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CONVENTION ON THE CONSERVATION OF EUROPEAN WILDLIFE
AND NATURAL HABITATS

Standing Committee

35th meeting
Strasbourg, 1-4 December 2015

File open

**Presumed degradation of nesting beaches in
Fethiye, Patara and Akgol (Turkey)**

**- REPORT OF THE ON-THE-SPOT APPRAISAL -
(28-30 July 2015)**

*Document prepared by
Mr Paolo Casale*

TERMS OF REFERENCE

PATARA

- Examine the biological situation of the loggerhead sea turtle in Patara nesting beach. The expert should take into account the possible impact of the summer house construction project within the Patara SPA, and of the revised land use and management plan (including the changes to the zoning that made construction within the 3rd Degree Archaeological protected area possible) on the turtles nesting activity;
- Assess the possible impacts of the developments plans, and of tourism and business infrastructures on the long-term survival of the species at the population level;
- Assess possible conservation problems linked to the management of the nesting beaches at Özlen beach, at Çayagzi beach and the Patara beach (signage, beach furniture management, beach litter, fishing nets);
- Examine the impact of the restoration measures or the protection measures eventually put in place, in light of relevant Standing Committee Recommendations;
- Discuss with relevant competent authorities at the national, regional and local level, and concerned NGOs and examine with concerned stakeholders possible solutions that may ensure the survival and nesting of marine turtles in the area.

FETHIYE

- Examine the biological situation of the loggerhead sea turtle in Fethiye nesting beach [located within the Fethiye-Göcek Special Environmental Protection Area (SPA)] taking into account the possible impact of real estate and tourism development on the turtles nesting activity and of their habitat;
- Assess the possible impacts of the developments plans, and of tourism and business infrastructures on the long-term survival of the species at the population level;
- Assess possible conservation problems linked to the management of the nesting beaches (beach furniture management, presence of fixed equipment, signage, information campaigns, light pollution, sport infrastructures, fishing activities, use of vehicles on the nesting beach);
- Examine the impact of the restoration measures or the protection measures eventually put in place, in light of other relevant Standing Committee Recommendations;
- Discuss with relevant competent authorities at the national, regional and local level, and concerned NGOs and examine with concerned stakeholders possible solutions that may ensure the survival and nesting of marine turtles in the area.

AKGÖL NESTING BEACH

- Assess the possible impacts of the possible construction of a shipyard/drydock on Akgöl nesting beach.

INTRODUCTION

The nesting sites of Patara and Fethiye/Agkol in the context of loggerhead sea turtles in the Mediterranean

The Mediterranean loggerhead (*Caretta caretta*) sea turtle population is considered as a distinct Regional Management Unit (Wallace et al. 2010). This population shows a subpopulation substructure (Clusa et al. 2013), with major nesting areas in Greece, Turkey, Libya and Cyprus. The average documented number of nests is over 7200 per year in the entire Mediterranean (Casale et al. 2010).

Patara and Fethiye are considered as “major nesting sites” for the Mediterranean loggerhead population (*Caretta caretta*) by Casale et al. (2010).

On the basis of my survey, I consider Fethiye and Agkol as belonging to the same nesting site, and I will here present two separate evaluations on (i) Patara and (ii) Fethiye/Agkol.

In my opinion, a successful management of these sites will have two important outputs: (i) a direct effect on the Mediterranean loggerhead population, and (ii) an indirect effect on other areas through a successful and exportable example of management.

The effects of current management cannot be simply assessed through past-present trends of nest counts, because current management will show its effects (i.e. number of new-borns entering the sea) only when these new-borns will be adults and will come back to the nesting site to lay their clutches. For the long maturation time of sea turtles (e.g., Casale et al. 2011) this may require 2 decades.

I. PATARA

Reasons of concern

Although the Patara nesting site is still in a relatively pristine condition, several potential threats have been identified and reported by MEDASSET, that I briefly summarize as follows:

- construction of 27 houses and up to 300 planned, located at 1.5 and 2 km from the nesting site according to the MEDASSET and Government reports respectively;
- inadequate management of the beach in terms of sea turtle conservation (e.g., lack of information given to beach users, beach litter);
- a new asphalted road, providing easy access to the beach;
- a new beach bar.

ON-THE-SPOT APPRAISAL TO PATARA

Summary of the meetings and visits on 28 July 2015

The delegation was composed by Mr Paolo Casale and Ms Ivana d’Alessandro

- meeting with representatives of Ministries, local authorities and Coast Guard
- meeting with representatives of NGOs and other stakeholders
- daytime visit of the south access to the beach
- daytime visit to the summer house village (already built and locations of future development)
- daytime visit to the mid-beach access to the beach (top of the dunes)
- daytime visit to 4 accesses in the northern part of the beach
- night-time visit of the south access to the beach
- night-time visit to the mid-beach access to the beach (top of the dunes)

Evaluation of the current and potential conservation status of the Patara turtle nesting site based on the on-the-spot appraisal

- Current status of the sea turtle nesting habitat

The nesting habitat (i.e. the beach area features that should allow nesting activity by adult females and incubation of eggs) appears in a very good condition. The nesting habitat was not permanently

modified and its capacity of host nesting activity and egg incubation is not yet irreparably compromised by the current anthropogenic threats.

This is based on observations obviously limited in time and techniques. Specific studies on nesting success, hatchling success, and spatio-temporal variations of these and other parameters are needed for a good assessment.

- ***Current status of anthropogenic threats affecting sea turtle reproductive activity (excluding predation by animals)***

The current anthropogenic threats are still spatially limited, affecting a low proportion of the whole nesting site that appears mostly in pristine conditions (Fig. 1). Where present, anthropogenic threats are still at a medium/low level. In my opinion they cannot significantly affect the overall nesting activity or the hatchling recruitment to the sea.

- **objects affecting nesting activity.** In the southernmost access to the beach a facility for tourists has been set up (Fig. 2). In a tract of the beach, objects (chairs, umbrellas) are placed at high numbers and density (Fig. 3) in the part of the beach suitable for turtle nesting, as evident from the nest locations (Fig. 4). If these objects were left in the same position during the night, they would represent obstacles to nesting females attempting to nest. The relatively limited length of the beach occupied by these objects at present time (if the survey day was representative in this respect), limits the overall impact on nesting.
- **beach litter.** During my survey I did not see an amount of rubbish that can affect sea turtle nesting. The highest level is probably near the Eşen river, which transports garbage from distant inland areas to the sea and the nearby beach. Beach users are source of a certain amount of garbage (Fig. 5-6).
- **beach bar at Çayağzı beach.** At the time of the survey, the beach bar was abandoned and its structure damaged by natural factors (Fig. 7-8). In this condition it does not affect turtle nesting. However, the structure needs to be removed before its pieces disperse on the beach.
- **new summer houses.** In my opinion, these houses (Fig. 9-10) do not have a direct impact on sea turtle reproductive activity. Whatever their real distance to the nesting site (1.5 km and 2 km from to the reports or 1.6-1.8 km from my measurement through Google Earth), at that distance (Fig. 11) the power of the illumination they produce (assuming normal illumination) is so much reduced that it would unlikely represent a significant light pollution on the nesting site. The elevation of these houses (Fig. 11) further decreases the effect of light pollution, because sea turtle hatchlings are more sensitive to brightness close to the horizon (Witherington and Martin 2000). However, the light of these houses can be easily sheltered in order to illuminate what needed, without dispersing light towards the beach. The houses may also have indirect effects, and these are treated in another section (“potential future problems”).
- **light pollution.** Light pollution was not significant during the survey. There were a few lights at the southern access and at the camping in the northern boundary of the beach (on the northern side of the Eşen river) and they can be further reduced/sheltered.
- **fishing.** Fishing nets are used close to the beach (Fig. 12, 13), and they can capture both nesting females and hatchlings.

- ***Predation***

High levels of predation on nests by foxes are reported by the Government report and for this reason specific measures are undertaken like nest protection by cages (Fig. 4). This predation should not be simply considered as a natural factor. The local population of predators like canids are known to be favoured by human presence and associated food resources like rubbish. A resource like sea turtle eggs, which is limited in time, cannot sustain a canid population over the year and would not cause its increase. On the other hand, sea turtle nests can be severely impacted by a canid population increased thanks to human presence and developments. Therefore, predation should be conservatively considered and addressed as an anthropogenic threat.

- ***Current management***

The current management seems to be not adequate:

- information of tourists is lower than desirable, including the lack of notice boards at all entrances;
- information, awareness and education of the local community about the value and conservation needs of their natural heritage is insufficient;
- lack of barriers to prevent access to the beach by night by vehicles;
- lack of control (beach furniture management, vehicle access);
- lack of a long-term sea turtle research/conservation team establishing long-term scientific knowledge and linkage with local community and stakeholders. This is a key aspect for successful sea turtle conservation programs at nesting sites.

- ***Potential future problems***

The increasing use of the beach by humans, also as a consequence of urban development in the area (eg, the 415 planned summer houses; Fig. 14), represents an important potential threat to sea turtle reproduction in the area. The current management - considered as not adequate in the current circumstances - will not be able to prevent high impact on sea turtle reproduction in the future.

Conclusions

- The Patara sea turtle nesting site is still in an almost pristine condition regarding the habitat and the human use of the beach. It allows shifting of nesting activity along the sea thanks to the long coastal tract. It also allows shifting of the beach and nesting activity inland in case of sea level rise under future climate change scenarios. It is still suitable for sea turtle reproduction under natural conditions. The only exception is the high predation level that is being addressed through caging all nests (ideally).
- This anti-predation caging makes sea turtle reproduction as dependent on continuous and intensive activity of nest protection, and this represents a vulnerability factor.
- There are first clues of potential problems under future conditions. The facilities for tourists in the southern access, including beach furniture, may disturb nesting activity if not adequately managed during the night. The tract of the coast used by these facilities might rapidly expand and similar facilities might be replicated at other beach accesses. Pressure for such developments are expected in the future due to the 415 new houses and to more visitors from other areas attracted by the natural beauty of the site.
- Current management and enforcement are not adequate, as well as the short term of research/conservation teams.

Recommendations

- Set up regulation which (i) prohibits further development on the beach (including buildings, structures, roads), (ii) regulates the extent and use of furniture on the beach, that should be removed by night (chairs and beds at least), (iii) prohibit access of vehicles, (iv) prohibits illumination of the beach; (v) prohibits fishing in front of the beach during the nesting and hatching periods.
- Set up adequate enforcement.
- Place barriers at the accesses to prevent vehicles from entering the beach.
- Improve information to tourists about sea turtle nesting and correct behaviour / use of the beach
- Improve information and education of the local community about sea turtle nesting, correct behaviour / use of the beach, and intrinsic value of nature and involve them in the protection and conservation of the nesting beach.
- Address the problem of predation as a consequence of human presence and as such possibly increasing in the future. Predator population control programs should be considered.
- All nests in areas with high human presence during the day should be fenced to protect them from walking persons and from furniture.
- Set up long-term research and conservation programs conducted by the same team. This team should have adequate man power to monitor the entire beach and protect all nests if necessary.

II. FETHIYE/AGKOL

Reasons of concern

Several threats/problems have been identified and reported by MEDASSET, that I briefly summarize as follows:

- construction of buildings/hotels; permanent structures on the beach (eg. pavillons);
- furniture (chairs, beds, umbrellas) and semi-permanent structures (wooden pathways, carpets) not removed by night;
- light pollution;
- vehicles accessing the beach;
- shower water on the beach;
- shipyard planned in Akgol;
- litter;
- plantation and sand extraction;
- motorised water sports and fishing.

ON-THE-SPOT APPRAISAL TO FETHIYE/AGKOL

Summary of the meetings and visits on 29-30 July 2015

The delegation was composed by Mr Paolo Casale and Ms Ivana d'Alessandro.

- Meeting with representatives of Ministries, local authorities and Coast Guard
- meeting with representatives of NGOs and other stakeholders
- daytime visit to several accesses of the beach and walking surveys along the beach
- night-time visit of most of the same tracts visited during the day

Evaluation of the current and potential conservation status of the Fethiye turtle nesting site based on the on-the-spot appraisal

- *Current status of the nesting habitat and related threats*

The nesting habitat (i.e. the beach area features that should allow nesting activity by adult females and incubation of eggs) appears to be degraded from low to high levels depending on the coastal tract. The worst tract is the southern one (Çalış) where a long promenade (with a concrete wall) has permanently limited the width of the beach, which in some tracts is left rather narrow (Fig. 15-16). This limits the choice of the nesting female in terms of nest location and related parameters (eg temperature) and makes nests more vulnerable to be inundated during storms. Moreover, this does not allow the sandy beach to shift inland in case of sea level rise under future climate change scenarios, making this part of the nesting beach very vulnerable to climate change. In other tracts the beach is wider and there is still good potential habitat. However, sand extraction has been reported and represents an extremely important threat to the habitat, especially considering that several tracts of the coast are made of pebbles and are not suitable for turtle nesting. The sandy tracts left, especially in wide beaches, are therefore extremely valuable. The ongoing development in terms of buildings represents a potential threat to the habitat if this occurs on or close to the beach.

- *Current status of anthropogenic threats affecting sea turtle reproductive activity*

The current level of anthropogenic threats occurring on the beach is very high, with such an impact to be comparable to a habitat degradation. In my opinion, in most of the Çalış tract the activity of nesting females is greatly affected by reduced available area where to nest and by human presence at night. For the intense light pollution and human presence, the natural hatchling recruitment to the sea may be severely affected, and it is probably the main reason why nests must be caged, rather than for predation. I will treat below only the main problems.

- **objects affecting nesting activity.** In most of the Çalış tract, umbrellas and sunbeds (left also during the night, as we could see during the visit) are placed near the shore and represent a barrier between nesting females emerging from the sea and the suitable nesting area (Fig. 15-16). In other tracts with a pebble zone near the shore, beach furniture is placed farer from the sea on the

sandy zone (Fig. 17), making it unavailable for turtles, which would nest there, if possible (Fig. 18-19). In other tracts most of the beach is occupied (Fig. 20). Permanent or semi-permanent structures occupy additional areas (Figs 21-22). In Karatas, the furniture of the Barut TUI Sensatori Resort (huge recent hotel) occupies the back part of the beach. However, the two parts of the beach with different colour and the sea turtle nests aligned along these two parts indicate that permanent obstacles (such as carpets or wooden pathways) were in place until before our survey (Fig. 23, 24). In Yanıklar the Hotel Majesty Club furniture occupies part of the beach as well (Fig. 25, 26).

In conclusion, the use of anthropogenic material on the beach (chairs, beds, umbrellas, wooden pathways, carpets, platforms etc.) is so extensive that a significant part of the sandy beach is unavailable for turtle nesting. Wooden pathways and carpets are particularly impacting in this respect. In several cases there were clues about a recent removal of such objects from large parts of the beaches, probably because of our survey. It is uncertain if this removal will be permanent. Such an extensive use of the beach has the same impact of habitat degradation, i.e. the reduction of the total available nesting habitat.

- **light pollution** is intensive in several tracts, especially in Çalış. The entire promenade, and as a consequence the beach just a few meters apart, is completely illuminated by several types of lights (street lamps, shops, bars, restaurants) (Fig. 27). From where nests are, the promenade is extremely bright and the beach is well illuminated (Fig. 28-29). Other lights (streets lamps, bar, discos on the beach) are along the Çalış coast west to the promenade (Figs. 30-34). Altogether, these many and different light sources create an artificial bright horizon that in my opinion represents a high level of light pollution which can disorient the hatchlings (Fig. 35). A specific study on hatchling orientation could assess this.

Other parts of the nesting beach are less impacted by light pollution than Çalış. Some illumination does occur where the resorts are. For instance, the lights of the huge hotel structure in Karatas (Barut TUI Sensatori Resort) reach the beach through the trees (Fig. 36). However, additional lights on the beach might have been switched off during our survey.

- **human presence on the beach by night.** The nesting beach in the Çalış zone is highly frequented by people during the night. Local people and tourists seem to spend significant time gathering in high numbers on the nesting beach, sometimes with their pets along. This represents a very high level of human presence on the beach and a likely source of disturbance to nesting females. It is possible that this causes displacement of nesting attempts to other tracts or to a later time in the night, when and if the human presence decrease. This could be assessed by a specific study.
- **vehicles.** At the time of the survey, vehicles in Çalış area could not enter the beach because of ditches dug along the coastal road (Fig. 37). It is questionable if such a measure can really be effective in the long term.
- **boat traffic.** The high number of tourists in the area induces business companies, often the same managing resorts or other beach structures, to offer recreational motorised water activities, increasing boat traffic. A time-limited survey is not adequate to assess the level of boat traffic and its impact, however the impact of boat traffic in a sea turtle breeding area is potentially high and this potential threat requires specific investigation.

- ***Current management***

The current management seems to be not adequate. Some measures to limit the anthropogenic impact are clearly in place (e.g. some notice boards, some light shading, recent ditches to prevent vehicle access, protection of individual nests with cages). However, the bad status of the nesting beach is so obvious that the only possible conclusion is that sea turtle conservation was not considered as a priority by the responsible administrations. This is even more striking in the light of the previous reports and recommendations about sea turtle conservation in the area. From the meetings a complex

situation emerged regarding different responsible bodies for different coastal tracts. However, this cannot be considered a real justification for the current status, if sea turtle conservation is considered as a national priority. The main specific management problems are:

- little or no management of light pollution, with an overall level inappropriate for a sea turtle nesting beach;
- allowed permanent structures that reduce the available nesting habitat;
- little or no management of semi-permanent or movable structures acting as permanent structures and reducing the available nesting habitat;
- lack of permanent barriers to prevent access to the beach by night by vehicles;
- lack of management of human presence on the nesting beach by night;
- information of tourists is lower than desirable;
- lack of a long-term sea turtle research/conservation team establishing long-term scientific knowledge and linkage with local community and stakeholders. This is a key aspects for successful sea turtle conservation programs at nesting sites.

- *Potential future problems*

On the basis of information given at the meetings, the planned construction of a shipyard/drydock on Akgöl nesting beach has been stopped. However, it is not clear if this decision is temporary or permanent. This shipyard/drydock would be extremely negative for sea turtles, for the following reasons:

- the construction phase will greatly impact all the area;
- the shipyard/drydock and its construction will reduce the available nesting habitat;
- the human presence and other possible structures (bar, restaurants, etc.) will represent a high level of habitat degradation and disturbance to nesting activity;
- the associated maritime traffic will increase the anthropogenic mortality of nesting females in the internesting or approaching area;
- Akgöl beach hosts a relatively high number of nests of the Fethiye nesting complex;
- in comparison to other tracts, it is still in relatively good conditions (Figs. 38-40). Therefore, it may be a refuge/buffer area to which nesting activity could shift in the future from more disturbed coastal tracts of the Fethiye nesting complex.

Conclusions

- The Fethiye sea turtle nesting site is in highly degraded conditions due to poorly controlled development and lack of adequate management. The Çalış tract is particularly affected by anthropogenic factors which are problematic for sea turtle reproduction. (i) Nesting activity by adult females is very likely affected by the high level of human presence by night and by the reduced available area of sandy beach, resulting in a possible different nest distribution and incubation conditions. (ii) Successful incubation would probably not be possible without cages protecting them from being trampled on and shadowed by furniture. (iii) Successful recruitment of hatchlings to the sea would probably not be possible without cages and conservation teams (mostly made up of volunteering people) preventing them from crawling towards the artificial lights, and protecting them from being trampled on, and helping them to reach the sea. Some of these conditions occur also in other zones, though to a lesser extent. Therefore, sea turtle reproduction in the Fethiye nesting site is extremely human-dependent, and this represents a vulnerable factor and a failure of proper conservation management. This is far from a desirable status for a sea turtle nesting site, which should allow the reproductive process (nesting, incubation, sea finding) to be successful under natural conditions, without human assistance to counterbalance human impacts.
- The main threats in the area are: permanent habitat degradation and reduction (walls and roads limiting beach width and possibility of inland shifting; sand extraction; planting vegetation); habitat unavailability (structures, furniture); disturbance (human presence by night); light pollution; maritime traffic; plans for a shipyard/drydock. Recommendations given by past assessments/reports do not seem to have been taken into account. Although valuable, the few

specific cases of management targeting localized impact factors obviously neither did solve the problems highlighted in the past nor prevented a further degradation up to the current level of impact.

- Both natural features and anthropogenic threats are not homogeneous along the whole nesting site. Sandy and pebble tracts (respectively suitable and less/not suitable for turtle nesting) alternate along the coast. Human use of the beach is more intensive in the south-eastern part (Çalış) and in general is higher on sandy tracts.
- Current management and enforcement are not adequate, as well as the short term of research/conservation teams.

Recommendations

- Stop any further development of permanent structures (buildings, roads, shipyard, etc.) along the entire coast of the nesting site complex, in order not to reduce further the nesting habitat.
- Stop sand extraction.
- Remove planted vegetation (e.g. acacia) and restore sandy beach.
- Map the coast in order to identify pebble zones (or zones less suitable for turtles) and sand zones (or zones more suitable for turtles) in the two dimensions, overlap this with the current nest distribution and identify the current and potential most suitable zones for sea turtle nesting. Set a max % limit of sandy tracts where to allow touristic structures on the beach and define (A) coastal tracts where beach furniture (umbrellas and beds) is allowed (zones less suitable for turtles + % sandy tracts as defined above) and (B) coastal tracts where beach furniture is not allowed.
- Consider all Akgöl beach as a tract type B.
- In tracts type A: (i) restrict furniture (umbrellas and beds) to a zone closer to the sea and leave the back zone free of objects; (ii) set min distance between two umbrellas, (iii) remove beds during the night to allow turtles to pass through and to nest in the back zone, (iv) limit wooden pathways to special needs and only if perpendicular to the shore, (v) prohibit carpets.
- In tracts type B: (i) prohibit any business and related furniture, allow people to frequent the beach during the day bringing their own umbrellas and beds, (ii) prohibit any object during the night
- Prohibit access during the night.
- Remove any structure from sand zones in areas with relatively narrow beach width, especially in the southern part.
- Reduce light pollution to a minimum: (i) remove all lights not strictly necessary, (ii) reduce the number of lights allowed for each business company, (iii) all lights considered as strictly necessary should be reduced in power and (iv) be red or orange-yellow, (v) all lights should be shaded in the direction of the beach.
- Further reduce lights after a certain time in the night, for not less than 50% of the dark time.
- Build permanent barriers on the roads to prevent vehicles to access the beach.
- Regulate maritime traffic during nesting/hatching season: (i) no motorized traffic near the coast, (ii) corridors from the beach to open waters.
- Set up long-term research and conservation programs conducted by the same team. This team should have adequate man power to monitor the entire beach and protect all nest if necessary. The team should also assess across the years and with the same comparable methods: (i) the disorienting effect of photo-pollution on hatchlings, (ii) disturbance of nesting females, and (iii) predation of nests (or attempts).
- Continue to protect all nests with cages, until the different conditions obtained through the other measures above will allow again a more natural process.
- Set up adequate regulation and enforcement for the measures above, including regular control (both day and night-time) of the entire coast.
- Improve information to tourists about sea turtle nesting and correct behaviour / use of the beach. This should include awareness campaigns to the hosts of the big resorts, in collaboration with the owners and managers.

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Fig. 1. Patara. View of the southern part of the beach.



Fig. 2. Patara. Southern access.



Fig. 3. Patara. Southern access

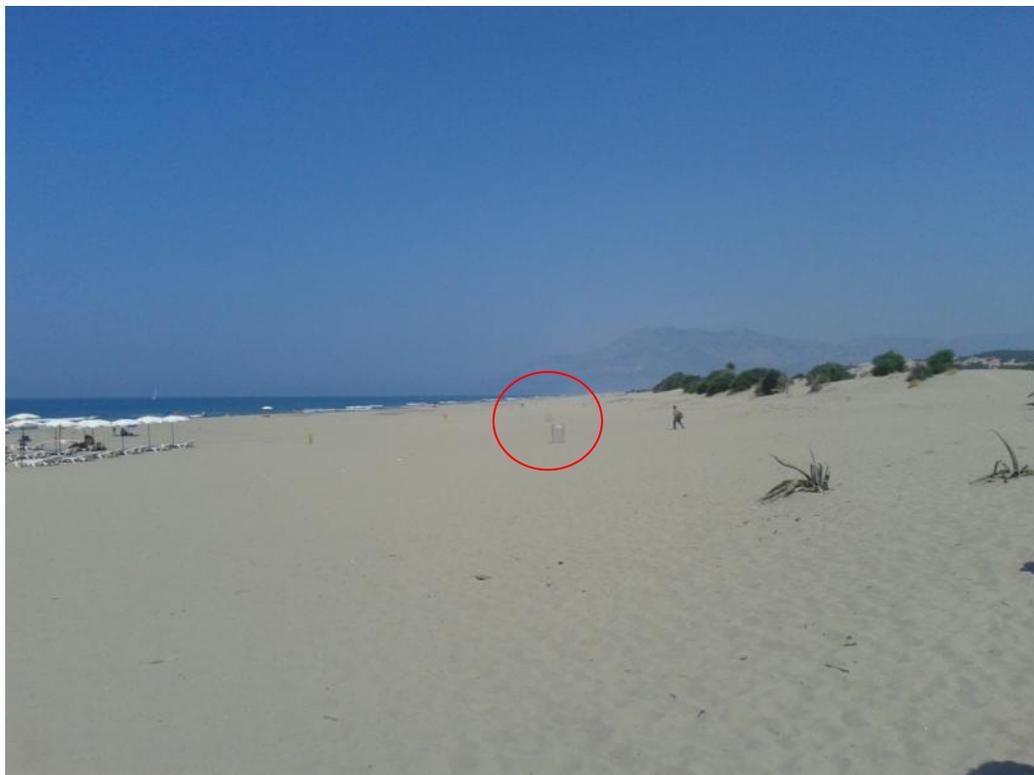


Fig. 4. Patara. Southern access. The red circle shows protection cages on 2 sea turtle nests



Fig. 5. Patara. Top of the dune. Garbage



Fig. 6. Patara. Garbage and umbrellas



Fig. 7. Patara. Beach bar



Fig. 8. Patara. Beach bar



Fig. 9. Patara. Summer houses



Fig. 10. Patara. Summer houses



Fig. 11. Patara. Summer houses. Distance to the sea and elevation



Fig. 12. Patara. Fishing net



Fig. 13. Patara. Fishers towing a fishing net



Fig. 14. Patara. One of the areas where new houses are planned (for a total of 300)



Fig. 15. Fethiye. Narrow beach limited by the promenade. Obstacles on the beach



Fig. 16. Fethiye. Narrow beach limited by the promenade. Obstacles on the beach



Fig. 17. Fethiye. Umbrellas on the sandy zone



Fig. 18. Fethiye. In tracts with pebbles, turtles nest in the sandy zone, if available



Fig. 19. Fethiye



Fig. 20. Fethiye



Fig. 21. Fethiye



Fig. 22. Fethiye



Fig. 23. Fethiye. Barut TUI Sensatori Resort. Different sand colour and nests aligned along the boundary indicate a permanent obstacle recently removed



Fig. 24. Fethiye. Barut TUI Sensatori Resort



Fig. 25. Fethiye. Hotel Majesty Club



Fig. 26. Fethiye. Hotel Majesty Club



Fig. 27. Fethiye. Çaltış. Promenade along the nesting beach



Fig. 28. Fethiye. Çalış. The promenade viewed from the nest area



Fig. 29. Fethiye. Çalış. The promenade viewed from the nest area



Fig. 30. Fethiye. Çalış. Street lamps and other lights as viewed from the nest area



Fig. 31. Fethiye. Çalış. Bars viewed from the nest area



Fig. 32. Fethiye. Çalış. Bars viewed from the nest area



Fig. 33. Fethiye. Çalış. Bars viewed from the nest area



Fig. 34. Fethiye. Çalıř. View from the nest area



Fig. 35. Fethiye. Çalıř. The artificial bright horizon viewed from the nest area



Fig. 36. Fethiye. Karatas. The Barut TUI Sensatori Resort viewed from the nest area



Fig. 37. Fethiye. Çaltış. Ditch dug along the coastal road to prevent vehicles to access the beach



Fig. 38. Fethiye. Akgöl nesting beach



Fig. 39. Fethiye. Akgöl nesting beach. Nests



Fig. 40. Fethiye. Akgöl nesting beach. Nests

Annex



**ON-THE-SPOT APPRAISAL
TO PATARA AND FETHIYE SPAS (TURKEY)**

28-30 July 2015

PROGRAMME

VISIT OF:

- Mr Paolo Casale, independent expert
- Ms Ivana d'Alessandro, Secretary of the Bern Convention
- MEDASSET (Observer/complainant), Ms. Liza Boura
- WWF-Turkey (Observer), Ms. Ayse Oruc
- IUCN (Observer), Dr. Oguz Turkozan and Dr. Yakup Kaska (MTRGs)

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MONDAY 27 JULY 2015

Arrival at Patara (via Dalaman), Overnight in Patara. Hotel: Dardanos Hotel
<http://www.pataradardanoshotel.com/uk/Pag-01.html>

TUESDAY 28 JULY 2015

09H00 – 11H00 – PATARA BEACH KIOSK

1. Meeting with officials (national and local authorities)

- Ministry of Environment and Urbanisation, Antalya Provincial Directorate
- Ministry of Environment and Urbanisation, General Directorate for Protection of Natural Assets
- Ministry of Environment and Urbanisation, Muğla Provincial Directorate
- Ministry of Water Affairs and Forestry, Antalya Provincial Directorate
- Ministry of Water Affairs and Forestry, Muğla Provincial Directorate
- Ministry of Water Affairs and Forestry, General Directorate of Nature Protection and National Parks
- Ministry of Culture and Tourism, Antalya Provincial Directorate
- Related municipalities
- Coast Guard command

11H00 – 13H30 – VISIT OF SOUTH PATARA BEACH

Attending: Bern Convention, independent expert, complainant (MEDASSET), observers (IUCN, WWF-Turkey)

By car with stops and assessment of: Patara main beach, the vicinity of the summer house village, top of the dune in correspondence to the mid-beach entrance, and beach entrance via Esen River

13H30 – 14H30 - LUNCH IN GELEMIS, PATAROS HOTEL

14H30 – 16H00 – PATAROS HOTEL, GELEMIS

1. Meeting with representatives of the NGOs and other stakeholders (participants to be confirmed)

- Dr. Ali Fuat Canbolat and Kerem Yekta Atatunç, Hacettepe University
- Dr. Yakup Kaska (IUCN MTSG – Marine Turtle Specialist Group member), Pamukkale University / DEKAMER
- Dr. Oguz Turkozan (IUCN MTSG), Adnan Menderes University
- Dr. Kurtuluş Olgun, senior biologist Emin Bozkurt, biologists Mehmet Tural, Yusuf Geroğlu and Ümit Gürkan Çakmak, Adnan Menderes University
- Dr. Munise Ozan*, Ms. Nerimin Bayçin, Mr. David McDonald Crann, Kaş Tourism and Promotion Association
- Ms. Ayse Oruc, WWF Turkey, IUCN MTSG member
- Dr. Pamir Yilmaz*, conservationist
- Dr. Mehmet Tuncer* and Ms. Fahriye Yavaşoğlu, Gazi University, Faculty of Architecture, Urban and Regional Department.

**speech*

16H30 – 19H00 - VISIT OF NORTH PATARA BEACH

Attending: Bern Convention, independent expert, complainant (MEDASSET), observers (IUCN, WWF-Turkey)

By car with stops and assessment of North beach entrance via Esen river and Ozden river

20H00 – 21H30 -DINNER

21H30-24H00- NIGHT ASSESSMENT

Attending: Bern Convention, independent expert, complainant (MEDASSET), observers (IUCN, WWF-Turkey)

By car, visit of the main beach entrance and the mid-beach entrance at top of the dune (no other beach entrances were visited in south and north beach due to time limitations)

WEDNESDAY 29 JULY 2015**10H00 - DEPARTURE FOR FETHIYE****11H30 – 14H15 – CALIS DER’S PREMISES****2. Meeting with officials (national and local authorities)**

- Ministry of Environment and Urbanisation, Muğla Provincial Directorate
- Ministry of Environment and Urbanisation, General Directorate for Protection of Natural Assets
- Ministry of Water Affairs and Forestry, Muğla Provincial Directorate
- Ministry of Water Affairs and Forestry, General Directorate of Nature Protection and National Parks
- Ministry of Transportation, Maritime Affairs and Communications, Shipyards and Coastal Structures
- Local authorities from Yaniklar, Ciftilik, Calis, Fethiye
- Coast Guard command

14H15 – 14H30 – LUNCH**14H30 – 16H30 - YACHT BOUTIQUE HOTEL, FETHIYE TOWN****3. Meeting with representatives of the NGOs and other stakeholders (participants to be confirmed)**

- Dr. Ali Fuat Canbolat and Kerem Yekta Atatunç, Hacettepe University
 - Dr. Yakup Kaska (IUCN MTSG) and Ms. Cisem Sezgin, Pamukkale University/ DEKAMER
 - Dr. Oguz Turkozan (IUCN MTSG), Adnan Menderes University
 - Members of the project “Monitoring & Conservation Project for Population of Sea Turtles & Soft-shelled Nile Turtles in Beaches of Fethiye-Göcek SEPA”: Dr. Sedat Yerli*, Dr. Fatih Mangit, Mr Mustafa Korkmaz and Mr Uğur Sü of Hacettepe University; Ms Begüm İçsen and Ms. Cansın Güreşcioğlu, Association for the Conservation of Nature (TTKD)
 - Marie Lambropoulos*, University of Vienna, on behalf of Dr. Michael Stachowitsch (The University has a students’ programme each year since 1993 and participates and cooperates with the Turkish research teams in sea turtle research and protection)
 - Ms. Bahar Edik Kayhan*, Karaot Dayanisma local civil society group representative
 - Mr. Sergender Sezer, TEMA Foundation local representative
 - Mr. Mete Ay*, Çalış Plajı İşletmesi Temmuz ÇALIŞ-DER
 - Representative of Fethiye Chamber of Shipping*
- * *speech*

16H30 – 19H00 - VISIT OF FETHIYE BEACHES

Attending: Bern Convention, independent expert, complainant (MEDASSET), observers (IUCN, WWF-Turkey)

By car, with stops and assessment of:

- Çalış & Çiftlik

20H00 – 21H30 - DINNER

21H00 – 1H00 AM - NIGHT ASSESSMENT

Attending: Bern Convention, independent expert, complainant (MEDASSET), observers (IUCN, WWF-Turkey)

By car, with stops and assessment of Çalış, Karatas (incl. “small beach”), Yanıklar. Akgöl was not visited but observed from Yanıklar

THURSDAY 30 JULY 2015

10H30 – 13H30 - VISIT OF FETHIYE BEACHES

Attending: Bern Convention, independent expert, complainant (MEDASSET), observers (IUCN, WWF-Turkey)

By car, with stops and assessment of Karatas (incl. “small beach”), Yanıklar & Akgöl (on foot)

13H30 – 15H00 - LUNCH

15H00 – 17H00 – INTERNAL DEBRIEFING (SECRETARIAT – EXPERT) AND DEPARTURE TO DALAMAN – OVERNIGHT IN DALAMAN

FRIDAY 31 JULY 2015

Departure of experts