

A groundwater overexploitation without sensitive impacts- technical approaches and social perception in central Tunisia
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In Central Tunisia, the Kairouan plain is considered as a region of major potentiality for the agricultural development. In this large region, the supply of drinking water and the demand for irrigation are fundamental priorities, satisfied by the groundwater pumping. This has led to the severe overexploitation of aquifers since decades. Thousands of wells and boreholes drilled to support the expansion of irrigation are a visible expression of the human grip on the environment. Most of them are illicit, which also illustrates the complex equilibrium between the official vision (including a relevant legal framework, and efficient institutions) and the real practices in the field. More generally, the regional hydrology (in both surface and underground compartments) is deeply modified by various types of human activities. For instance water and soil conservation works induced a significant decrease of the river flow in the upstream catchment. But our interlocutors (individual and institutional) have very different perceptions of the impact of the different anthropogenic actions on water resources and on water uses. Many models of surface runoff and groundwater flows, sometimes coupled, have been built in order to represent the changes in the regional water budget, with various levels of complexity and relevance of initial assumptions. They are often of good quality and provide reliable estimates for future scenarios. Critical issues are expected in long-term trends. Nevertheless the water exploitation and management did not really change over the last decades- farmers and regional authorities in charge of the water control do not base their strategies on modelling results. This questions the importance of the scientific input from researchers in the final decision making process.

