



REVIEW

Mediterranean sea turtles: current knowledge and priorities for conservation and research

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ABSTRACT: The available information regarding the 2 sea turtle species breeding in the Mediterranean (loggerhead turtle *Caretta caretta* and green turtle *Chelonia mydas*) is reviewed, including biometrics and morphology, identification of breeding and foraging areas, ecology and behaviour, abundance and trends, population structure and dynamics, anthropogenic threats and conservation measures. Although a large body of knowledge has been generated, research efforts have been inconsistently allocated across geographic areas, species and topics. Significant gaps still exist, ranging from the most fundamental aspects, such as the distribution of major nesting sites and the total number of clutches laid annually in the region, to more specific topics like age at maturity, survival rates and behavioural ecology, especially for certain areas (e.g. south-eastern Mediterranean). These gaps are particularly marked for the green turtle. The recent positive trends of nest counts at some nesting sites may be the result of the cessation of past exploitation and decades of conservation measures on land, both in the form of national regulations and of continued active protection of clutches. Therefore, the current status should be considered as dependent on such ongoing conservation efforts. Mitigation of incidental catch in fisheries, the main anthropogenic threat at sea, is still in its infancy. From the analysis of the present status a comprehensive list of research and conservation priorities is proposed.

KEY WORDS: *Caretta caretta* · *Chelonia mydas* · Nesting areas · Foraging grounds · Population abundance and trends · Population structure · Behavioural ecology · Biometrics

1. INTRODUCTION

The Mediterranean Sea hosts local populations of 2 sea turtle species, the loggerhead turtle *Caretta caretta* and the green turtle *Chelonia mydas*. These have been identified as 2 independent Regional Management Units (RMUs) (Wallace et al. 2010) out of 11 and 17 RMUs for the 2 species worldwide, respectively, and are the subject of the present review.

The Mediterranean is also frequented by turtles originating from Atlantic rookeries, including large numbers of loggerhead turtles (Encalada et al. 1998, Carreras et al. 2011, Clusa et al. 2014) and a limited number of leatherback turtles *Dermochelys coriacea* (Casale et al. 2003), and green, olive ridley *Lepidochelys olivacea* and Kemp's ridley turtles *L. kempii* (Tomás & Raga 2008, Carreras et al. 2014, Revuelta et al. 2015).

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