

# Environmental analysis of Varna Lake based on satellite imagery

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The publication presents an in-depth analysis of Varna Lake, Bulgaria. The analysis is based on satellite imagery. Varna Lake is an artificial body of water located in one of the biggest port cities in Bulgaria - Varna. The lake connects to the Black sea and has a major industrial and transportation significance to the city of Varna and Bulgaria in general. As the lake is surrounded by heavily urbanised and tourist-related areas its environmental and ecological properties have substantial importance.

In line with the stated above the presented analysis takes a look into available historical data of satellite imagery - mainly from the various Sentinel missions. The analysis is based on the estimation of several known indexes that can be extracted from the satellite imagery. The presented results provide a summary of the environmental properties of the lake and their change in recent years. The analysis also shows areas where different pollutions accumulate and where they have the most significant effect.

The presented study is part of the KnowWAT project, coordinated by TU-Varna. The project aims to improve the knowledge available for Varna Lake.

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