

# **Selection of suitable location for cage location due to the impact of rivers leading to the southern Caspian Sea region on the density and density of phytoplankton**

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## **Abstract**

In order to investigate the effect of rivers leading to the southern Caspian Sea on the phytoplankton production situation in this area and selecting the appropriate location for the establishment of cages, eight transects in the depths of the sea were sampled and examined. In the study of nitrogen-phosphorus parity ratio in different transects, the highest seasonal mean in the Anzali area was 1: 8.47 (standard error = 0.6). The density and density of phytoplankton mass in different transects were significantly different ( $p < 0.05$ ). In transects of Astara, Babolsar, Anzali, Amirabad, Turkmen, Sefidrud, Noshahr and Tonekabon, the highest density of phytoplankton was observed ( $p < 0.05$ ). In terms of biomass, transects of Astara, Anzali, Sefidrud, Babolsar, Noshahr, Tonekabon, Amirabad and Turkmen respectively had higher values ( $p < 0.05$ ). The status of production and the probability of occurrence of algal bloom in different regions and at certain times using the results can be considered, which should be considered in determining the appropriate location for cage establishment.

**Keywords:** Cage culture, Phytoplankton, Density, biomass Caspian Sea, River, Nitrogen, Phosphorus