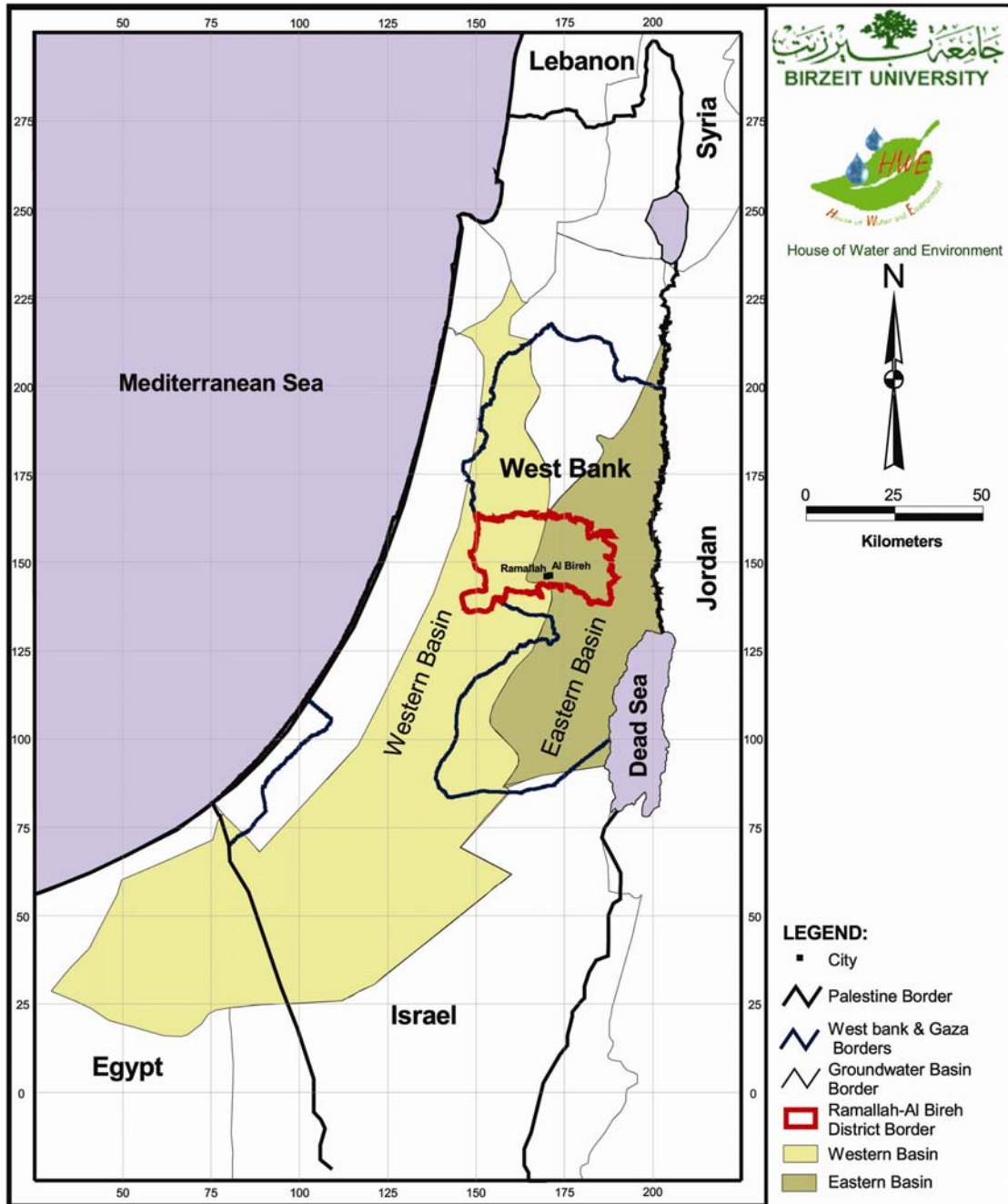


**“Influence of Urban Development on the Quality of Groundwater”
Guidelines Design for Groundwater Protection**

RAMALLAH – AL BIREH DISTRICT



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ABBREVIATIONS

Ein	Spring
ESW	Ein Samia Well
ARIJ	Applied Research Institute-Jerusalem
GIS	Geographical Information System
HSI	Hydrological Service of Israel
HWE	House of Water and Environment
IGRAC	International Groundwater Resources Assessment Centre
JSET	Joint Supervision Enforcement Team
JWU	Jerusalem Water Undertaken
m asl	meter above sea level
m bgl	meter below ground level
Mcm/yr	million cubic meters per year
Mekorot	Israeli Water Company
mm/yr	millimeter per year
MOPIC	Ministry of Planning and International Communication
PCBS	Palestinian Central Bureau of Statistics
PHG	Palestinian Hydrological Group
PoWER	Partnership for Water Education and Research
PWA	Palestinian Water Authority
SUSMAQ	Sustainable Management of West Bank and Gaza Aquifers
Wadi	Valley
WBWD	West Bank Water Department
WQMP	Water Quality Monitoring Program
WSI	Water Studies Institute
WWTP	Wastewater Treatment Plant

CHAPTER ONE INTRODUCTION

1.1 Motivation of PoWER Research

1.2 Research on Groundwater Pollution Protection

1.3 Objectives of this Case

The main research objective is to develop guidelines for governments, water managers, spatial planners and environmental managers in order to understand the impacts of polluting activities on groundwater resources in urban catchments and use them to develop strategies for the groundwater protection.

The specific research objectives are:

- 1 Identify the impact of urbanization on the quality of storm water in urban drainage systems.
- 2 Identify and prioritize the type of contaminants and their associated sources that present a threat to groundwater, the environment and health in each partner urban catchments.
- 3 Establish a data information system on groundwater pollutants in each partner city.
- 4 Identify the most vulnerable zones (in terms of intrinsic and specific vulnerability) where urban development should be strictly controlled or even prevented.
- 5 Formulate strategies for better understanding the impacts of polluting activities on groundwater resources in urban catchments.
- 6 Develop best practice guidelines for groundwater protection in urban areas.
- 7 Develop a groundwater quality monitoring program.



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