

## ASSESSMENT OF THE ERZENI RIVER QUALITY

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### Abstract:

Albania has plentiful water resources but often their quality is a problem due to pollution, especially in low-lying areas where most of the population lives and most industrial and agricultural activities take place. The main objective of this study has been to assess the quality of water in the lowland of the Erzeni river basin. The monitoring program has been based on the methodology provided in the Water Framework Directive as part of the surveillance program. Based on standard ISO 5667-1 the monitoring program of Erzeni river has been prepared estimating the main physic - chemical parameters and the heavy metals. The program includes the determination of stations, physic- chemical parameters and monitoring period, sampling and sample analysis, recording and data analyzing as well as data reporting. The sampling stations has been defined in the entire length of the referring to the characteristics of the river shore and according to the comprehensive representation criteria of the water quality state, depending on the scale of human activity. At each sampling station it has been measured in-situ such parameters as temperature, pH and dissolved oxygen (DO), chemical oxygen demand (COD), biological oxygen demand (BOD5), nutrients – nitrogen forms NH<sub>4</sub>, NO<sub>2</sub> and NO<sub>3</sub>, phosphorus forms P- PO<sub>4</sub> and P-total. The measurements of these indicators have been performed directly in the stream. By comparing the average results of the analysis it demonstrates a change in the quality of river water Erzen. River water areas located on the upper flow, far from populated areas or less populated areas have a good and sustainable quality. Increased values of monitored indicators are noticed in Ndroqi station continuing up to Rushkulli and Sallmone stations where the pollution chemical indicators results in higher values.

**Keywords:** *water quality, pollution, physic- chemical parameters, heavy metals*