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MACEDONIAN LAKES

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Introduction

The Republic of Macedonia is a land-locked country located in the central part of the Balkan Peninsula, covering an area of 25,713 km², with about two million inhabitants and with annual water resources per capita of about 3,150 m³.

From the hydrographic aspect, the territory of Macedonia is a unique natural basin in the Balkan Peninsula and wider because more than 80% of the water resources are formed on the territory of the country in four river basins: Vardar, Crn Drim, Strumica, and Juzna (South) Morava river basin. The river basin areas of Vardar and Strumica River gravitate toward the Aegean Sea, covering 87% of the total territory. The river basin area of Crn Drim River gravitates toward the Adriatic Sea (13% of the total area), and the river basin area of Juzna Morava whose territory is insignificant gravitates toward the Black Sea.

There are three major natural lakes in Macedonia: Ohrid, Prespa, and Dojran Lake. The locations of these lakes are shown in the map in Figure 1. All of them are shared with the neighboring countries. The lakes belong to the group of the oldest European tectonic lakes.

Ohrid lake

General

Lake Ohrid is the biggest lake in the Republic of Macedonia and is located in the southwest part of the country, on the border between Macedonia and Albania. It is situated on 695 m.a.s.l., and it covers an area of 358.2 km², out of which 230 km² belongs to Macedonia

and the rest to Albania. The total watershed area covers 2,340 km², out of which 843 km² belongs to Macedonia. The shoreline is 87.5 km long, out of which 56 km belongs to Macedonia, the maximum length is 30.8 km, and its maximum width is 14.8 km. The average depth is 164 m and maximum depth is 289 m.

The Lake is surrounded by the mountains Mokra (Mokra Planina – 1,589 m.a.s.l.) and Jablanica (1,945 m.a.s.l.) on the Albanian side, as it is shown in Figure 2, and by the karstic mountain Galicica (2,255 m.a.s.l.) on the eastern side.

History

Lake Ohrid is Europe's oldest lake (between 4 and 10 Ma ago) and is among the oldest in the world. By its origin, the Lake is a tectonic lake and belongs to the so-called group of "Desaretian lakes," named by an ancient region Desaretia. The Lake was formed in the tertiary period prior to the glaciation.

Due to rich history and unique flora and fauna, Lake Ohrid was declared a UNESCO World Cultural and Natural Heritage Site in 1980.

Geology

The wider zone in this part of the country consists of a complex of Paleozoic metamorphic and magmatic rocks which makes up the foundation bedrock. The Mesozoic rocks from the Triassic Era show types of facies, such as (1) sediments consisting of conglomerates, sands, and clays and (2) carbonate sediments, such as slate, bank and massif limestone, and dolomites. These sedimentary formations are intensely rugged, broken, and karstified. Tectonic forces formed much of the terrain in the Lake Ohrid watershed. It has been shaped by both Hercynian and Alpine orogenesis.

Hydrographic features

Lake Ohrid is the seventh deepest lake in Europe, with a volume of 50.7 billion cubic meters. Most of the water

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