

Investigating the Effects of Fish Breeding Cages on eutrophication and Increasing Nutrients (A Case Study in Ghazaleh Creek)

Farahnaz kianersi¹, Seyed Reza Seyed mortezaie², Simin Dehghan Madiseh³

1,3-Aquaculture Research Center-South of Iran, Iranian Fisheries Science Research Institute, Agricultural Research Education and Extension Organization, Ahvaz, Iran

2-Iranian Fisheries Science Research Institute, Agricultural Research Education and Extension Organization, Tehran, Iran

Corresponding author g mail: Farahnaz.kianersi@gmail.com

Abstract

One of the main problems of aquaculture is the change in water quality. Aquatic activities cause changes in water quality due to increased phosphorus and nitrogen levels. Nitrogen and phosphorus enter the water in the form of ammonia and urea, or through re-release of organic matter, reintroduced into water, and enhance the growth of phytoplankton and the appearance of algal blooms and reduce dissolved oxygen. In this research, the changes in phosphorus and nitrogen were studied. The probable effects of increasing phosphorus and nitrogen concentrations on water quality in Ghazaleh creek were studied. Sampling was carried out on a monthly basis from November 2005 to October 2007. The range of the different parameters were NO₂ (0.019-0.89ppm), NH₃ (0-0.03 ppm), NO₃ (3.53-11.93ppm) for PO₄ (0.97-6.05ppm). Comparison of the results of this study shows that, except for ammonia, other parameters studied such as nitrate, nitrite and phosphate in Ghazaleh creek have been present in most months for more than the standards provided.

Keywords: Ghazaleh creek, fish cage culture, eutrophication, Water Quality