OHRID LAKE - IMPORTANT RESOURCE FOR COOPERATION OF LOCAL GOVERNMENT BETWEEN MACEDONIA AND ALBANIA

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ABSTRACT: The aim of this paper is cooperation of local government between Macedonia and Albania. There are three cities on the lake's shores: Ohrid and Struga on the Macedonian side; Pogradec in Albania. There are also several fishing villages, although tourism is now a more significant part of their income.

Lake Ohrid is the deepest lake of the Balkans, with a maximum depth of 288 m and a mean depth of 155 m. It covers an area of 358 km² containing an estimated 55.4 km³ of water.

The water at the surface of Lake Ohrid moves predominantly in a counter-clockwise direction along the shore, as a result of wind forcing and earth rotation - phenomenon known from oceans. In terms of vertical water exchange, convective mixing during winter cooling is the dominant process. However in an average winter only the top 150-200 meters of the lake are mixed, whereas the water below is stably stratified by salinity. The stability due to this salinity gradient allows complete convective mixing events only roughly once every 7 years.1

Key Words: Lake Ohrid, water, protection, cooperation.

[1]H. Ivanova; Vlijanieto na voveduvanjeto na rekata Sateska na Ohridskoto Ezero i izgradbata na privremen regulacionen objekt vo Struga vrz oscilaciite na Ohridskoto Ezero. MANU . Simpozium za regulacijata na Ohridskoto Ezero. 1974. Pp. 132- 219.

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INTRODUCTION

The end of the last century and ceratinly this century are characterisized by inventing efficient methods to protect and develop the environment, as a necessary condition for the existence of the human kind and its further civilisation.

Natural freshwater is characterized by the presence of a lot of constituents (components) with organic or inorganic nature. It is a disperze system. Water is a resource which can be regenerated. However, when we talk about drinking water, according to existing quantities it is limited, because the amount of freshwater (sweet water) is limited compared to the total amount of water on Earth.

The entry (admision) of polluted substances (matter) in a river ecosystem is of a special importance because it causes preservance of the dynamic ballance in that ecosystem. Since the lake is an open system, information on the load of the lake with any pollutant of any source and in what amount it is loaded is very essenctial and valuable .

LAKES IN MACEDONIA

There are a lot of lakes in the Republic of Macedonia. They differ from one another in the way they form their basins, by their depth and size.

If we study the way they form their basins we devide them in natural and artificial lakes. Natural lakes in Macedonia are formed from nature itself million years ago. Tectonic lakes or hollow lakes are situated in hollows, this is why they were named Lake Ohrid, Lake Prespa and Lake Dojran.

LAKE OHRID

It is situated in the Southeast of Europe with its shoreline in Macedonia and Albania. It harbours a rich biodiverse fauna, which is due to its very old age, approximately 2-3 million years old. 2

Lake Ohrid is the biggest and the deepest lake in the group of Dessaret basins in the zone of Eagean Lakes. It is “a museum of living fossils” and it is a habitat (environment) for a lot of freshwater organisms which in Balkan Peninsula and in Central Europe can be found only as fossils.3

The long life span of Lake Ohrid is a result of the regeneration of its tectonic depression basin.

Maximal depth of the lake is 288.7 m. Basin of the lake is graduated (graded) at the sides especially east and north side. Flat surface in the center and very little shallow water. Its north ans south shoreline is 1.5-2 km whereas east and west shoreline in some places is 10m. Its avarage depth is 163.1m. Shoreline is 87.531 km long. Its maximum length 30.372km, and wideness is 14.8km. Avarage widness is 11.79km.

Volume of the water is 58.638 km3 with retension time of 83.61 years.

It’s only outlet the River Black Drim flows in northwest direction, in Struga, and has an avarage flow of 22.4m3/s.4

The first scientific researches were done during XIX century. Two eminent scientists from the Univerity of Viena discovered a great number of fish and fossils.

[2] T.Naumovski; Oligomiksijata na Ohridskoto Ezero. Hidrobiološki zavod. Jub. Izd.I .1985. pp.217-226.

[3] B.Tokovic, P.Radoševic, S. Cusiq; Naucno strucen sobir “ Zaštita, zacuvuvanje i unapreduvanje na kvalitetot na slatka voda”, Ohrid, 1982.

[4] S.Aliu : Environmental pollution of chemical nature in Lake Ohrid Toxicological parameters in food chain”. LAP Saarbrucken - Germany. Amazon Distribution GmbH, Leipzig.. Printed in USA and UK 2010. Pp 21 – 23.

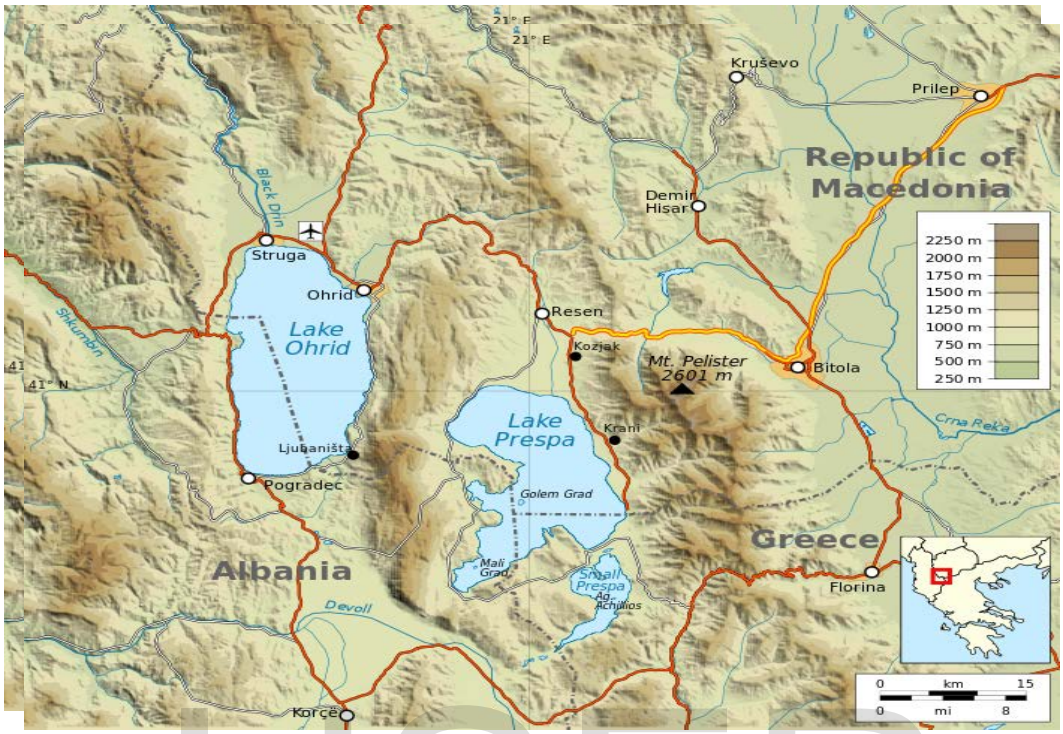

Figure 1. Map of Macedonia – Ohrid Lake And Prespa Lake

Images of Struga

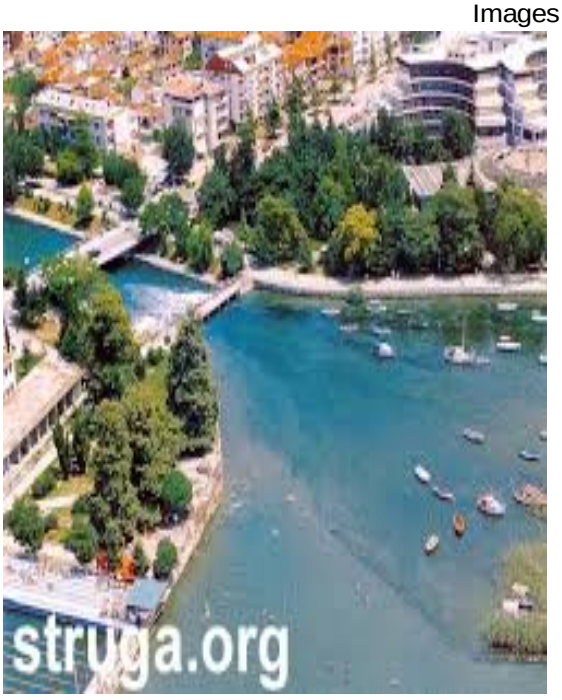

Figure 2. Part of Ohrid Lake and Black Drin – Macedonia

Images of Ohrid

Images of Pogradec

Figure 3. Parts of Ohrid Lake – Albania

MEASURES MASS FOR PROTECTION OF WATER

Protection of living environment is one of the most important fields of our time and, it is more than a logical thing that, the society should show special attention to this field in R. of Macedonia, as well.Heavy Metals, pesticides and anather environmental pollution in the Rivers, which pour in Ohrid Lake - Measures Mass for Protection, This is stated in Act 8 of Constitution of R. of Macedonia where arrangement and space humanity and protection and advancement of living environmental and nature and respect of the norms of international Law, in general is accepted and is stated as one of the fundamental amount of Constitution of R. of Macedonia.Regulation of living environment and nature protection, need to be arranged with other special laws that must have accordance with international norms and Constitution of R. of Macedonia.[5]

Along pouring this rivers brings with itself dangerous materials with which humans and other organisms are in dangerous. This materials can bring change's on water quality and world life, in physical-chemical, biological, radiological, microbiological aspects, etc.

CONCLUSIONS

To achieve proper development of tourism of cities nearby Lake Ohrid, beside regular meeting of the Macedonia – Albania joint committee, to be found other forms of cooperation, such as project for management of sewage, ban of without criterion fishing.

Different meetings to raise population consciousness in this area

Raise of activities organization levels between ecological associations

[5] A.Aliu & E. Stavileci : "Qeverisja Lokale – Njoftime Themelore dhe Shqyrtime Krahasimtare " Tekst Universitar per studente. Tetove – Prishtine 2009.pp.167

Cooperation of local government organs between municipalities of Ohrid, Struga and Pogradec.

REFERENCES

[1] A.Aliu & E. Stavileci : "Qeverisja Lokale – Njoftime Themelore dhe Shqyrtime Krahasimtare " Tekst Universitar per studente. Tetove – Prishtine 2009.pp.167

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[5] S.Aliu : Environmental pollution of chemical nature in Lake Ohrid Toxicological parameters in food chain". Lambert Academic Publishing Book Saarbrucken - Germany. Amazon Distribution GmbH, Leipzig.. Printed in USA and UK 2010.pp.21 – 23.