

THESIS

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2024



Hungarian University of Agriculture and Life Sciences

Károly Róbert Campus

Institute of Agronomy

Agricultural Engineering bachelor's education

PRACTICES OF WATER MANAGEMENT IN MOROCCO

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Gyöngyös

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Practices of Water Management in Morocco

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Morocco grapples with formidable water management challenges, driven by its arid and dry climate, rapidly increasing population, and escalating demands from the agricultural, industrial, and urban sectors. This thesis underscores the urgent necessity for sustainable and effective water management strategies to safeguard the viability of Morocco's agriculture, which heavily relies on irrigation as a lifeline.

My thesis utilizes a detailed research design to thoroughly investigate water management and irrigation practices in Morocco. Both primary and secondary data were extensively analyzed to gain a comprehensive understanding of the subject matter. Primary data was obtained through an in-depth and informative interview with a knowledgeable Ministry of Water and Equipment employee, who provided valuable insights into the intricacies of water management.

By analysing the information collected, I obtained the following results and conclusions. While traditional irrigation methods historically supported Morocco's agriculture, they now prove grossly inadequate in the face of intensifying water scarcity and the detrimental impacts of climate change. Morocco, however, has proactively taken notable strides through government-led initiatives, such as the comprehensive National Water Strategy, which includes a multifaceted approach to address various water-related issues. Additionally, agricultural water subsidies and collaborations with international organizations have played a pivotal role in enhancing water efficiency practices.

To effectively combat these challenges, Morocco has recognized the need for substantial investments in hydraulic infrastructure projects. These projects encompass the construction of dams, reservoirs, and pipelines, which collectively illustrate a robust response to the increasing water management difficulties faced by the country. However, it is important to acknowledge the significant financial burden associated with implementing modern irrigation technologies,

such as desalination and wastewater treatment, which hampers their widespread adoption, particularly among small-scale farmers operating on limited budgets.

Nonetheless, the thesis highlights the immense potential of implementing innovative practices, including the use of drip irrigation and remote sensing technologies, which have been proven to optimize water usage and significantly reduce wastage. Therefore, the incorporation of advanced technologies remains of utmost importance for achieving sustainable water efficiency. However, it is equally essential to emphasize the crucial role of educating and incentivizing farmers to adopt these technologies, as their active participation is paramount in driving and sustaining these transformative changes.

Furthermore, community-based water management approaches have demonstrated remarkable effectiveness in fostering local ownership, ensuring equitable resource access, reducing operational costs, and enhancing maintenance practices. These approaches empower communities to actively participate in the decision-making process and take ownership of their water resources, resulting in enhanced water governance and improved sustainability.

In summary, Morocco's water management strategies must prioritize a comprehensive approach that encompasses amalgamating cutting-edge technologies, sustainable practices, and active community involvement to adapt to the evolving demands of the present and future. Policymakers, stakeholders, and local communities must collaborate and synergize their efforts to fortify water governance, with a specific focus on integrated water resource management. Additionally, investment in bolstering irrigation infrastructure and continuous research and technology development are crucial for the long-term sustenance of water resources and the enhancement of agricultural productivity. By adopting these strategies and implementing holistic approaches to water management, Morocco can safeguard its precious water resources, enhance agricultural productivity, and foster socio-economic growth, ultimately securing a more sustainable and prosperous future in an increasingly water-scarce environment.