

## **Cartografía subterrânea dos antigos mananciais de Paranhos e Salgueiros para o abastecimento de água à cidade do Porto (NW de Portugal): contexto e marcos históricos**

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### **Abstract**

This work highlights the evolution of the Porto urban groundwater systems (NW Portugal), namely to evaluate the groundwater supply that might be available nowadays for non-potable practices. In addition, observes retrospectively the main hydrohistorical issues to assess the evolution of the Paranhos and Salgueiros spring galleries catchworks, which shaped for more than five centuries one of the main water supplies to Porto city. A comprehensive bibliographical analysis of historical documents related to groundwater use was performed and is also emphasised the importance of groundwater inventory mapping. Recently several groundwater and hydrohistorical inventories have been performed in Porto urban area, supported by field and desk techniques for urban groundwater and GIS-based mapping. The concept of the urban water cycle stresses an integrated sustainable water resources management related to climatic, geological, physiographic, environmental, and sociocultural conditions. This study points out the importance of the key historical studies for groundwater resources must be based in GIS-based mapping, hydrogeography and hydrogeology to better understand the evolution of urban water supply systems.

**Keywords:** Historical Cartography; Underground Mapping; Urban Groundwater; Water Supply; NW Portugal.