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THE IMPACT OF USING MODERN IRRIGATION TECHNIQUES ON THE ANCIENT MOUGHEUL PALM GROVE, SOUTH-WEST OF ALGERIA

Abstract

To resist against a hostile environment, the oases of Saoura developed ingenious techniques of catchment and sharing of water to exploit the rare and precious waters of the groundwater. But the intervention of modern irrigation techniques has disrupted the entire oasis system inside the oasis such as the spring, the palm grove and the ksar. These techniques have overexploited the groundwater supplying the palm grove in terms of quantity and quality.

For centuries, the oases of Mougheul used only the source (with a flow of 25 dm$^3\cdot$s$^{-1}$ in 2001) which is inside the oasis to irrigate the parcels and herds. After the year 2005, the state decided to supply the city of Bechar with drinking water through the catchment field of Mougheul through five modern boreholes, which had a profound impact on the oasis, its surroundings, and the whole artesian source.

In this work, we study the impact of the use of modern catchment systems on the water source and the life of the Mougheul population. By interviewing farmers and landowners about the impact of groundwater scarcity on the oasis. This allowed knowing the current state of the oasis and the reasons for its deterioration.

Key words: irrigation, Mougheul, oasis, palm grove, seguia, traditional system, water source