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Approaching the ecosystem to fisheries: Technical and biological interactions among demersal stocks off the northern Benguela area

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Abstract

The Angolan coast is characterized by a wide specific diversity that shares the same geographic and bathymetric distribution, leading to the overlapping on diet and suffering from the same fishing effect. *D. angolensis*, *D. congoensis*, *D. macrophthalmus*, *M. polli*, *P. bellottii*, *P. incisus* and *P. jubelini* are opportunistic feeders, feeding principally on fish (Mytophidae), shrimps (*P. longirostris* and *A. varidens*), euphausiids and polychaets, according to the abundance in the fauna. Cannibalism is common in the diet of *M. polli*. The diet of the predators is mainly related to the geographic and bathymetric overlapping with preys species. Predators and preys are distributed along the Angolan coast showing higher concentrations in the overlapping areas, between 9°S-13°S and 200 a 400 m of depth, fact that leads to technical and biological interactions. *Pomadasys spp* overlap on diet for sharing the same area and depth strata. The higher overlapping rate occurs between 100-200 m of depth, where most of predator and prey species occur. This geographic and bathymetric overlapping between predator and prey species leads to the same fishing effect from the trawling activities. The degree of co-occurrence is higher in the commercial trawling because they take place in the geographic and bathymetric areas of distribution where both predator species commercially important and prey species are highly concentrated. The same effects from commercial activities lead to the same decreasing trends in the abundance of the predator and prey species.

Keywords: Angola, diet, predator, prey, fishing, effect