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Seawater Intrusion and Salinization Processes Assesment in a Multistrata Coastal Aquifer in Italy

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ABSTRACT

This paper presents the results of the investigations, driven by different techniques, including environmental tracers and geophysical methods, in the aim of better understand the causes of the current salt-water intrusion in the Pontina Plain, in the south of the Lazio Region (Italy). In the last 50 years many investigation campaigns have been carried out to evaluate the evolution of salt-water intrusion. This is an area with a strong man-made residential and tourist impact and, in the some cases, it is characterized by intensive agricultural practices. Therefore, it can be affected not only by salt-water intrusion, but by the salinization of its groundwater also due to other factors. All these factors have led the Pontina Plain to a groundwater situation which makes the groundwater resource management and the planning of their future exploitation very difficult.

KEYWORDS

Coastal Aquifers; Geophysical Methods; Environmental Tracers; Salinization; Salt-Water/Fresh-Water Relation; Italy

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