

TECHNICAL REPORT NO. 2
Criteria for the
Preparation of Groundwater Vulnerability Maps

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groundwaters downstream of extensively cultivated areas. Groundwater quality is also largely affected by other land uses, such as industrial sites, oil storage/filling facilities, sewage effluents (treated and untreated sewage), waste disposal sites (legal/illegal), etc. This is noticed especially in urban and heavily industrialized areas, such as the Amman-Zarqa region. In order to protect and conserve Jordan's groundwater resources measures for the protection, such as the establishment of groundwater protection zones are immensely important. To help implementing such protection zones the project 'Groundwater Resources Management has proposed a National Guideline for the Delineation of Groundwater Protection Zones (Technical Report No. 1). Based on this guideline protection zones may be defined, in which certain activities and land uses are allowed or restricted. However, to provide an effective protection of the groundwater resources, it is also important to convince the land use planning authorities to take the issue of groundwater protection into consideration when deciding about locations and conditions for the establishment of facilities and activities which are possibly hazardous to groundwater, such as waste disposal sites, sewage treatment plants and sewer mains, industrial and commercial estates, storage facilities for oil products and toxic hazardous substances, etc. By locating such sites in areas where, and treating and discharging effluents in a manner that contamination of the groundwater resources cannot occur, a deterioration of the groundwater resources can be actively avoided. The preparation of groundwater vulnerability maps helps to create awareness among land use planners for the issue of groundwater protection.