

FIVE YEARS OF MARINE TURTLE CONSERVATION EFFORT IN LEBANON: MONITORING AND AWARENESS.

Monica Aureggi¹, Mona Khalil², Helen Cross³, Max Kasperek⁴, Charbel Rizk⁵, and Lily Venizelos⁶

¹ Naucrates, Via Corbetta, 11 – 22063 Cantu' (CO) – Italy

² MEDASSET- P.O. Box 19, Tyre, Lebanon

³ Centre for Ecology, Evolution and Conservation (CEEC), University of East Anglia, UK

⁴ Mönchhofstr. 16 - 69120 Heidelberg, Germany

⁵ MEDWETCOAST Project, Ministry of Environment – Lebanon

⁶ MEDASSET- 1(c) Licavitou St., 10672 Athens, Greece

The importance of Lebanon's coasts for sea turtle nesting was discovered in 2001 under the framework of MEDASSET's ongoing conservation programme in the Eastern Mediterranean (since 1990), when the first beach survey to assess nesting potential took place.

Surveys along the entire Lebanese coast showed that nesting was sparsely distributed along parts of the northern coast and scattered on several developed beaches, but the southern nesting sites were found to be more important both nationally and regionally. Loggerhead turtles (*Caretta caretta*) are widespread along the coast of Lebanon and high-density nesting can be observed at specific sites throughout the Lebanese coastal belt. The green turtle (*Chelonia mydas*) is far less common and nesting is confined to the less developed areas of the south.

Lebanon signed and ratified the UNEP Mediterranean Action Plan (UNEP/MAP) in 1975, the Convention on Biological Diversity in 1994 and the Barcelona Convention, its protocols and revised Action Plan for the conservation of marine turtles in 1999.

The 5 -year monitoring project on El Mansouri Beach and the 2- year monitoring at the Tyre Nature Reserve and Abbassiyeh Beach, in collaboration with the Lebanese Ministry of the Environment's MEDWETCOAST Project and with support from RAC/SPA (UNEP/MAP) and the Marine Conservation Society, have provided useful data, although long-term monitoring is required before population size can be accurately assessed. Nesting in South Lebanon ranges from 37-70 *Caretta* nests and from 0 -16 *Chelonia* nests per year.

At a regional level, being within the range of 21-100 *Caretta* nests per season, Lebanon can be classified as a nesting area of 'moderate importance'. Although numbers for greens are considerably lower, *Chelonia* nesting effort in Lebanon is also considered as of 'moderate importance' as the Mediterranean sub-population is classified as 'critically endangered' on the IUCN Red List.

Turtles in Lebanon are under threat from tourism development, predation, interaction with fisheries, a lack of awareness/information and pollution. A coordinated interdisciplinary approach is urgently required for their conservation. The exploitation of turtles and their eggs does not appear to present a major problem.

Since 2001, along the most important nesting beaches, progress has been made along the most important nesting beaches in setting up beach monitoring and nest protection programmes, as well as conducting awareness raising for Ministry of the Environment staff, the general public and fishermen. Lebanese volunteers are also trained in beach monitoring methodology. In 2005, a survey was conducted among fishermen regarding the interaction between fisheries

and sea turtles, as well as a light pollution study of businesses in the tourist zone of the Tyre Coastal Nature Reserve. A National Action Plan has been compiled for the Ministry of Environment outlining the major threats to turtles and identifying the urgent need for protection of critical nesting areas. South Lebanon has been under considerable socio-economic strain as a result of the political situation, so development has been limited. As tourism returns, uncontrolled development could become a real threat. Continued support from all parties involved is needed for the programme to progress.

BIBLIOGRAPHY

Aureggi, M., C. Rizk and L. Venizelos (2005) Survey on sea turtle nesting activity South Lebanon, 2004. Joint report of MEDASSET and MEDWESTCOAST. 35pp.

www.medasset.org;

Cross, H., C. Rizk, M. Khalil & L. Venizelos. Marine Turtle Conservation in the Mediterranean, Population Status and Conservation Activities on Sea Turtle Nesting Beaches in South Lebanon, 2005. Joint project of UNEP-MAP RAC/SPA MEDASSET and MEDWESTCOAST. (in press);

Demirayak, F., R. Sadek, S. Hraoui-Bloquet and M. Khalil (2002) Marine turtle nesting activity assessment on the Lebanon coast. Phase 1: Survey to identify nesting sites and fishery interaction. Joint Project of MEDASSET, Ministry of the Environment in Lebanon, RAC/SPA (MAP-UNEP), 63 pp www.medasset.org ;

Kasperek, M. (2004) The Mediterranean Coast of Lebanon: Habitat for endangered fauna and flora. Joint effort by the MSC Project funded by the EU, the MEDWESTCOAST Project funded by the French GEF, and MEDASSET. 35pp;

Kasperek, M.B., B.J. Godley and A.C. Broderick (2001) Nesting of the Green Turtle, *Chelonia mydas*, in the Mediterranean Sea: a review of status and conservation needs.

Zoology in the Middle East 24: 45-74, Heidelberg; **Margaritoulis, D., Argano, R., Baran, I.,**

Bentivegna, F., Bradai, M.N., Caminas, J.A., Casale, P., De Metrio, G., Demetropoulos, A., Gerosa, G., Godley, B.J., Haddoud, D.A., Houghton, J., Laurent, L., and Lazar, B.

(2003) Loggerhead turtles in the Mediterranean Sea: present knowledge and conservation perspectives. In, A.B. Bolten, B.E. Witherington (eds). Loggerhead Marine turtles. Smithsonian Institution Press, Washington D.C., pp175-198;

Newbury, N., M. Khalil and L. Venizelos (2002) Population status and conservation of marine turtles at El-Mansouri, Lebanon. Zoology in the Middle East 27: 47-60;

St John, F., M. Khalil, and L. Venizelos, L. (2004). Marine turtle Conservation in the Mediterranean: Marine turtle nesting in South Lebanon 2003. Project by MEDASSET. 18pp.

www.medasset.org.