DRIMON Policy Brief – June 2008

Transboundary Water Management Challenges in the Lake Prespa Region

Based on a Stakeholder Workshop and Institutional Analysis performed by the DRIMON Partners

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This policy brief is a short summary of the institutional and stakeholder analysis in Lake Macro Prespa within the DRIMON project. The purpose is to provide information to managers and end users in the Lake Prespa region, about the current state of the lake ecosystem, the main pressures, and the institutional and policy constraints for carrying out integrated transboundary water management. The basis of the analysis is a stakeholder workshop in May 2008 in Pretor, a village located in Resen Municipality in Macedonia. In addition, information was gathered from secondary sources, field visits and interviews with locals.

An important aim of the DRIMON project[1] (www.drimon.no) is to contribute towards an increased knowledge base and dialogue between stakeholders for the transboundary management of water resources in two Balkan lakes – the Macro Prespa and the Shkodra. In this policy brief, the case of Lake Macro Prespa is discussed based on the information and data collected by the project participants to date, in particular from a Stakeholder Workshop held in Pretor near Resen on 30 May 2008.

Lake Macro Prespa May 2008

[1] DRIMON (2006-2009) is a research project with full name "Interdisciplinary assessment of water resources management in two transboundary lakes in South Eastern Europe"; funded by the Norwegian Council for Research.

The sustainable use of the lake is highly important for the large number of users dependent on the lake for their livelihoods.

DRIMON Stakeholder Workshop 2008 Participants

The DRIMON Project is mainly concerned with pressures related to nutrient loadings to the lake. Agriculture and tourism are identified as the two most important sectors causing such pressures.

Facts on Lake Prespa

- Shared between Albania, Macedonia and Greece
- Located highest of all Balkan lakes at 853 m asl
- Large but shallow lake (274 km^2 surface area; max depth 50 m); with lake water level decreasing in the latter years
- Major sectors include agriculture and, increasingly, tourism.
- Areas under cultivation include 12500 ha in Macedonia, of which apple orchards constitute 3000 ha; and 1500 ha in Albania, mainly wheat, maize, grape and pasture.
- Prespa Lake is rich in biodiversity, with 17 fish species and over 260 bird species, incl. colonies of Dalmatian Pelicans.
- Designated as an area of international importance according to the Ramsar Convention.

DRIMON Stakeholder Workshop
The DRIMON Stakeholder Workshop organized in Pretor on 30 May 2008, brought together representatives from different agencies with a direct or indirect interest in the water resources of the Macro Prespa region. They included managers, policy makers and end-users from several sectors in both Albania and Macedonia.

In the workshop, the participants discussed and identified the main pressures, conflicts or problems related to use and management of Lake Prespa, the institutional constraints for transboundary management, and their suggestions for improved management of the water resources.

Although not all key stakeholders of the region was present at the workshop, a good overview of the current challenges and management status on the Macedonian and Albanian part of the lake Macro Prespa was obtained. It was agreed, however, that in future workshops more effort should be done to include participants also from Greece.

Apples are the main agricultural produce on the Macedonian side of the Lake Prespa region

Pressures and impacts on Lake Prespa

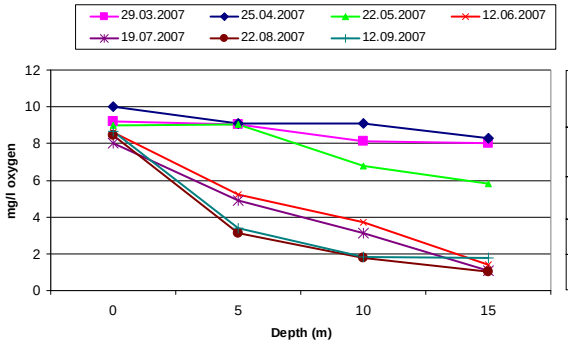
Increases in both agriculture and tourism development were regarded as positive by stakeholders, as these sectors provide employment and more income to the region. However, development in these sectors is also accompanied by various negative impacts on the catchment environment, including:

- increased demand for irrigation water and water for tourism industry, which may contribute to the observed fluctuations of the water level of the lake;
- inappropriate use of land resources especially close to the lake shores for construction of hotels and restaurants, and conversion of shore areas into beaches;
- pollution from untreated sewage and waste water, seepage from solid waste sites;
- cultivation of land close to rivers and lake shores with no vegetation zones to reduce particle, nutrient and pesticide runoff;
- pollution from farm machinery and pesticide spray equipment that are rinsed directly in river or lake waters;
- deforestation in the catchment areas.

DRIMON water monitoring programme

In order to investigate the impacts of amongst others agriculture and tourism on water quality, the DRIMON Project has set up a water quality monitoring program. Water is sampled regularly at the tributary Golema Reka, as well as in the lake. The focus of the monitoring is on nutrients and sediments, but also pH, oxygen levels in the lake, and conductivity are measured. The monitoring is transboundary, with samples taken on both the Albanian and Macedonian side of the lake.

In 2007, the contents of oxygen at the bottom of the lake sank to less than 2 mg/l during the summer (see chart below). This may be a result of increasing nutrient inputs with subsequent algae growth in the lake. Oxygen depletion can lead to the development of toxic gases at the bottom of the lake, which again may cause the death of fish and other aquatic biota. The monitoring programme continues in 2008 in order to further investigate the nutrients loads to the lake as well as the main sources.



Oxygen levels in Prespa are seriously reduced at the bottom of the lake during summer

Main suggestions for improvement

The main suggestions by stakeholders for reducing the impact on the lake environment and promoting sustainable development included

Tourism:

- Introduce subsidies and soft loans to local small scale entrepreneurs to set up local tourist facilities;
- Improve eco-friendly tourism by providing more training facilities for local tourist operators, guides, private hotel owners and local people (similar to the initiatives being taken up by the Brajcinska village/Resen municipality);
- Develop a long term tourism plan within the Prespa Park with transboundary stakeholder participation;
- Promote co-operation between tourism organisations across boundaries in order to offer transboundary packages;
- Introduce an environmental tax system with sanctions against violators.

Tourism development may cause habitat destruction (Prespa lake near Pretor May 2008)

Agriculture:

- Increase water use efficiency through better drip irrigation techniques
- Further develop the existing Soil Testing Laboratory facility in Resen to accommodate the large interest for soil analysis; which again will help optimise fertilizer application;
- Maintain and upgrade the existing network of meteorological stations located in the Prespa region for improved forecasting major plant diseases and advising farmers on the proper pesticide use;

Prespa Lake is known as an important bird sanctuary, with 260 different species.

- Provide certified seedlings of new apple varieties;
- Build storage capacities for better preservation of fruits to help farmers get better profits;
- Build new capacities for primary processing of fruits and production of fruit pulp;
- Implement projects for organic production of apple.

However the main challenges identified by stakeholders were the lack of adequate financial resources and difficulties in integrated transboundary management.

Institutional and transboundary cooperation

It was felt by the stakeholders that there is a need to promote integrated management of water resources within their own countries before transboundary management problems can be addressed.

In the recent years a few efforts have been made to bring together different agencies in water management for improved national co-operation. An example is the Albanian National Water Commission (NWC) which was established as a result of the 1996 Law on Water Resources. The commission is headed by the Prime Minister and comprises all Albanian Ministers involved in the water sector. At the local level, this Law calls for the establishment of a water basin council and authorities, but so far this is yet to be implemented. Often, the implementation mechanisms are not in place for the regional and local levels, and decisions in the water sector are not backed up by allocation of the

necessary financial resources. In Macedonia, a new law on water is yet to be ratified by the Government, and it remains to be seen if the new law will improve national co-operation between water authorities at different levels.

New restaurants and hotels are being built along the shores of Lake Prespa (Pretor May 2008)

Similar challenges exist in the transboundary cooperation, where a several meetings have been conducted and declarations signed, but where the outcome and follow up are perceived to be rather poor.

The stakeholders expressed that even though the Prime ministers of the three riparian countries signed a declaration in 2000, declaring Lake Prespa as a trilateral protected park, not much has happened in the field since then. It was suggested that local initiatives such as exchange of cultural groups, interaction between local mayors of the three municipalities around Prespa, and scientific co-operation between the three countries may be a useful way to increase interactions. Other measures proposed were joint monitoring of the Prespa with the participation from all the three countries and integrated planning by local agencies around lake Prespa, preferably supported by an international transboundary agreement.

Way forward

An important recommendation from the DRIMON Stakeholder Workshop was to prepare a comprehensive long term *development plan and policy* within the Prespa region. Ideally, such a plan should be prepared jointly by the three countries, preferably under the guidance and organisation of an independent body such as UNDP/GEF, or alternatively under an independent body constituting members from all three countries.

In order to achieve transboundary co-operation it is an advantage to have a set of commonly agreed principles. The EU Water Framework Directive should be useful in this context, and designating the Prespa area as a pilot basin for implementation of the directive in the three countries is an idea that the DRIMON Partners wish to pursue.

Scene from the Brajcino village at Lake Prespa

The DRIMON Project (2006-2009)

Through the integration of natural and social sciences the DRIMON Project will identify environmental goals and provide guidelines as to how these goals may be met, through an understanding of institutional structures across borders and enhancement of the dialogue between decision-makers, stakeholders and scientists. The partners are:

- Bioforsk - Norwegian Institute for Agricultural and Environmental Research (Project leader)
- The Agricultural Institute, University of St. Cyril and Methodius, Macedonia.
- The Agricultural University of Tirana, Albania.
- Faculty of Natural Sciences and Mathematics, University of Montenegro
- NIVA, the Norwegian Institute for Water Research

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Read more: www.drimon.no