**The marine turtle fishery in the Bay of Ranobe, SW Madagascar and the transition towards a co-management protection strategy**

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**Abstract**

Marine turtles constitute an integral aspect of the cultural heritage for the Vezo fishing community who inhabit the coastal regions of Southwest Madagascar. However, turtles also represent enormous wealth owing to the capture, trade, and wholesale of turtle meat. Over a four year study period (2009–2012) social, economic and biological information was collated on the turtle fishery in the Bay of Ranobe, with the aim of implementing a co-management protection strategy for marine turtles. The study found that *Chelonia mydas* (green turtle) significantly dominates the fishery (95%), although all five species of marine turtle present in Madagascan waters;, *Eretmochelys inbricata* (hawksbill), *Caretta caretta* (loggerhead), *Lepidochelys olivacea* (olive ridley) and *Dermochelys coriacea* (leatherback) are also targeted. Estimates of the annual income from the turtle fishery increased from £3,000 in 2009 (£2.60/ kg) to £6900 in 2012 (£3.60/kg). Over the same time period, average turtle length (straight carapace) decreased from 78 cm in 2009 to 69 cm in 2012 with the capture of large individuals becoming increasingly rare. Utilizing this information, the marine NGO ‘ReefDoctor’ assisted in the creation of the first grassroots marine turtle fisheries management association in Madagascar, which received legal status in late 2012. Through the alliance of turtle fishers, community leaders and elders, indigenous knowledge is translated into an informed and integrated management framework. The association aims to protect marine turtles through the strengthening of traditional customs and the implementation of traditional social codes or DINA’s. A transition towards co-management can increase compliance and reduce friction and conflict with, within, and between communities. ReefDoctor has provided the Vezo community with the tools to make informed management decisions which has resulted in a highly dedicated community-lead team that seeks to become an innovative working model and platform for marine turtle conservation throughout the Western Indian Ocean.