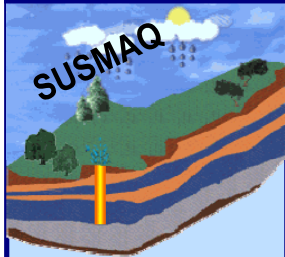




Palestinian National Authority
Palestinian Water Authority



السلطة الوطنية الفلسطينية
سلطة المياه الفلسطينية



Conceptual Model of Wadi Natuf Groundwater Recharge

Sustainable Management of the West Bank and Gaza

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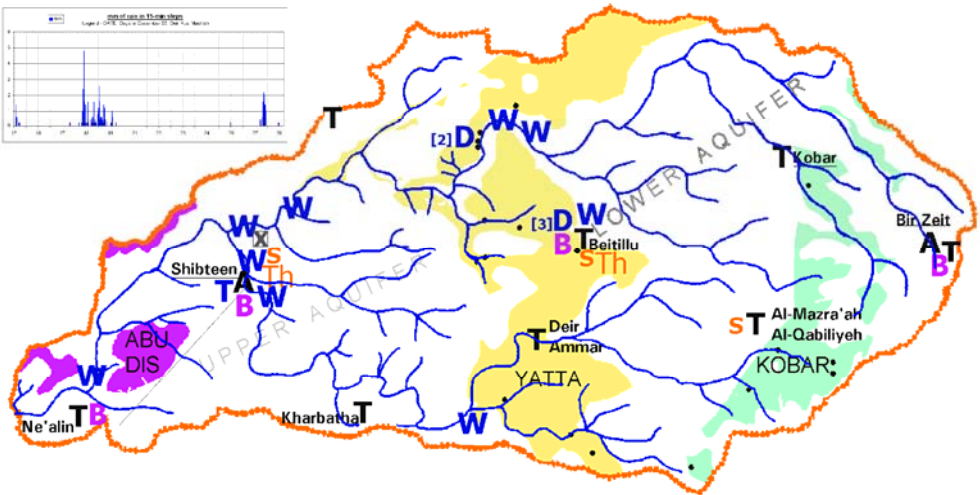
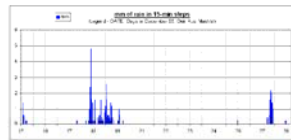


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Final Report
SUSMAQ-NAT # 64 V 0.3

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<p>Disclaimer</p> <p>This report is an output from the Natuf Recharge Estimation Component, part of the SUSMAQ project.</p> <p>The findings, interpretations and conclusions expressed are those of the authors (the Team) and should not be attributed to other collaborators on the SUSMAQ project.</p> <p>The project does not guarantee the accuracy of the data included in this publication. Information shown in maps, figures, tables and the text does not imply any judgment on legal status of territory or the endorsement of boundaries. The typescript of this paper has not been prepared in accordance with procedures appropriate to formal printed texts, and the partners and funding agency accept no responsibility for errors.</p>	<p>Contact Details</p> <p>Professor Enda O’Connell Project Director University of Newcastle upon Tyne Tel: 0191 222 6405 Fax: 0191 222 6669 Email: P.E.O’Connell@ncl.ac.uk</p> <p>Engineer Fadle Kawash Deputy Chairman Palestinian Water Authority Ramallah, Palestine Tel:02 295 9022 Fax 02 2981341 Email: fkawash@pwa-pna.org</p> <p>Dr. Amjad Aliawi Operations and Technical Manager Team Leader, Hydrogeology and Flow Modelling Sunrise Building Al-Irsal Road Al-Bireh/Ramallah, Palestine Tel. 02 298 89 40 Fax. 02 298 89 41 e-mail: a.s.aliawi@susmaq.org</p>
<p>The SUSMAQ Project</p> <p>The aim of the project is to increase understanding of the sustainable yield of the West Bank and Gaza aquifers under a range of future economic, demographic and land use scenarios, and evaluate alternative groundwater management options. The project is interdisciplinary, bringing together hydrogeologists and groundwater modelers with economists and policy experts. In this way, hydrogeological understanding can inform, and be informed by, insights from the social sciences. The results of the study will provide support to decision-making at all levels in relation to the sustainable yield of the West Bank and Gaza aquifers.</p> <p>The project runs from November 1999 to October 2004, and is a partnership between the Palestinian Water Authority, University of Newcastle and British Geological Survey. The project is funded by the United Kingdom’s Department for International Development (DFID).</p>	<p>Recharge Estimation in Wadi Natuf</p> <p>The Recharge Estimation in Wadi Natuf catchment area is part of the SUSMAQ project. The Recharge Assessment focuses on a catchment stretching East of Birzeit down to the Green Line. It aims at a better understanding of the mechanisms that control recharge as well as its quantities.</p> <p>The report provides an overview over the conceptual model approach. It lays out the main features and mechanisms controlling natural groundwater recharge in Wadi Natuf.</p>
<p>Bibliographical Reference</p> <p>Conceptual Model of Wadi Natuf Groundwater Recharge. Working Report No.: SUSMAQ-NAT #64 V0.3. Sustainable Management for the West Bank and Gaza Aquifers, Palestinian Water Authority (Palestine) and University of Newcastle upon Tyne (UK).</p> <p>Study Team and Authors: PWA/SUSMAQ: Clemens Messerschmid ,Research and Coordination Advisor, Abbas Kalbouneh – Hydrogeology, Researcher, Eng. Omar Zayed, Eng. Emad Sayfi. Newcastle University and BGS/SUSMAQ: Dr. Geoff Parkin - Modelling Advisor, Dr. Andrew Hughes- Recharge Modeller, Dr. Amjad Aliawi – Team Leader, Dr. Bruce Dudgeon – Hydrogeology and Field Instrumentation Advisor.</p>	<p>Feedback</p> <p>The SUSMAQ and PWA teams will appreciate any feedback on this report. Feedback should be sent to the above contacts.</p>

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