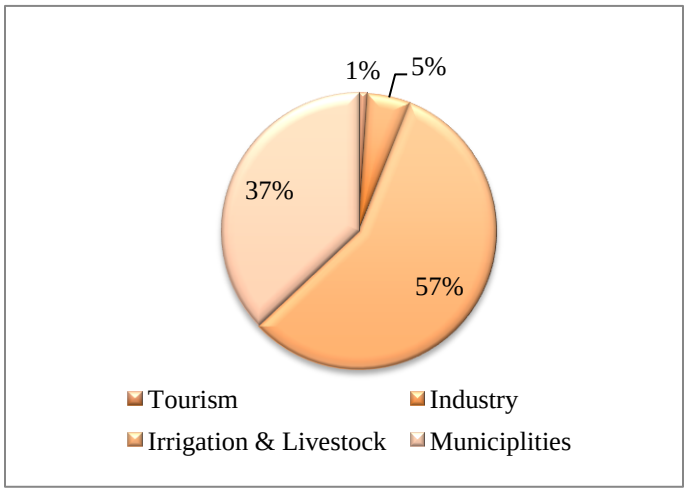
الجمعية العلمية الملكية
Royal Scientific Society

"WATER RESOURCES IN Al-Shouneh Al-Janoubeyeh"

FACTSHEET

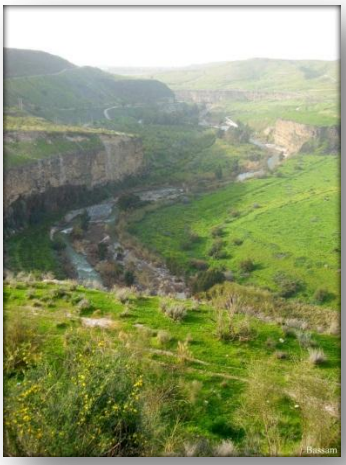
Jordan is facing a future of very limited water resources, among the lowest in the world on a per capita basis. Water scarcity is the single most important natural constraint to the country's economic growth and development. The annual per capita share of water for all uses is estimated at 145 m3 and is projected to decline to only 91 m3 by the year 2025 putting Jordan in the category of having an absolute water shortage.

Municipal uses represent about 37% of the total consumption, irrigation uses represent around 57%, while industrial and tourism uses are estimated at 5% and 1% respectively.



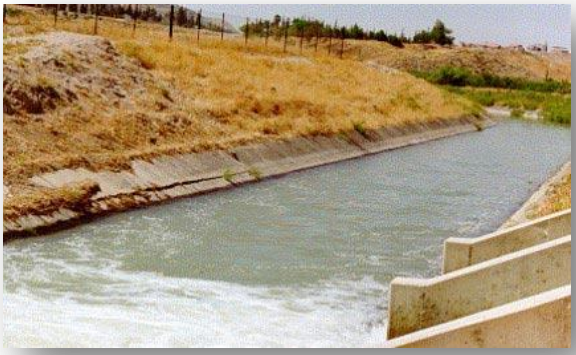
Due to the limited rainfall in the study area (120 mm in 2000-2001 and 90 mm in 2012-2013), agriculture activities rely mainly on irrigated agriculture.

Main surface water resources in the study area:



- **Yarmouk River:** The Yarmouk River flows at the borders of Syria and Jordan. The total catchment area of the river measures 6,790 km². The river flow during 1950–1976 averaged 400 MCM/year. Recent measurements of flows and estimates of riparian extractions indicated a decline in the river discharge.

- **King Abdallah Canal (KAC):** The major water carrier in the Jordan Valley is KAC. Water diverted to it from the Yarmouk River, however, the KAC is



also fed with water from side wadis and dams built on Wadi Arab and the Zarqa River, and, since 1995, from Lake Tiberias in Israel.

- **Wadi Kafrain**: The wadi drains an area west of Amman with an extent of 189 km² lying at elevations ranging from 1,200 m above sea level down to areas lying below sea level in the Jordan Valley. The average discharge of the wadi is 6.4 MCM/year, consisting of 1.6 MCM/year flood flow and 4.8 MCM/year base flow. In 1968, a dam was constructed at the entrance of the wadi into the Jordan Valley with a capacity of 3.8 MCM (capacity

was raised to 7 MCM). This dam now serves as a storage facility for irrigating downstream lands and for recharging the underlying aquifer.

Main ground water resources in the study area:

- About 1035 groundwater wells are registered in the records of the Ministry of Water and Irrigation (MWI). Most of these are operated by the private sector under direct supervision of MWI, while few are operated by the MWI.

The Jordan Valley Authority (JVA) manages surface water resources in the Jordan valley (and the study area), and the Water Authority of Jordan (WAJ) manages ground water.

About (51%) of farmers in the study area relies mainly on groundwater for irrigation, while (33%) receives water from KAC, (and 16%) irrigates from Kafrain Dam water.

Quality of KAC water in the study area is getting enhanced since several years. This is mainly attributed to the fact that the wastewater treatment system at As-Samra treatment plant was upgraded. Effluent of As-Samra plant is being discharged to Zarqa River and flows to King Talal Dam that discharge water to KAC.

Farmers are satisfied with quality and quantities of irrigation water. However, most of them did not analyze for water quality. They depend on information provided by JVA and the National Center for Agricultural research and Extension (NCARE).

Concerted action that included the involvement of stakeholders was initiated in the Jordan Valley whereby farmers on a lateral main were given jurisdiction over irrigation water distribution among themselves. Since that time, Water Use Associations (WUAs) were established, currently there are (3) WUAs operated in the study area (WUAs number 95, WUAs number 91, and Al- Rama WUAs).

WUA #95 stated that the water is supplied to farmers 6 days per week for 5 hours per day. There are two lines of supply, pumped which provides 6 lps and flowing which provides 9 lps. The reason for the lower pumbed amount is the installation of flow adapters. There are more pump lines than free flowing lines and the number depends on the geographical location of the area irrigated.