



Palestinian National Authority
Palestinian Water Authority



السلطة الوطنية الفلسطينية
سلطة المياه الفلسطينية



Sustainable Management of the West Bank and Gaza Aquifers

UNIVERSITY OF
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Development of a Framework for Evaluating SUSMAQ Management Options

SUSMAQ- SUS # 24 V 1.1

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SUSTAINABLE MANAGEMENT OF THE WEST BANK AND GAZA AQUIFERS

Proposal:

Development of a Framework for Evaluating SUSMAQ Management Options

SUSMAQ-SUS #24 V1.1

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CONTENTS

- 1. Background and Objectives**
- 2. The Palestinian Challenge**
- 3. Framework of the management tool**
 - Description of the framework**
 - Elements of the framework**
 - Society and stakeholders**
 - Alternative futures**
 - Identification of management options**
 - Sustainability assessment**
 - Macro and micro analyses**
 - Analysis for decision makers**
 - Development of a Management Tool**
- 4. Activities of Components 8 and 9**
- 5. Bibliography**

Figure 1 Framework for the proposed management tool

Figure 2 SUSMAQ Workplan : Activities (Tasks)

Figure 3 SUSMAQ Workplan : Deliverables

Acknowledgements: Some ideas from the working note prepared by Alan MacDonald and Geoff Parkin are included in this document. Also, this document takes into consideration the ideas presented in the Cyprus technical workshop and the work developed by Alan Nicol, Miles Burton and Roger Calow about the Management Options Component of the SUSMAQ Project. The Palestinian challenge (section 2) is presented only to provide an idea about what needs to be considered. It is just an illustration and hence the ideas and the numbers are presented for demonstration purposes only and were taken from the literature.

1. Background and Objectives

Groundwater is the primary source of water for the Palestinians in the West Bank and Gaza Strip. The groundwater resources of Palestine are extracted from wells and springs. The surface water in Palestine is mainly from numerous seasonal wadis, as well as the Jordan River, which is currently controlled and used exclusively by the Israelis. Palestine is among the countries with the scarcest renewable water resources per capita due to both natural and artificial constraints, amounting to only 100 cubic meters per capita per year. This amount is far below the per capita water resources available in other countries in the Middle East and the World. At present, water demand exceeds the available water supply. The gap between water supply and water demand is growing due to population growth, higher standard of living, and the need to expand irrigated agriculture and industrialisation. This growing gap calls now for structural and non-structural measures for the mobilisation of any additional conventional and non-conventional water resources, and for efficient management of these resources. These are called the Palestinian ***Management Options***.

This gap, if not bridged in a timely sustainable manner, will inevitably have serious adverse effects on future Palestinian socio-economic and commercial development. Based current estimates, Palestinians should be able to develop an additional amount of 650 Mcm/year from the different resources by the year 2020. Bridging the growing gap will be totally dependent on the development options and the action plans to be implemented (based on 250 Mcm/yr as a current amount).

There is a great need to:

- Identify the possible management options;
- Evaluate these options using a management tool;
- Make an evaluation based on sustainability measures reflecting social, environmental and economic points of view;

and finally to

- Recommend guidelines for sustainable water resources management in Palestine.

The issue of sustainable water resources development in Palestine is complex. This is because the development of additional water sources is restricted and based on the approval of the Israelis, since Palestinian water rights are still a subject to be determined and defined within the results of the Final Status Negotiations. In addition to the scarcity of water resources under the existing political constraints, the protection of the water resource environment is another constraint that makes it difficult to develop sustainable demand/supply scenarios for Palestine which has an unclear socio-economic future.

The purpose of this document is to propose a framework for evaluating management options within the SUSMAQ project. The framework will be developed within Component 9 of the project, and will integrate supporting technical activities undertaken within Components 1 to 7, and socio-political/economic activities undertaken within Component 8. This document defines the overall framework for the proposed management tool, and the activities within Components 8 and 9.



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