

DETERMINATION OF THE MOST APPROPRIATE MEASURES FOR SENSITIVE AREAS TR WITH ANALYTICAL HIERARCHY PROCESS: MANYAS LAKE EXAMPLE

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ANKARA-2017

EXPERTISE THESIS ABSTRACT

In this study, it is aimed to evaluate the restoration methods applied in sensitive areas and to provide an approach which will help decision makers in determining the highly suitable methods.

Within the scope of this study, national and international legislation on sensitive areas have been examined and methods for conservation and improvement in sensitive water bodies have been evaluated and restoration methods that can be applied in cases where the desired level of improvement has not been provided despite taking protective measures have been thoroughly explained. Information was provided on the Analytical Hierarchy Process (AHP), which would be a "decision support tool" for determining the most appropriate method for a sensitive water body.

As a case study area, Lake Manyas was chosen representing one of the major wetlands of Turkey; bearing hypertrophic characteristics. Four restoration methods (chemical addition, dredging, biomanipulation and floating wetland) that can be applied to this lake were compared using the Expert Choice program, based on AHP, within the framework of technological, economic, environmental and social criteria. The preference ratios of the four methods were calculated on the basis of the mentioned criteria and their comparisons included regarding the sub criteria. Accordingly, the floating wetland method with 34% share among the four methods leads the first place in the order of preference. The floating wetland is followed by biomanipulation with 28.7%, chemical addition with 21.8%, and dredging with 15.5%.

Keywords: Sensitive Area, Eutrophication, Analytical Hierarchy Process, Lake Restoration Methods, Manyas Lake