

TRANSBOUNDARY MANAGEMENT ISSUES IN PRESPA LAKE REGION

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The issue of water resources management becomes highly important not only because of water scarcity, but also as a result of its sharing across national boundaries. Approximately 40% of the global population lives in transboundary water basins, shared by more than one country, emphasizing the need for concerted management of transboundary water bodies and harmonization of policies. Transboundary rivers and lakes were not utilized in the past because of the complexities associated with their development and management. Nowadays, there are increasing social, economic and political pressures to utilize such water sources.

In the case of an international basin district extending beyond the Community and according to the Water Framework Directive (WFD 2000/60, article 13, paragraph 2 and 3), the Member State should ensure coordination with the aim of producing a single international basin management plan. Where such an international river basin management plan is not produced, Member States shall produce basin management plans covering at least those parts of the international basin district falling within their territory to achieve the objectives of this Directive. As the EC Directive 2000/60 will be implemented not only by the present EU Member States but also by all countries that are applicants for EU membership, the Directive will be the ruling piece of legislation concerning river (and lake) basin management. The Directive requires EU Member States to strive for basin-wide coordination of river basin management plans. As a result, present and future EU Member States will have to intensify their cooperation with non-EU countries wherever they share international river basins.

Greece shares five rivers (in most cases is the downstream country) and three lakes and has signed number of bilateral agreements addressing water management issues with neighbouring countries, which, however still pending with regard to various water uses, as well as water discharges and water quality levels.

This paper focuses on the problems identified in the integrated management of the Prespa Lake System and the difficulties encountered in producing a single international basin management plan, as imposed in the Water Framework Directive. This forms a great challenge since both regional (inexistence of a unified self-existent body for the management of national water resources in each of the three countries) and transboundary cooperation (an interim "Co-ordination Committee for the Prespa Park" – PPCC has been established) should be managed.

Prespa Lake System is shared by Albania, Greece and Former Yugoslav Republic of Macedonia. The basin includes the two lakes, Micro Prespa and Macro Prespa, and the surrounding forested mountainous slopes, covering a total area of 2,520 Km² [1]. The area is characterized by its natural beauty, its great biodiversity and its populations of rare water birds. The fauna of the area includes characteristically 23 species of fish (7 endemic species) and approximately 46 species of mammals. The basin is of a specific importance for waterbirds as the Dalmatian pelican, white pelicans and pygmy cormorants. The area is also remarkable for its cultural sites. Prespa Lake is among the seventeen most ancient lakes on earth and is estimated to be more than five million years old.

Furthermore, the fact that Macro and Micro Prespa lakes and their catchment basin are regulated and protected under a series of National, Community and International legal instruments highlights the significance of the region. In Albania and Greece, almost the whole Prespa catchment is covered by a single protected area in the form of National Park (or National Forest in the case of Greece). In the FYR of Macedonia the Prespa catchment is much larger and includes at least three separate protected areas (Galicica National Park, Pelister National Park and Ezerani National Reserve). The main international instruments concerning protection and management of the Prespa Park area binding on one or more of the three countries and imposing minimum obligations on them are the following:

- 1971 Convention on Wetlands - Ramsar Convention (all three countries are Parties)
- 1992 ECE Convention on the Protection and Use of Transboundary Watercourses and International Lakes (Albania and Greece are Parties).
- 1979 Berne Convention on the Conservation of European Wildlife and Natural Habitats (all three countries are Parties)
- 1983 Bonn Convention on the Protection of Migratory Species of Wild Animals (all three countries are Parties)
- 1992 UN Convention on Biological Diversity (CBD) (all three countries are Parties)
- 1991 Espoo Convention on Environmental Impact Assessment in a Transboundary Context (all three countries are Parties)
- 1973 Convention on International Trade in Endangered Species of Flora and Fauna (CITES) (Greece and the FYR of Macedonia are Parties)
- 1985 Convention on the Protection of the Architectural Heritage of Europe (Greece and the FYR of Macedonia are Parties)

To establish an effective transboundary water management plan, strong collaboration both within the different bodies in each country and among Greece, Albania and FYROM is compulsory. Problems concerning pollution and depletion of the lake, natural resources, biotic environment and socioeconomic development should be investigated. Moreover, to improve the environmental situation and achieve sustainable development of the region all the above issues should be clarified.

The farmlands in the basin is a significant source of pollution to the Prespa Lakes, as pesticides and fertilizers wash into rivers and streams and eventually to Micro and Macro Prespa, deteriorating their water quality. The main economic activity for the three countries is agriculture. Because of intensive irrigation, the fields are widespread, the lake level is dropping and the cultivated land extends right down to the edge of the lake. The intensive agriculture also disrupts nutrients balance of soils and affects natural resources. Changes of water quality also take place due to input/output from Devolli River, Aghios Germanos Stream and Stara River and there is a constant reducing appeal to tourist due to eutrophication and increased pollution (wastewater and solid waste).

Industry also contributes pollution to the lake as in part of FYROM, there are food processing plants that discharge waste such as apple pulp.

Since 1960, fish production is steadily decreasing, due to overfishing and overgrowth of the reed beds and there is a constant decline in the number of fishermen. In Albania and the FYR of Macedonia, although there is lack of statistical data on fish yield and fisheries, a decrease in fishing production is also noted. This fact together with a possible foreign fish importation, disturb the biotic environment.

Anthropogenic activities on both Greece and FYROM have led to dramatic changes in the mutual impact between man and environment. Important man-made pressure has been manifested through intensive natural resources exploitation, development and advancing of the agricultural production, the exploitation of the lake water for irrigation, the development of tourism and the increased amount of waste waters that leek into the lake. All the activities have resulted in significant amount of phosphorous leading to the lake, thus accelerating eutrophication and aging process.

It is obvious that the ecological and chemical status of the lake should be determined, fulfilling the main objective of the Water Framework Directive for surface waters, which is to reach a good ecological status or to maintain a good or high status where it already prevails. Hydro-morphological, geological and physico-chemical parameters should be used for the characterisation of the lakes. Reference conditions must be established representing, as far as possible, undisturbed conditions and including biological as well as hydro morphological and physico-chemical baselines.

Economic development in the Prespa region is full of contrast, with three different countries with their own history and economic evolution. The lowest level of income is found in the Albanian side of Prespa. There is low total gross income per capita and there is an increase in unemployment rate. The inexistence of opportunities forces people and especially, young people to leave the area and go to bigger urban centres. The non-existent infrastructure in Albania and the medium quality infrastructure in Greece and FYR of Macedonia set the accessibility of the Prespa Lake area difficult and sometimes impossible.

The region is subject to different and even conflicting management regimes and policies, which further exacerbate the threats to the ecosystem as a whole and make unilateral response measures ineffective [3]. A large number of public agencies, ministries, services and institutions in all three countries are involved in water resources management, monitoring and protection. Operating on a local, regional or national level, they are usually linked to particular sectors of economic activity or higher-level public administration, aiming solely at fulfilling their own particular objectives and demands, with inefficient coordination regarding water policies. The existence of many governmental departments dealing with water problems, which additionally have activities not well coordinated has resulted in a variety of administrative problems, including complexity, overlapping of responsibilities and conflicting situations, as well as inefficient use of existing information, problems in priorities-setting and in general ineffective management of the available water resources.

In this paper, main problems identified in the basin referring to water management issues, environmental protection and economic development are highlighted. Legal, administrative, environmental protection and sustainable development issues of contemporary water policy are studied and analyzed, with the aim to contribute to the development of an integrated water policy in a trilateral context. Moreover, the difficulties in adopting and performing common actions in transboundary level are pointed.

An integrated water resources management (IWRM) plan that integrates both the natural and human system is needed. It should target the sustainable use of water and encourage changes in consumption behaviour and modes of water supply that account for social, economic and environmental costs in assessing and planning water development options. For a successful implementation of the integrated water management plan the following issues that are analyzed in the paper are proposed:

- creation of an enabling environment for transboundary strategies and cooperation supported by political will on all levels of national governments, regional and local authorities, local people and NGOs
- enhancement of public participation and awareness creation
- sustainable resources practices (agricultural practices, “Prespa Park products”)
- creation of additional socio-economic perspectives (restoration of ancient monuments, the training of specialised tour guides, the building of small hotels, the use of the park for educational and recreational uses, agrotouristic strategies)
- installation of a permanent operational monitoring system that will establish the current environmental status of the lake and assess any changes in the status resulting from pollution or measures taken in the context of the wider IWRM plan. In order such a system to be effective, all the collected data should be available freely to all three partner countries in order to create a common credible and verifiable database [2]

References

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