



The relationships between catch per unit area (CPUA) in jinga shrimp (*Metapenaeus affinis*) and ecological parameters in the North West Persian Gulf

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Abstract

The present research aimed to investigate the relationship between catch per unit area (CPUA) in white shrimp (*Metapenaeus affinis*) and ecological parameters in the North West Persian Gulf (Khuzestan waters) in "Life-Buseif" was started from September 2017 and its operations and sea cruises were done at December 2018. Sampling was done with trawling and determination of swept area. Furthermore, ecological parameters such as physic-chemical factors in water and samples from sediments and benthic fauna were evaluated. The greatest determined shrimp biomass was in 2017 and 2018 were 419 and 202.4 MT respectively and the highest exploitation proportional level for *M. affinis* were 78% and 48% in 2017 and 2018, respectively. The average zooplankton counts in 2017 and 2018 were 58 and 77 number per liter, respectively. In 2017, the CPUA value for *M. affinis* has negative relationships with benthos and positive with zooplankton populations. In 2018, the highest regression was found between water temperature and CPUA of different shrimp species. In 2017 the shrimp exploitation was 2.5 times higher than those in 2018 indicating the presence of *M. affinis* in different depths. In all of statistics, only dissolved oxygen and temperature had significant relationship with *M. affinis* biomass.

Keywords: Persian Gulf, Khuzestan province, shrimp, CPUA, ecological parameters.