

## Optimisation of the Hydrometeorological-Hydrometric Network: A Case Study in Greece

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**Abstract :** The operation of a network of hydrometeorological-hydrometric stations is basic infrastructure for the management of water resources, as well as, for flood protection. The assessment of water resources potential led to the necessity of adoption management practices including a multi-criteria analysis for the optimum design of the region's station network. This research work aims at the optimisation of a new/existing network, using GIS methods. The planning of optimum network stations is based on the guidelines of international organizations such as World Meteorological Organization (WMO). The uniform spatial distribution of the stations, the drainage basin for the hydrometric stations and criteria concerning the low terrain slope, the accessibility to the stations and proximity to hydrological interest sites, were taken into consideration for its development. The abovementioned methodology has been implemented for two different areas the Florina municipality and the Argolis area in Greece, and comparison of the results has been conducted.

**Keywords :** GIS, hydrometeorological, hydrometric, network, optimisation

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