ADVANCED APPLICATION FOR WATER INFORMATION SYSTEM BASED ON GIS IN PALESTINIAN WATER AUTHORITY

B. Obaid [*], M. Latif [†]

[*]IWW Rheinisch-Westfälisches Institut für Wasserforschung gemeinnützige GmbH ,
Institute of Geowissenschaften, Johannes Gutenberg-Universität, Mainz.
Justus-von-Liebig-Str.10-, 64584 Biebesheim , Germany
e-mail: Obaidbasheer@hotmail.com, web page: http:// www.iww-online.de

† Paletinian Water Authority
e-mail: mahlatif@yahoo.com

Summary. Water Sector has a huge amount of data stored in various databases. These data need processing and analyzing to create comprehensive water information system to provide and support water sector planners, managers, and decision makers.

In Palestinian Water Authority (PWA) there is various data as rainfall, Groundwater quality and quantities, water production, wastewater quality and quantities which create necessity to develop comprehensive water information system able to provide water sector stockholders with accurate water information

This paper displays new technique about the integration of applications of geographic information systems and Water Information System in the PWA Offices in Gaza Strip and West Bank which have been used to provide knowledge of water resource management, Licenses Management and Technical issues. The contribution of geographic information systems to the generation, management, and delivery of spatially distributed data, the advent of new geographic information systems tools, and the role of systems in water resource decision support systems are designed. Also this paper displays the implementation steps of the project and shows the importance of GIS technique in the PWA Departments as a decision support system DSS.
In addition the Link between ArcGIS 9.1 and Oracle Enterprise Edition10g using ArcSDE Server and Oracle Spatial to integrate the PWA system has been explained.

Moreover, expected water applications have been illustrated under the PWA system such as Groundwater data model, Surface water data model and integrated information system and supporting infrastructure.