

DEVELOPMENT OF AN INTEGRATED WATER RESOURCE MANAGEMENT (IWRM) TOOL AND EVALUATION OF ENVIRONMENTAL AND SOCIO-ECONOMIC INDICATORS

A Case Study for Jericho City, Palestine

Abstract

The Integrated Water Resources Management (IWRM) Tool is a management tool used to evaluate the over all socio-economic and environmental situation of a specific region for a specific period of time. In general this tool is an interactive computer-based system intended to help decision makers utilize data and models to identify and solve problems and make decisions. In our case, the IWRM tool will be developed for the Jericho city as a case study.

Jericho is a town in the eastern part of the West Bank, located near the Jordan River. Situated 250 meters below sea level, Jericho is not only the oldest city in the world and the oldest continuously occupied settlement in the world, but is also the lowest living town on earth.

The Decision Support System (DSS) for Jericho City is composed of two parts:

- 1- Integrated Water Resources Management (IWRM) Tool
- 2- Decision Support Tool (DST)

The DST will be based on the Drive-Pressure-State-Impact-Response Framework (DPSIR). The DPSIR framework is presented as a system for organizing information that emphasizes cause-effect relationships designed for environmental problem solving.

This paper will attempt to present the DPSIR framework for Jericho City, which will essentially be a methodological framework (or guideline) for decision makers, which summarizes key information (indicators) from different sectors. The expected outcome will be a set of management options, which will ultimately help decision makers develop management plans.