and to the south of the mouth of Asi (Orontes) River (Seyhhidir and Meydan beaches).
- To design and implement an awareness programme for fishermen in order to reduce sea turtle mortality.
- To stop discharging sewage into the sand dunes.

- To stop the illegal extraction of sand from the nesting beaches and to install a control system.
- To carry out clean-up activities on the entire beach, at least once before the start of the nesting season.

BIBLIOGRAPHY.

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.

T-PVS (99) 74: F. Demirayak, commissioned by MEDASSET: Specific Site, Status of the Green Turtle (*Chelonia mydas*) on the Turkish Mediterranean Coast, 26 pages.

T-PVS (2000) 56: MEDASSET: Green Turtle (*Chelonia mydas*) on the Turkish Coast: Kazanlı, Akyatan and Samandag, 13 pages.

T-PVS (2000) 73: Turkish Government: Protection of sea turtles (*Caretta caretta*, *Chelonia mydas*) in Turkey, 15 pages.

T-PVS (2001) 39: Secretariat of the Bern Convention: Specific Site, Green turtle *Chelonia mydas*, 9 pages.

T-PVS (2001) 70: MEDASSET: Specific site, Conservation of the Green turtle (*Chelonia mydas*) in Turkey, 18 pages.

ADDENDUM to T-PVS (2001) 70: MEDASSET: Conservation priorities for the Green turtle (*Chelonia mydas*) in Turkey: Samandag sandwinning in August 2001, 3 pages.

T-PVS/Files (2002) 2: On-the-spot Appraisal Undertaken for the Council of Europe (12th –15th May, 2002) by Max Kasperek: Conservation of the marine turtles in Kazanlı beach (Turkey), 6 pages.

T-PVS/Files (2002) 17: Turkish Government: Conservation of the marine turtles in Kazanlı beach (Turkey), 4 pages.

T-PVS/Files (2002) 20: Secretariat of the Bern Convention: Green turtle *Chelonia mydas* in Kazanlı (Turkey), 7 pages.

ENVIRONMENTAL SITUATION AND TECHNICAL REPORTS PRESENTED BY MEDASSET TO THE STANDING COMMITTEE TO THE CONVENTION ON THE CONSERVATION OF EUROPEAN WILDLIFE AND NATURAL HABITATS (BERN CONVENTION) AT THE COUNCIL OF EUROPE, PUBLISHED UNDER T-PVS REFERENCE:

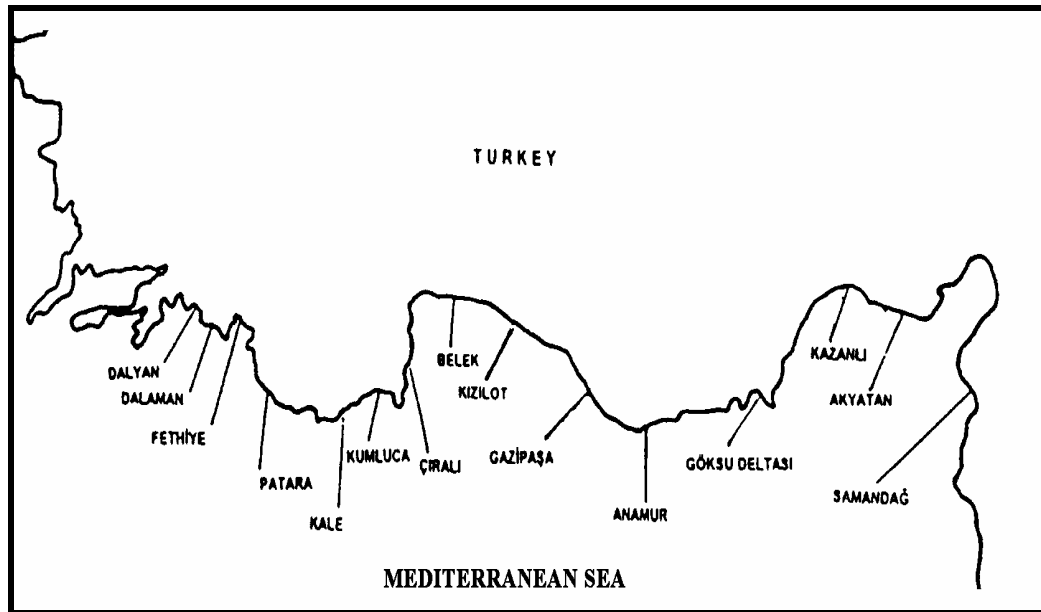
T-PVS (99) 74: F. Demirayak, commissioned by MEDASSET: Specific Site, Status of the Green Turtle *Chelonia mydas* on the Turkish Mediterranean Coast, 26 pages.

T-PVS (2000) 56: MEDASSET: Green Turtle (*Chelonia mydas*) on the Turkish Mediterranean Coast: Kazanlı, Akyatan and Samandag, 13 pages.

T-PVS(2001) 70: Commissioned by MEDASSET, prepared by K. Corbett: Conservation of the Green Turtle *Chelonia Mydas* in Turkey, 18 pages.

REPORTS PUBLISHED WITHOUT A T-PVS REFERENCE:

ADDENDUM to T-PVS (2001) 70, MEDASSET, information provided by Samandağ Çevre ve Turizm Derneği: Conservation Priorities for the Green Turtle (*Chelonia mydas*), in Turkey, Samandag Sandwinning in August 2001, 3 pages.

ADDENDUM 1.

The 17 major marine turtle nesting areas of Turkey as assessed by WWF/International in 1988.

ADDENDUM 2.

