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ADAPTIVE MANAGEMENT FOR SUSTAINABLE DEVELOPMENT OF AMARA LAKE (S-E ROMANIA)

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Abstract

The Amara Lake is located at the south-eastern part of Romania. It is a shallow lake with an average depth of 3m and average extent of 1.32 km^2, having a particular importance for the area in which is situated. This importance derives from its main functions in the ecosystem, namely: source of food, shelter and breeding place for almost 54 bird, balneary tourism attraction and jobs for the residents of Amara who live in the northern part of the lake. Under these conditions, the sustainable development of this area is required, and this can be attained by proposing and implementing practices which will protect and harmonize the area from economic, social and ecological point of view. In this study, a SWOT (Strengths, Weaknesses, Opportunities and Threats) analysis of Amara Lake ecosystem was performed in order to found the most adequate management solution, whose implementation would allow the sustainable development of area. The proposed management solution considers the forestation of southern shore of the lake with *Acer campestre* tree species. The effects of this solution on Amara Lake ecosystem were evaluated by monitoring three water quality indicators (total nitrogen, total phosphorus and biochemical oxygen demand (BOD_5)) during of six years (2010-2015). These indicators are strictly related to the eutrophication process of lake water, and their variations during the monitoring period indicated that the forestation of southern shore of the lake can be considered a viable management solution.

Key words: Amara Lake, management solution, sustainable development, SWOT analysis

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