PalStudent Journal
A Palestinian Scientific Journal for the Youth

ABSTRACTS: VOLUME 6, SPECIAL ISSUE

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Political Ecology of Water in Palestine: Bio-Technical Aspects of Purified Waste Water and the Possibility of Infrastructural Development under Settler Colonialism in the Post Oslo Period. Wastewater Treatment Plant in Jericho as a Case Study

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Background: Water scarcity in Palestine presents a significant and wide-ranging challenge, exacerbated by limited access to clean water sources, population growth, and political conflict. The establishment of wastewater treatment plants, particularly in Jericho, is vital to addressing this issue. This project focuses on studying the dual relationship between purifying wastewater and assessing its biological suitability for agricultural use in Jericho Governorate. Additionally, it evaluates the economic and social impact of the plant on the residents of the governorate. Consideration is given to the complexities surrounding water resources in the region, including issues of water scarcity, groundwater depletion, and the political context.

Main Research Question: To what extent was the Wastewater Treatment Plant able to solve the problems for which it was created and its impact on infrastructure development in Jericho Governorate since the Oslo Accords until the present?

Objectives:(A) Checking the quality limit of treated water by using the most probable Number Test (MPN) and API20E Test.(B)Undertaking qualitative research including interviews, focused groups, and ethnographic observations to explore its social dynamics and value as illustrated by people in the Palestinian society. (C)To investigate the station's capacity for development under the constraints imposed by the Israeli occupation.

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Methods: The methodologies employed in this research project involve both qualitative and quantitative approaches. Qualitative research methods, such as interviews, focused groups, and ethnographic observations, include understanding perspectives and behaviors related to water recycling in Jericho. Additionally, a survey will be conducted to assess the viewpoints of residents regarding the water recycling process. In the second part of the research, laboratory-based methodologies will be employed to evaluate the quality of treated water and crops, focusing on dates as an example. Two main methods will be utilized: the Most Probable Number (MPN) test for water quality assessment and the API 20E test for microbial identification.

Furthermore, different types of selective and differential media will be utilized for culturing crops to assess their growth and potential contamination.

Results: The Jericho purification plant represents a beacon of hope and a tangible model for development efforts in Palestine amidst challenging conditions of occupation. Its significance extends across various domains, including economic growth and environmental sustainability. By addressing long standing water scarcity issues, the plant not only mitigates environmental challenges but also fosters prosperity in multiple regions of Palestine. In essence, the plant serves as a solution to the water crisis that has plagued Palestine for an extended period.

Keywords: Political ecology, development, infrastructure, Wastewater.

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