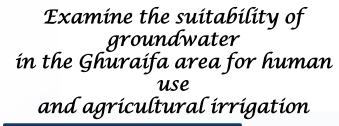


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### Research methods:

- 1. Choose the search problem.
- 2. Determine the location of the study.
- 3. Collecting water samples from the study sites.
- 4. Microbiological examination in cooperation with the Safety and Quality Center Food and water quality department in Al-Buraimi Governorate.
- 5. Applying the appropriate protocols (land cover, water and soil).
- 6. Record the vegetables' growth data (coriander and watercress) every two days, and water them with equal quantities of water.
- 7. Entering data on the program's website (www.globe.gov).
- 8. Compare results and write recommendations.



## **Summary:**

The research aims to study the characteristics of well water in the Ghuraifa area in Buraimi Governorate and the extent of its suitability for human use and agricultural irrigation, where we have observed that people dig wells in their homes and use them to irrigate crops and the desire to use them for cooking and drinking purposes. Therefore, we found that the Globe Program team must conduct a field study to discover the quality of this water.

# **Research questions:**

- 1. What is the quality and suitability of groundwater wells in Ghuraifa for human use?
- 2. What is the effect of groundwater wells in Ghuraifa on the germination and growth of vegetable crops?
- 3. What is the impact of groundwater wells in Ghuraifa on the soil properties







### Abstract:

Through the results of the application of the water protocol and the microbiological examination of the water samples of the wells of the study area, we concluded that it cannot be used for drinking or cooking without conducting an examination in the Food Quality and Safety Center. Salinity of irrigation water and increase plant tolerance, but many problems may arise for the soil and crops by increasing the concentration of dissolved salts. Accordingly, efforts should be intensified to educate people not to dig wells in their homes due to the health damages resulting from their use, and they must also be made aware of the high salinity damage Crop and soil use of this type of water in irrigation needs to experience the type of soil, climate and the type of plant that can bear high salinity and can be used in one agricultural engineers in order to avoid salt damage to the soil and plant.

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