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## **Investigating some of the fishery indicators from landing data in the northern waters of the Oman Sea (Sistan and Baluchestan Province)**

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### **Abstract**

The fishery has direct and indirect effects on the aquatic resources and the entire ecosystem, and the structure and functioning of the food networks will change the ecosystems of the sea. The average ( $\pm$  standard deviation) of total catch during the 21 years of the study period was  $70852 \pm 131819$  t with a 95% confidence level of 161,2122 t and 101515 t, with a significant increase in the trend ( $P < 0.05$  and  $R = 0.89$ ). The average of the Mean trophic level (MTL) during the study period was  $4.23 \pm 0.04$  and the trend of changes along with the increase of the catches had a downward and significant slope ( $P < 0.05$  and  $R = 0.52$ ). The average of the Fishing in Balance index (FiB) was  $0.44 \pm 0.25$  and the trend of its changes along with the increase in the catches was increasing ( $P < 0.05$  and  $R = 0.85$ ). The Piscivory index (PI) was  $0.99 \pm 0.01$  and without any specific changes at the same time as the increase in the catch ( $P > 0.05$  and  $R = 0.12$ ). The increase in total fishing and the fishing in balance index, as well as the decrease of the trophic level index and the beginning of a reduction in the level of fishing for mollusks and cartilaginous fish in this province, can indicate the severe changes in the structure of aquatic species in this area. According to the above results, it can be concluded that in the current situation, the catch is out of optimal condition and it is recommended to reduce the exploitation or at least do not increase exploitation.

**Keywords:** Fishing in balance index, Food networks, Trophic level index