

Timisoara, 25-26 May

## WATER QUALITY MANAGEMENT OF THE BEGA RIVER

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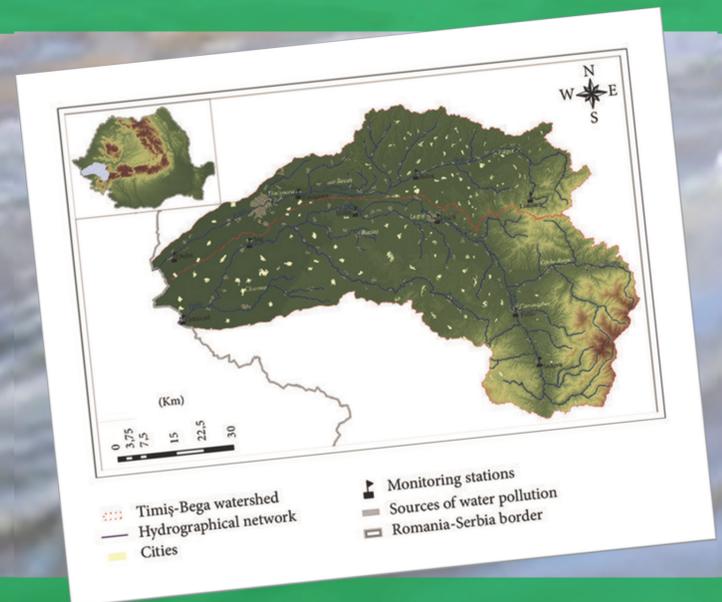
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### Introduction

The environment is a living mechanism with a special complexity, on whose integrity and good functioning all human activity and even life on Earth depends. The philosopher F.BACON warned that "we can never command nature, but we must respect it". The moment man tries to "command nature", it turns against, and the losses are always greater than the benefits. The same happens with water, an essential element of nature and a condition of life on this planet. If man uses it rationally and protects it, it provides him with its resources and allows him to live on Earth. If, instead, they use it irrationally, wasting it and impuring it, it becomes the limiting factor not only of the human species, but even of life. Unfortunately, man often adopts the second option, so experts estimate that before suffering from a lack of fuel or energy and hunger, the population of Earth will suffer from thirst. And our country, as part of this planet, has limited water resources, a phenomenon exacerbated by the prolonged drought of recent years. Moreover, these resources are subject to large variations in time and space.

### Material and method

The Bega River has a total catchment area of 2,241 km<sup>2</sup>, of which 2,211 km<sup>2</sup> are located on Romanian territory (Timiș County). The length of the Bega river is 170 km, of which 168.6 km on the territory of Romania (Timiș County) and the remaining 1.4 km on the territory of the Republic of Serbia and originates from the western slopes of the Poiana Ruscă mountains, below the Padeș peak, from an altitude of 1,150 m. The upper sector of the Bega river has two branches: Bega Poieni and Bega Luncani. The last one listed, Begheiu itself, has its sources upstream from the town of Luncani and flows north to the town of Curtea where it joins the second branch.



### Result and discussions

#### Volume of water captured for agriculture

For agriculture (fish farming, trout farming and irrigation), the following water uses are captured from the Bega river: SC NEW ERA BUSINESS SRL, USAMBV TIMISOARA Farm no.6 Micii Naturalisti,

SC FERME DE LA BRICQUE SRL, SC RAVAMAX TEAM SRL, SC INEU SRL

#### Volume of water captured for industry

For industry, the units that capture water from the Bega River are: LOCAL HEATING COMPANY COLTERM

SC AQUATIM SA TIMISOARA and TOMEȘTI

Analyzing the global characterization elements of the water quality of the Bega river, it results that the water quality is adequate on the river sections located in the upper part of the hydrographic basin, up to the upstream of the Timișoara municipality. Achieving the objective of "good" water quality.

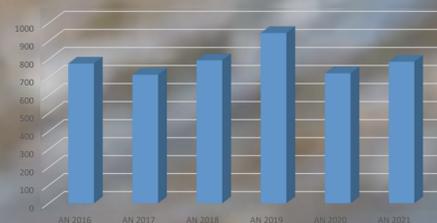
Volumes of water captured for agriculture from the Bega River (thousands of cubic meters)



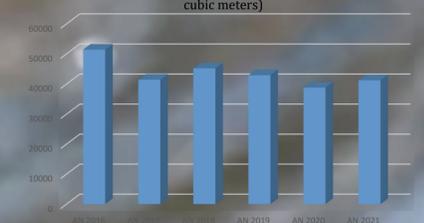
Volumes of water captured for industry from the Bega river (thousand cubic meters)



Volumes of water discharged into the Bega River by industrial units (thousands of cubic meters)



Volumes of discharged wastewater, in the Bega river, originating from human agglomerations (thousands of cubic meters)



### Conclusions

The Plan for the Development of the Banat Hydrographic Area aims to substantiate the measures, actions, solutions and works to achieve and maintain the balance between the water requirements of water users and the water available at the sources, to reduce the negative effects of natural phenomena on life, assets and activities human (floods, excess humidity, drought, soil erosion), use of water potential (production of hydromechanical and hydroelectric energy, navigation, extraction of construction materials, aquaculture, tourism, leisure, landscaping, etc.), determination of environmental requirements regarding water resources

**Acknowledgement:** This research work was carried out with the support of GEOMATICS RESEARCH LABORATORY infrastructure, <https://erris.gov.ro/LABORATOR-CERCETAREGEOMATICA>, BIORESOURCES, ENVIRONMENT AND GEOSPATIAL DATA CENTER from BUASMV "King Michael I of Romania" Timisoara - Faculty of Agriculture. BIORESOURCES