Review of artisanal shark populations in the eastern African coast

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Artisanal shark fishery provide an important source of livelihood to coastal communities in eastern Africa, but face an increasing threat of overfishing through target and incidental capture. We collated catch data over a 64-year period from the 1950s and analyzed a range of fishery descriptors to determine exploitation trends of shark populations in Kenya, Tanzania, Mozambique, Madagascar and Seychelles. The data were sourced from 26 published and unpublished reports, and fisheries websites of the IOTC and the Sea Around Us Project. Shannon-Weiner Diversity Index was used to measure species diversity indices showing a range across the 5 countries with highest diversity in Kenya (3.05) and lowest in Seychelles (1.55). This may partly reflect availability of records. Species abundance reported from each country ranged from 12 (Seychelles) to 28 (Kenya and Mozambique), and were widely reported across the region. Our results show that sharks contributed 0.46% of the total artisanal catches in Kenya, 0.07% in Tanzania, 0.12% in Mozambique and 0.32% Madagascar. T. obesus (White reef shark) and C. albimarginatus (Grey reef shark) contributed more than 50% of the mean catch composition in Seychelles. According to status of species occurrence, Hammerhead sharks (Sphyrnidae spp.) were fairly abundant. There was a significant difference in annual catch rates between the countries (ANOVA: F=2.53; p=2.31E-08) with Tanzania recording the highest annual catch rates while Seychelles had the lowest. This review provides insights into catch trends and data gaps in shark populations in eastern Africa as a first essential step in evaluating the stock status of sharks in the region.