

# **Assessment of discarded catch from prawn trawl fisheries of Malindi – Ungwana Bay, Kenya**

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## **Abstract**

### **Background**

Discards are the part of the non-targeted catch that is thrown overboard fishing vessels. Catch may be discarded because: i) the quota has been exceeded, (ii) there are undesired species, juveniles and small sized organisms (iii) they are illegal species (iv) the species have no commercial value and offal from fish processing on board the vessels. Discards from commercial fisheries are a major conservation concern globally because they comprise of mostly of juvenile fish, thus considered unsustainable and a waste. In addition, discards have a potential of modifying ecosystems through food webs. Studies on fisheries discards in the Western Indian Ocean region are few. In Kenya, prawn trawling has been going on in the Malindi-Ungwana Bay for over four decades now, but the discards from trawling have remained to be a sensitive issue. Since 2016, data on discards from the commercial fishing Industry has been collected. In this study, discards from Prawn trawling fisheries from Malindi-Ungwana Bay was evaluated.

### **Methodology**

Semi-industrial prawn trawling operates within the Malindi-Ungwana Bay between latitudes 3°30'S and 2°30'S and longitudes 40°00'N and 41° 00'N covering the Malindi and Ungwana Bay Complex. The depth increases rapidly to 100 m after 7 nm and generally decreases northwards. The area has one of the most productive marine fisheries in Kenya as a result of the topography of the continental shelf in the bay and inflow of fresh water from the two rivers Sabaki and Tana that drain a large part of the central and eastern regions of Kenya. Since 2016, data on discards from the Industry was collected through the Observer Programme, in accordance with the Prawn Fishery Management Plan and as per the regulations of the regulations of the Regional Observer Programme. Weights, species composition, diversity and trophic groupings of discards were analysed.

### **Results**

Over the three years assessed, 2017 had the highest amount of discards and in 2018, there was 61% reduction on discards. The mean discards/trawl ranged from 67 to 126 Kg/trawl. The Indian Pellona, *Pellona ditchela* was the most abundant in the discards. Other abundant species included *Trichiurus lepturus* and *Secutor insidiata*. Discards from prawn trawling fishery comprised of over 100 fish species and other non-fish resources. The most abundant trophic group comprised of predators.

**Conclusion**

It is important to monitor discards because a section of the resource is harvested and wasted. Discards have a potential of modifying ecosystems through food webs, as they provide a ready-made source of energy to opportunistic or scavenger species. Kenya can device a sustainable management regime for the discards. Utilisation of discards has been considered, with proposal that the local communities benefit from this resource.