



## ***‘Developing a simplified Decision Support System For land and water management in the Central Jordan Valley to enhance food security’***

### **INTRODUCTION TO THE PROJECT**

While farming is the predominant profession for many Palestinians and Jordanians in the Jordan Valley region, the agricultural system still lacks proper planning and management. Along the region, most water and land resources are utilized for agricultural uses, and therefore, agricultural planning is more challenging under the existing conditions and limitations.

Just like any other arid regions, groundwater is the main water source for drinking, agriculture, and industrial uses, in particular in the Palestinian side where Palestinians have no access to surface water and very limited access to ground water resources. In addition, land degradation is becoming increasingly clear due to both natural and anthropogenic implications.

This research is being conducted in partnership between the Applied Research Institute – Jerusalem (ARIJ) from Palestine as a main applicant (Leader) and the Royal Scientific Society (RSS) from Jordan as a contributor.

The research aims at developing the agricultural system to improve food security in the Jordan Valley region in the light of drought, climate change, water scarcity and land deterioration. Such an objective cannot be achieved without establishing a solid foundation of information that shall be built into an integrated database. The database is one of the significant tools used to enhance our understanding of the current situation of the agricultural system, resources management, technology adoption and crop diversification to support the plant study and research to improve the capacity of this system on food security and economic approach.

Modelling is being utilized as an efficient tool in the agricultural planning and decision making on different levels. This will be done using an optimization model in which the net benefits from main cash crops cultivated in the region will be maximized under the limitations in water and land resources and the pressure of high demand in food due to the population growth.

The study areas selected from the Jordan Valley are: Jericho and Al-Awja in the Palestinian side and Al-Shounah Al-Janoubeyeh in the Jordanian one. Both areas of study lie in the central Jordan Valley and share the same agro-ecological and climatic conditions.

There are 4 objectives to be accomplished within the project:

**Objective 1:** Introducing project objectives, activities, indicators and expected outputs to main stakeholders.

**Objective 2:** Conducting field survey and developing statistical and spatial information database for the targeted area.

**Objective 3:** To create a Simplified crop cultivation – production Decision Support System.

**Objective 4:** to disseminate the developed Decision Support System

The importance of this study is highlighted in focusing in enhancing the developing of future agricultural plans and strategies through optimizing the utilization of the available land and water resources and potential diversification of cropping types and systems to meet the need of population growth.

## MAP OF STUDY AREA

