Population Dynamic of *Terapon jarbua* (Forsskal, 1775) in the Northern Persian Gulf (Hormozgan Coastal Waters)

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Abstract

In this study, biological characteristics and population dynamic of *Terapon jarbua* (Forsskal, 1775) was investigated. A number of 1257 specimens were collected by Pound nets and shrimp trawl nets during August 2012 to August 2013 in Hormozgan coastal waters. ELEFAN 1 in the software package FiSAT was used to analyses of length frequency data. The highest and lowest recorded length and weight of caught fish were 5.1cm and 28.8cm (total length) and 1.53 gr and 373.07 gr, respectively. The exponent b (3.3159) showed growth positive allometric. Growth parameters L_∞, k and t0 were obtained 29.4cm, 0.74 year^{-1} and +0.18 year, respectively. Ø (index for comparison of growth performance), W_∞ (asymptotic weight) and T_{max} (maximum length) were also estimated 2.8, 415 gr and 4.05, respectively. Total mortality (Z), natural mortality (M), fishing mortality (F) and exploitation rate (E) was calculated 1.69 year^{-1}, 1.43 year^{-1}, 0.25 year^{-1} and 0.15, respectively. Using Bhattacharya method, cohorts grouped in two groups. Two age groups were observed in spring, summer and autumn seasons, but three age groups were discriminated in winter. Probability of catch curve indicated that L25, L50 and L75 are 8.79 cm, 11.1cm and 22.69 cm for *T. jarbua*. Although the Exploitation rate (E) of selected species is appropriate, continuous monitoring of length and feeding regime of caught fishes by population dynamic models could be useful for understanding the occurrence of fishing down in the Persian Gulf.