

THE FISH SPECIES COMPOSITION AND VARIATION OF CATCH FROM THE ARTISANAL FISHERY IN THE PEMBA CHANNEL OF THE WESTERN INDIAN OCEAN

Matola Hakim¹, Catherine Mwakosya² and Shigalla Mahongo²

¹ Vrije Universiteit Brussel, Triomflaan 19, Bus 354, 1160 Auderghem, Brussel, Belgium
E-mail: hmatola@vub.ac.be

² Tanzania Fisheries Research Institute, Dar es Salaam Centre, P.O Box 78850, Dar es Salaam, Tanzania

In the Western Indian Ocean coastal zone, where highly diverse fish communities occur, it is important to study the artisanal fisheries exploiting these communities. Forty-three (43) species of fishes were caught by drifting gillnet, longline, handline, traps and gillnet during October 2008, January 2009, January 2010 and June 2010. A catch of 6,873.2kg from sampled fishing crafts was landed in which the sub-sample weight of 4,920.6kg was measured to biological level. A total of 64 species was observed, whereby the higher CPUE of 55.1kg/boat/day was obtained from sharknets (drifting gillnet) dominated by *Thunnus albacores* (86.9%). The Handline was the next which contributed 4.9% which was dominated by emperor group (*Lethrinus lentjan*) and the least catch was from trap fishing which contributed 4% of the total catch dominated by *Leptoscarus vaigiensis* and *Siganus sutor* (3.8%). Sharknet dominated in terms of catch rates compared to other two fishing gears because it caught large pelagic fishes. Furthermore, this study showed the higher percentage composition by number was contributed by gillnet whereby the catch was dominated by *Lethrinus lentjan* (62.3%). There were considerable differences in the species composition and variation in terms of gear types and sampling periods. Based on the sampling period it was observed that *Thunnus albacares* and *Katsuwonus pelamis* are caught more during October while other species had little variations. This paper discusses in detail their catch variation and abundance between gears and sea condition.

Keywords: artisanal fisheries; fishing crafts; CPUE; species composition and catch variation.