

# **The study of fluctuation of primary productivity around of Sturgeon pen culture.**

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## **Abstract:**

The percent study was carried out to determine the impact of Sturgeon pen culture activities on the primary productivity from August 2015 to July 2016 in Gorgan Gulf. 5 sampling stations with 3 repetitions were selected which were in distance 0, 5, 25, 50 and 100 m from pen sites. The maximum amount of Chol a, BOD<sub>5</sub>, COD, NO<sub>2</sub><sup>-</sup> and TAN were in the station which was

25 m far from the pen sites which showed a significant difference with the other stations ( $p < 0.05$ ). The results also proved that feeding can cause increase, though not significant in P and  $\text{PO}_4^{-3}$  values around the pen. However, there was significant difference between stations. These results indicate that the pen culture had maximum effect on water quality in distance 5 m far from the pen sites.

**Keywords:** Pollution, Productivity, Sturgeon Fish, Pen, Gorgan Gulf, Caspian Sea