Assessment of the effectiveness of Turtle Excluder Devices (TEDs) in prawn trawls in Kenya and Tanzania

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Several countries of the South West Indian Ocean region require the use of turtle excluder devices (TEDs) in prawn trawl nets. However, some doubt exists about their effectiveness in decreasing catches of turtles and other bycatch species while maintaining target catches. During the South West Indian Ocean Fisheries Project the effectiveness of TEDs was tested during shallow water crustacean surveys conducted in Kenya and Tanzania. The effectiveness of the TEDs in minimising turtle catches was impossible to assess as no turtles were caught in any of the trawls. Using generalised linear models we incorporated trawl speed and catch size as possible influences in effectiveness of the TEDs in reducing bycatch. In Tanzania, the TED did not reduce Bycatch catch rates, but did reduce Target catch rates. In Kenya, the TEDs increased Target catch rates except when catches were small but also increased Bycatch rates, particularly at faster speeds and when catches were large. Considering bycatch rates in TED nets were not much reduced (in Tanzania) and were increased relative to non-TED catch rates (in Kenya) it may be concluded that the TED was not functioning effectively. Correct TED installation is vital for effective utilisation of TEDs. This has implications for initiatives to implement TED use in Mozambican trawl fisheries.