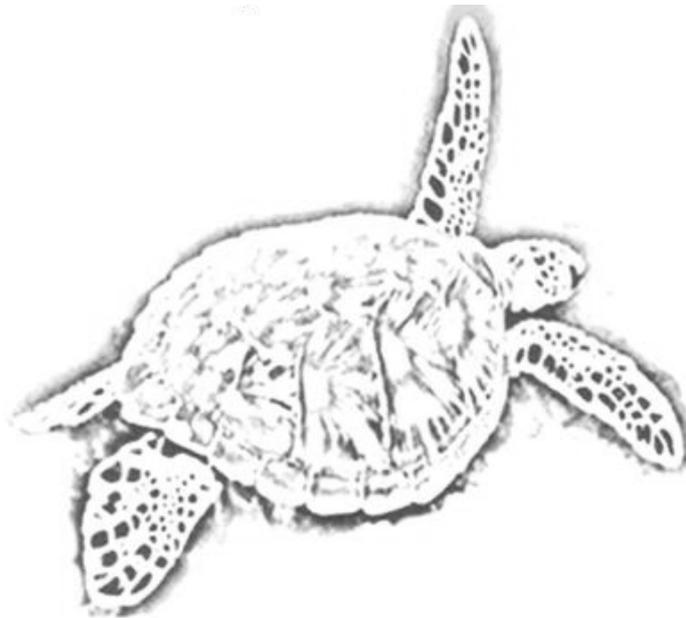


# **PROCEEDINGS OF THE SECOND MEDITERRANEAN CONFERENCE ON MARINE TURTLES**

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**Editors:  
Andreas Demetropoulos  
Oguz Turkozan**



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**THE MEDITERRANEAN SEA: A WORLD EXAMPLE OF REGIONAL COOPERATION IN SEA TURTLE RESEARCH AND CONSERVATION EFFORTS**

**Dimitris MARGARITOULIS**

Regional Vice-Chair for Mediterranean, IUCN/SSC's Marine Turtle Specialist Group, c/o ARCHELON, P.O.Box 51154, GR-14510 Kifissia, Greece

The Mediterranean Sea covers an area of about 2.5 million km<sup>2</sup> with a coastline of approximately 46,000 km bordering three continents, i.e. Africa, Asia and Europe. The communications of the Mediterranean Sea to other seas are very restricted. At Gibraltar there is a very narrow strait across which lies a relatively shallow sill. As the Mediterranean Sea has a negative hydrological balance, with losses through evaporation exceeding the input of water through runoff and precipitation, a permanent incoming surface current, through the Gibraltar Strait, is created. A weaker subsurface counter-current spills saltier Mediterranean water into the Atlantic.

Presently there are 21 states bordering Mediterranean and more than 50 million people living along its coasts, exhibiting a multitude of cultures, languages and religions. The wider area, behind the coasts, supports about 400 million people. Although the Mediterranean Sea is not considered very productive due to the lack of currents and nutrients it is heavily fished and runs severe risks of pollution and contamination by the many cities and industries on its coasts. Further, around 150 million tourists visit Mediterranean each summer causing a serious pressure.

Three circumglobal species of marine turtles (*Caretta caretta*, *Chelonia mydas*, *Dermochelys coriacea*) are regularly encountered in the Mediterranean; two of them (*Caretta caretta* and *Chelonia mydas*) have evolved local populations, which are genetically distinct from their conspecific non-Mediterranean stocks. Further, a substantial contingent of loggerheads from the western Atlantic exploits the Mediterranean as a foraging area. Past exploitation, continuing restriction and degradation of nesting areas, and substantial incidental catch in fisheries are the main causes of concern to the sea turtles' abundance in the Mediterranean.

Although sea turtle research and conservation efforts have started relatively late, in the last few years they have gained a significant momentum. The first research and monitoring activities (Demetropoulos and Hadjichristophorou 1982, Geldiay et al. 1982, Margaritoulis 1982) were rather localized and remained mostly within national boundaries. An exception is Roberto Argano's work in the late 70s, when he visited several fishing ports in the western Mediterranean and questioned fishermen, providing a first insight on the great numbers of turtles caught in fishing gear (Argano and Baldari 1983).

However, some long-term projects, despite their seemingly localized nature, started to produce results affecting a great part of the Mediterranean. This was effected through flipper tagging and subsequent long-distance tag recoveries accumulated little by little over the years (Margaritoulis 1988, Argano et al. 1992, Margaritoulis et al. 2003, Lazar et al. 2004). The wide dispersion of tagged turtles in the Mediterranean manifested the international character of sea turtle research and conservation. For example, the discovery that female loggerheads nesting in Zakynthos and Kyparissia Bay forage in the Gulf of Gabes and in the northern Adriatic, showed that the survival of marine turtles cannot be effected by protection of the nesting areas alone. Indeed, when Greece passed the first legislative acts to protect the nesting beaches at

Laganas Bay, admittedly with a high political cost, the turtles using these beaches were actually traded for human consumption in the Gulf of Gabes; an activity declared as banned soon afterwards.

Regional efforts for marine turtle conservation in the Mediterranean started at the beginning of the 80s by international institutions and conventions. The Barcelona Convention (adopted in 1976) and its protocol concerning Mediterranean SPAs (adopted in 1982 and replaced in 1996) covers all Mediterranean countries and the European Union and has sanctioned a specific Action Plan for the Conservation of Marine Turtles in 1989 (revised in 1999) which plays a decisive role in pressuring governments to take action for the benefit of sea turtles (Ouerghi 2001a). The Bern Convention or the Convention on the Conservation of European Wildlife and Natural Habitats, a legally binding instrument within the framework of the Council of Europe, came into force in 1982; now 13 riparian Mediterranean countries are contracting parties. The Bern Convention is very active on marine turtles and frequently reminds governments in fulfilling their obligations stemming from the Convention; several important cases concerning protection of marine turtle habitats are known (Fernandez-Galiano 2003). Further, the CMS (otherwise Bonn Convention or Convention on the Conservation of Migratory Species of Wild Animals) is working towards establishing an interlinked, global framework for the conservation of marine turtles, where Mediterranean initiatives can either be included or take advantage of it (Barbieri in press).

The expansion of research, monitoring, public awareness and capacity building actions in the Mediterranean, conducted in most cases with the assistance of a large contingent of multi-national volunteers, resulted in a wide participation and a concomitant increase of sea turtle workers. However the results of research work and other findings could not reach the “official” levels in a meaningful timeframe, and therefore a communication gap was created between intergovernmental conventions and governments, and the many turtle workers in the region. This is fairly understandable as generally the average sea turtle researcher and/or NGO could not participate directly in the appropriate intergovernmental or governmental meetings where recommendations are proposed or decisions taken. Of course, there are many examples on the part of the Conventions in attempting to solicit the opinions of researchers through ad hoc expert meetings or creating “group of experts” or allowing NGOs’ reports as information documents in official meetings.

In the meantime, regional cooperation among researchers flourished. The old mood of suspicion and distrust dissolved gradually and soon communications were enhanced, data were exchanged to a certain degree, and various ideas and proposals were brought forward. To this end, the decentralization of IUCN’s Marine Turtle Specialist Group (MTSG) played a decisive role. This group, one of about 120 of the IUCN’s Species Survival Commission (SSC), is exclusively devoted to marine turtles. Recently the MTSG’s Vision Statement was reinstated as follows: “We envision marine turtles fulfilling their ecological roles on a healthy planet where all peoples value and celebrate their continued survival.”

In 1998 it was decided by the then MTSG Chair Alberto Abreu Grobois to decentralise the structure of the MTSG. Regional Vice-Chairs were appointed to large geopolitical regions around the world; one of the first to be created was the Mediterranean region. It is recognized that since then the Mediterranean region started to appear in the global sea turtle scene with its own identity. Certain facts below reflect the progress made towards the goal of regional cooperation:

1. The creation of MedTurtle, a listserv established by the MTSG for free exchange of information and discussion among marine turtle researchers and conservationists. Its operation started in 1998 and in 2005 featured more than 140 subscribers.
2. The meetings of the Mediterranean sea turtle specialists in the context of the Sea Turtle Symposia (STS). The STS is an annual global event, convened by the International Sea Turtle Society, which brings together many sea turtle scientists, students and enthusiasts around the globe. In 2001, at the 21<sup>st</sup> STS in Philadelphia, sea turtle workers in the Mediterranean met for the first time and decided to convene annually a regional meeting in the context of the STS. This has been unfailingly effected since then with the fourth Mediterranean meeting conducted in January 2005 at the 25<sup>th</sup> STS in Savannah (Casale et al. 2005). At these meetings issues of common interest are discussed, regional policies are developed, and collaborative proposals or even projects are elaborated (Margaritoulis and Glen 2002, Margaritoulis 2003, Margaritoulis 2004). It should be noted that at the 23<sup>rd</sup> STS a Discussion Forum concerning reduction of mortality in fisheries, organized by Mediterranean experts (Casale 2003), attracted several international experts on fisheries to provide their opinions.
3. In 2001, following a recommendation by the contracting parties of Barcelona Convention, the three international conventions pertinent to the conservation of marine turtles in the Mediterranean, i.e. the Barcelona, Bern, and Bonn Conventions, organized the First Mediterranean Conference on Marine Turtles (Rome, 24-28 October 2001) (Ouerghi 2001b). This brought together a great many Mediterranean researchers, conservationists, representatives of governments and international institutions, and students to present their works and to discuss various regional issues concerning sea turtles (Margaritoulis and Demetropoulos 2003). In view of its success the Second Mediterranean Conference on Marine Turtles followed suit and took place in Turkey (Kemer, 4-7 May 2005), with an even greater success as to the quality of the scientific contributions and the more specific workshops effected. Further, the future of these valuable regional conferences was secured in a more efficient way (Margaritoulis 2005).
4. Various one-off meetings that took place in the region and provided a great opportunity in bringing together Mediterranean colleagues. Some of these meetings that come to mind are the Darwin Initiative Workshop (Cairo, Egypt, 13-16 November 2000) (Edwards and Campbell 2001), Workshop on sea turtles and the long-lining fishery (Malaga, Spain, 30-31 October 2003), Workshop on Rehabilitation of Injured Sea Turtles (Glyfada, Athens, 19-20 November 2004) (Panagopoulou 2005).
5. A collaborative multi-authored chapter on a global loggerhead turtle book made known a great wealth of unpublished data from several long-term projects in the Mediterranean (Margaritoulis et al. 2003).

All these events improved greatly the relations among scientists, changed old-fashioned attitudes and provided the forum for establishing cooperative projects with a high regional value. Two examples of cooperative projects are the following. The so-called European Marine Turtle Project (EMTP) or Assessing Marine Turtle By-catch in European Mediterranean Fisheries, investigated sea turtle by-catch in fisheries having a great impact on population dynamics, i.e., trawling in Italy and Greece, and drifting long-lines in Spain, Italy and Greece. This project, co-financed by the European Commission, was organized in collaboration with fisheries and turtle researchers as well as fishermen to ensure that the methods are acceptable by fishery managers, and that biological data collected from turtles are useful to sea turtle

research. The project's main objective was to reliably assess the impact of fishery-related mortalities through an integrated approach involving stock identification, estimation of total catch and mortality, and population modelling development (Laurent et al. 2001).

The second collaborative project assessed the genetic structure of the loggerhead turtle nesting populations in the Mediterranean. Samples from nesting turtles, collected from several countries in the Mediterranean and analysed in the Laboratory of Genetics at the University of Barcelona, provided very important results as far as the long-term conservation of the species in the Mediterranean is concerned (Carreras et al. in press).

Mediterranean is a bright example of regional cooperation for the conservation of marine turtles. Regional cooperation at the official level will benefit greatly by incorporating the knowledge and opinions of sea turtle specialists. This can be facilitated with the involvement of IUCN's MTSG. Further, on the part of the conventions more pressure and lobbying should be exerted towards other bodies (e.g. FAO's GFCM) in order to promote policies influencing the long-term conservation of marine turtles in the Mediterranean.

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