

## Middle East regional study on water supply and demand development

Concluding Report prepared by Israeli, Jordanian and Palestinian Study Teams  
February 1998

*Sponsored by the Government of the Federal Republic of Germany,  
Ministry for Economic Cooperation and Development (BMZ),  
implemented in cooperation with the German Agency for Technical Cooperation (GTZ)*

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Joint statement, Preface, Origin of the study, Basic objectives and Organisational set-up are given here.

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### 1. Joint statement

The joint Steering Committee of the study, composed of the members of the Local Steering Committees from the three participating core parties Jordan, Israel and the Palestinian Authority, is issuing this Joint Statement at its final meeting, which constitutes the conclusion of the study, on 18–19 February 1998 in Eschborn, Germany.

As part of the programme adopted by the Multilateral Working Group on Water Resources of The Middle East Peace Process, the Government of the Federal Republic of Germany has sponsored the Middle East Regional study on Water Supply and Demand Development. The study was conducted by three Study teams — one from each core party — under the guidance

of Local Steering Committees and with professional, administrative and financial support from the Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ).

As one important outcome of this study, the study teams have jointly identified the following five regional priority activities recommended to be implemented in the short-term, and in order to prepare the ground for decisions on the necessary medium- to long-term measures for mobilizing new and additional water for the region:

- Joint development of prototype desalination plant(s) at the Mediterranean and the Red Sea
- Comparative study of the Mediterranean to Dead Sea and Red Sea to Dead Sea water transfer/desalination schemes
- Pre-feasibility study at large-scale seashore desalination plants

- Pre-feasibility study of intra-regional conveyance systems for the distribution of new and additional water
- Study on regional institutional set-ups

Water scarcity is already affecting the region and is continuously increasing and expanding. Although each core party has some limited potential of unexploited local water resources and can improve the efficiency of water use, the future water gap can only be covered through the provision of new and additional water to the region. The study, which was conducted as a joint effort, has demonstrated the importance of such a joint regional effort and its contribution to narrowing the gap in perceptions, experiences and expectations. This joint effort should, therefore, continue and the recommended pilot projects and studies should be implemented jointly. Irrespective of the actual size of the future regional net water gap, regional cooperation in the development and management of additional water resources is not only necessary but will also be beneficial for all regional parties — a typical “win-win” situation.

The German Government is kindly requested to assist in identifying support for initiating future actions resulting from this study. Moreover, the Joint Steering Committee calls upon the donor community to help raise the large amounts of money needed to supply to the region the minimum additional volumes of water required for the life of the region’s inhabitants.

As one of these actions, the core parties will, within the next three months, develop a project proposal (or project proposals). Based on the recommendations from the Concluding Report of the study, the project(s) will be in the field of desalination. Requests for prototype desalination plants for Gaza and Aqaba will be the subject of said proposals. Cooperation among the core parties with respect to development of know-how in the field of desalination will be highlighted.

The regional approach towards integrated water resources development and management requires the participation of all parties concerned. Therefore, Syria and Lebanon are invited to join such activities at the earliest possible date.

The members of the Joint Steering Committee have signed this Joint Statement in the presence of and with the support of representatives of Germany and the Gavelholder of the Multilateral Working Group on Water Resources. At the successful conclusion of the study, they take the opportunity to express their special gratitude to the Government of the Federal Republic of Germany for facilitating and supporting the study activities during the last four years since 1994.

February 19, 1998, Eschborn, Germany  
 Jordanian Steering Committee  
 Palestinian Steering Committee  
 Israeli Steering Committee

## 2. Preface

The report represents the Concluding Report on the Middle East Regional Study on Water Supply and Demand Development submitted to the Multilateral Working Group on Water Resources (MWGWR) of the Middle East Peace Process. It summarizes and assesses the results of a joint effort of the three core parties, the State of Israel, the Hashemite Kingdom of Jordan and the PLO for the benefit of the Palestinian Authority, facilitated by the Ministry for Economic Cooperation and Development (BMZ) and the Deutsche Gesellschaft für Technische Zusammenarbeit GmbH (GTZ). This report is based on the findings of the three study teams as presented in their various reports submitted to the Local Steering Committees and GTZ. All reports are the sole responsibility of their respective authors.

The three study teams wish that the readers of the final document see it as their joint effort. Although GTZ devoted substantial time and resources for its preparation and production, the report is written from the perspective of the three study teams and was reviewed by representatives of the three core parties. GTZ/CES should be seen as involved only to the extent of assisting the three core parties.

During the course of the study, various water demand scenarios were developed and considered by the three teams including a scenario proposed by GTZ/CES. The three study teams decided to use the consolidated long-term “base” water demand projections and the related sub-regional fresh water gaps, and agreed on the profiles and costs for various development options; various regional development scenarios (“combined” options) under different technological and political conditions; the elements of a regional water resources strategy; and key regional activities to be further pursued in the short-term as a basis for medium- and long-term decisions. In addition, the JOR and PAL teams assessed the various potential local supply and demand development options for their systems in terms of quantity, quality and costs.

During the three phases of the study GTZ/CES made commendable efforts, not only in the stocktaking of data and study reports, but also through promoting joint team efforts. Throughout the planning process, it was demonstrated that cooperative efforts can achieve the objectives of the study. While many solutions have been proposed to deal with water shortages in the region, the study was the first attempt to prepare a joint overall database and a comparative analysis of the main options including the immobilisation of new and additional water for the region.

It was shown throughout the study that water scarcity is aggravating in the region. As a result, immediate actions are needed towards proper planning and implementation steps should be

initiated soonest. This is particularly important in the case of Gaza.

The first steps needed immediately are the implementation of several prototype projects and studies that will help the regional parties to develop new options including coastal desalination, intersea desalination scheme and sea import by tankers or large bags.

In looking ahead and forecasting the implementation steps, it is assumed that the peace process in the Middle East will continue and a comprehensive peaceful solution in the region will be reached, including agreements on water-related issues and on regional cooperation. It is also understood that this report and contents thereof will not affect any bilateral agreements.

A regional approach towards water resources planning and development furthermore requires the participation of all core parties concerned. The MWGWR has invited Syria and Lebanon to join such activities at the earliest possible date.

The joint team wishes to express their thanks to the German Team GTZ/CES: Dr. Dedo Geinitz, Ms. Ines Dombrowsky, Dr. Horst-Rüdiger Frantz, Mr. Jürgen Krombach, Dr. Ulrich Küffner, Dr. Klaus Lindner and Mr. Yousif Toma for their valuable assistance throughout the study phases, and to all the members of the three study teams without whose devoted time and efforts the study would not have been completed.

The joint team wishes to express their thanks to the Joint Steering Committee: Messrs. Ram Aviram and Moshe Ysraeli of the Israeli Steering Committee; Dr. Hazim El-Naser and Mr. Ali Ghezawi of the Jordanian Steering Committee as well as Mr. Koussai Quteishat, Head of the Jordanian Delegation to the MWGWR; and Dr. Riyadh El Khoudary and Mr. Fadel Kawash of the Palestinian Steering Committee who contributed to the study and the reports through their careful review and helpful advice and to all who

contributed to the study and its successful conclusion.

Israeli Team Leader	Dr. Dan Hamberg
Jordanian Team Leader	Dr. Sawsan Himmo
Palestinian Team Leader	Dr. Marwan Haddad

### 3. Origin of the study

In the context of the Middle East Peace Process, in 1992 a Multilateral Working Group on Water Resources (MWGWR) has been set up as a platform for addressing water related issues in the region. As a contribution to the activities of the MWGWR, the German Government proposed in 1993 to sponsor a Middle East Regional Study on Water Supply and Demand Development. The Deutsche Gesellschaft für Technische Zusammenarbeit GmbH (GTZ), the German Institution for Technical Cooperation, was subsequently charged to implement the study on behalf of the German Government.

### 4. Basic objectives

The main objectives of the study, as stated in the terms of reference (March 1995), were:

- to elaborate specific proposals for the provision of additional water resources on the basis of a comprehensive demand forecast; and

- to develop a concept for coordinated future management of all regional water resources.

### 5. Organisational set-up

The study was conceived as a joint and coordinated activity of local study teams of the three participating core parties (Israel, Jordan, PLO for the benefit of the Palestinian Authority), working separately but according to identical terms of reference and in a coordinated manner through the assistance of GTZ. Syria and Lebanon were invited to participate. They have not joined, but had a standing invitation to do so.

The core parties established Local Steering Committees (LSC) to set up mechanisms for the successful implementation of the study, and to provide guidance to the study teams in policy matters. Furthermore, the three LSC formed a Joint Steering Committee (JSC) to maintain the regional approach of the study, to ensure a close cooperation of the study teams, and to jointly discuss the study findings through several JSC meetings.

Information on the full Concluding Report and Evaluation Report can be obtained from the Deutsche Gesellschaft für Technische Zusammenarbeit GmbH (GTZ), Dag Hamarskjöld-Weg 1–5, Postfach 51–80, D-65726, Eschborn, Germany.