

Chapter 7

ANALYSIS OF SPECIFIC WATER QUALITY CHARACTERISTICS IN AGIN REGION OF KEBAN DAM LAKE

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Introduction

The concept of “water quality” is not a newly developed one. The old English common water rights law stated that the quality of the water could not be impaired by those using it. On the other hand, until the last century, the question of which quality criteria are to be taken as basis has not been determined, nor has any answer to this question been found. Even in early 20th century, simple terms such as “fresh”, “polluted”, “contaminated”, “potable” were used to define water quality by personal observations rather than scientific findings.

In the process of economic growth and social development, the potential of natural resources and the wise use of this potential has an important and determining role. The economic development of countries in terms of production, consumption, and distribution relationship is based on the richness of natural resources and their efficient use, besides other factors. Therefore, conservation of natural resources has also become an integral part of the national security strategy. Rapidly increasing world population, industrial growth, infrastructural problems caused by over-urbanization, and in addition to these, the lack of treatment plants negatively affect the ecological balance and give rise to environmental pollution. Water sources are affected the most by environmental pollution. Long-term and sustainable use of the water sources, which are among our most important natural wealth, is a must.

Turkey has a river network of nearly 178.000 km which includes 26 river basins. Moreover, it has 200 natural lakes spread on an area of 500.000 ha. There are 794 dams in different sizes established for electrical power generation, irrigation, water supply, and flood protection (1).

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The reason for the increase in the chemical oxygen demand (COD) value particularly in summer months in Ađın Region of Keban Dam Lake may be the possible transport of the existing organic sources of pollution (animal wastes, fertilizers, agricultural pesticides etc.) from the land around the stations from which the samples were collected to the lake.

Conclusion

As a result of this study, considering the conditions and changes of the parameters analyzed during the year, it is observed that Ađın Region of Keban Dam Lake has 3rd class water quality parameters in terms of chloride, and 1st class water quality parameters in terms of the other chemicals. After evaluation of all data in terms of water quality, it has been concluded that the issue of pollution in Ađın Region of Keban Dam Lake has less importance.

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