

Developing sustainable water management in the Jordan valley

Start date: 1997-11-01

End date: 2001-04-30

**Project Acronym:**

**Project status:** Completed

Coordinator

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Description

**Objective:** The main objective of this project is to develop the scientific basis for an integral management plan of water resources and their use in the Jordan Valley.

Specific objectives are :

- \* Development of a GIS-based database containing harmonised sets of population, land use, soil and water data of the Jordan Valley, including consistent sets of maps that project distribution of water sources and users.
- \* Projection of potential available sources and demand of water until about 2030.
- \* Assessment of the hydrogeological conditions, including a conceptual model for assessing environmental and health risks of current practices on soils and groundwater.
- \* Identification of environmental and health risks of water quality degradation.
- \* Evaluation of water collection, storage, delivery and irrigation practices and development of scenarios for water and soil management, regarding different land use practices.
- \* Formulation of an optimisation model for water use, considering utilisation conflicts and potentials of conjunctive water uses.

**Achievements:** Expected Outcome

The outputs of this joint project will provide a scientifically sound basis for better understanding the situation in the Jordan Valley and thus will directly benefit the future development, stability, and sustainability of the region. Final results will provide new knowledge about actual and projected water resources and flows in the regions including supply and demand. Result will allow to identify the impact of surface water diversions, irrigation practices, and water delivery methods on the hydrological budget of the study area thus leading to recommendations for optimizing the water usage in the region that will ensure sustainability and environmental protection.

**General information:** Key activities involve :

- \* Collection and harmonisation of existing data on the water supply and demand system.
- \* Analysis of current irrigation, water collection, and delivery practices.
- \* Application of a set of models for (i) groundwater evaluation, (ii) hydrological budgets and groundwater optimisation and allocation, (iii) environmental risks of wastewater use and fertiliser application. Model results will be integrated into a GIS in order to provide a spatial resolution and visualisation.
- \* Evaluation of model results in view of the expected socio-economic development in the region to provide options for policy makers for the optimisation of management regimes.

Project Details

**Start date:** 1997-11-01

**End date:** 2001-04-30

**Duration:** 42 months

**PJ\_REF:** IC18970161

**Project cost:**

**Project Funding:**

**Programme Acronym:** [INCO](#)

**Programme type:** Fourth Framework Programme

**Subprogramme Area:** Basic natural resources

**Contract type:** Cost-sharing contracts

**URL:**

**Subject index:** Coordination, Cooperation, Environmental Protection, Policies, Renewable Sources of Energy

**Other Indexes:**

Other participants

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