



Study on coastal water quality index of Caspian Sea (CWQIcs) around the small scale of fish cage culture

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Abstract

Water quality in coastal environments is affected by economic development which related to human activities such as tourism, fisheries, fishing, aquaculture and agriculture. Fish farming activities are effective in changing environmental conditions, likewise, the success of this industry depends on the appropriate water quality (chemical and biological parameters). According to the important role of water quality, the aim of this study is to investigate the water quality index based on 9 physicochemical parameters in places which fish cage farming were active there, during 2018 and 2019. Based on the results the median of the CWQIcs (Costal Water Quality Index of Caspian Sea) in winter and spring were equal to 65 and 70, respectively during the period of breeding fish cage culture. In the summer (after the fish crop), the median of CWQIcs was recorded 70. The water quality classified in bad condition tend to fair quality at the beginning and end of fish breeding, based on the water quality classification (excellent (97-100), good (92-96), moderate (70-91), bad (35-69) and very bad (1-34). However, the water quality in summer was in moderate class. Since water in the excellent to fair classes are suitable for the living of aquatic species and fish farming, so it is necessary to more productivity in the production and protection of the Caspian ecosystem, further monitoring according to the guidelines related to fish cage culture rules, especially pay attention in fish feeding management.

Keywords: Water Quality Index of Caspian Sea, Fish cage culture, Iran