

## Study of distribution and diversity of Polychaeta due to impact bottom trawling in Bahrakan fishing area (Persian Gulf)

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### Abstract

The study took place to survey the changes in diversity and distribution of Polychaetes in fishing area of Bahrakan, due to the trawling. Sampling was taken before (15 May) of trawling and two weeks (5 Sep) and three months (14 Nov) after trawling in 2010, in three period in Bahrakan coast. Therefore, eighteen stations placed with the depth of 6 meters and 10 meters. The amount abundance Polychaetes had decreased significantly in both depths two weeks after trawling ( $P < 0.05$ ). Also in 6m depth, no significant difference was observed between abundance Polychaetes in two weeks and three months after the trawling ( $p > 0.05$ ). Only in 10m depth, abundance Polychaetes after three months comparing to two weeks after trawling had increased significantly ( $p < 0.05$ ). Changing biomass Polychaetes was similar to Changing abundance. After the trawling, small size individuals became dominant. Abundance Species of *Cossura longicirrata* had increased in both depths in two weeks after the trawling. Also in both depths, Shannon Diversity and Margalef Species Richness indices showed process decreasing and Simpson dominant Index showed process increasing. In both depths, Pielou Evenness Index two after trawling had increased. While, after three months comparing to two weeks after trawling had decreased and most effects of trawling were on 6m depth.

**Keywords:** Polychaetes, Macrobenthos, Biodiversity, Impact Trawling, Persian Gulf