

# **Rainbow trout (*Oncorhynchus mykiss*) Aquaculture Effect on Water Quality Index (IRWQI<sub>SC</sub>) Around Floating Cage in Southern Caspian Sea**

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## **Abstract**

This study was carried out in two rainbow trout aquaculture farms in a floating cage in two regions of Mazandaran province (klarabad and Abbas Abad) on the southern coast of the Caspian Sea. The water quality index (IRWQI<sub>SC</sub>) was determined around the floating cage using water parameters including turbidity, temperature, pH, electrical conductivity, dissolved oxygen, nitrate, ammonium and phosphate during *Oncorhynchus mykiss* aquaculture and the factors above plus biochemical oxygen demand of water, three months after aquaculture. The water quality index around the cage was determined by separating the different sampling periods in two modes: 1. Close the cage (cage shadow and distances of 50 and 100 meters); and 2. Distance of 1000 meters away from the cage. The results showed that the status of water quality was moderate. The results seem to be influenced by the natural conditions of the region.

**Keywords:** Caspian Sea, Floating cage, Aquaculture, *Oncorhynchus mykiss*