



Socio-economic and political context of Integrated Water Resources Management in the Lower Jordan Valley

Abdel Rahman Tamimi¹, Bernd Rusteberg², Subhi Samhan³, Hazem Kittani³, Issam Nofal⁴, Muath Abu Sadah^{3/5}, Torsten Lange⁶

KEY FINDINGS

Public participation in policy formulation is the key issue for integrated water resources management.

Regional cooperation is the major possibility to meet the growing water demand; it will enhance the socioeconomic development of Palestinians.

The socio-economic development is the shortest way and the precondition for peace and regional stability.

Good governance and socioeconomic incentives to the farmers will guarantee sustainable management.

The Jordan River basin has a large potential to be a good model for the Water-Energy-Governance-Food nexus.

A plan for an Interministerial and Cross-sectoral IWRM Committee for the Palestinian Territories as basis for discussion has been developed and provided to PWA and MoA.

Objectives

The main objective of the conducted work is to highlight the socio-economic and the political frame of the integrated water resources management (IWRM) in the Lower Jordan Valley.

Lower Jordan Valley importance for the Palestinians

The Palestinian Jordan Valley extends from Jericho in the south to Bisan in the north and covers an area of about 1.5 million dunums, which equal 25% of the total area of the West Bank. The Jordan Valley is a unique region that has attracted visitors from around the world. It has unique geographical and environmental characteristics unparalleled anywhere else. Moreover, the Dead Sea is the lowest and most saline body of water in the world. The sea itself is abundant in minerals of therapeutic value. Many tourists seeking to heal various skin, artery, and joint ailments are attracted to the region. The region has 81 tourist sites, including those of significant archeological and natural value. It is also the oldest continually inhabited area in the world. The Jordan River is one of the most outstanding symbols of the „Holy Land“ and together with its surrounding area a natural heritage to the people all over the world. The Jordan Valley is not only considered the food basket for Palestinians, but also bears additional economical potential due to export of various crops, e.g. dates (Figure C.2 1).

The large potential for urban development of the Jordan Valley area is very suitable for the expected demographic expansion for the West Bank. It is the only remaining Palestinian area that can absorb large scale urban development.

Diagnosis of the situation

Currently, groundwater is the main source of water for Palestinians. The magnitude of renewable groundwater resources

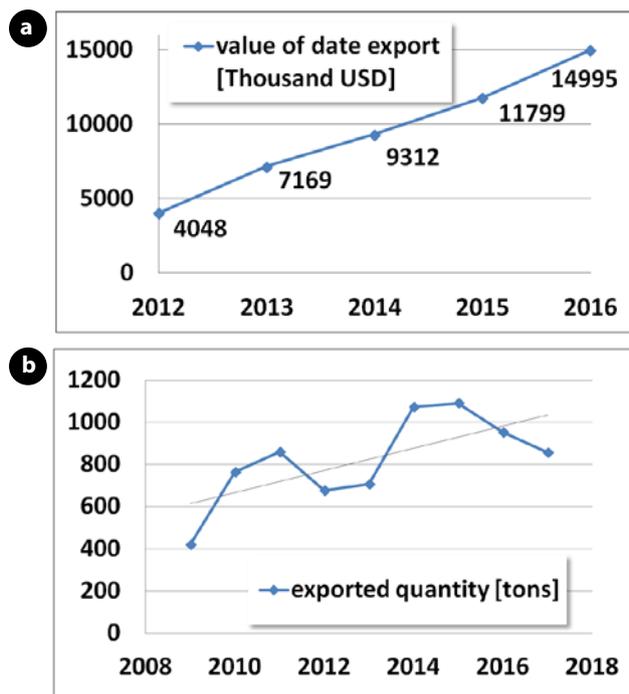


Figure C.2 1: Realized annual exports of agricultural products from the Jordan Valley; (a) value of date exports 2012-2016, (b) quantity of exported agricultural products in tons 2008-2017

in the Palestinian Territories varies from the official 729 MCM/year (679 MCM/year in the West Bank and 50 MCM/year in the coastal aquifer of Gaza) that is stated in the Oslo interim agreement. Although the official value for the West Bank appears to be overestimated, it was not re-evaluated since then. According to the agreement the annual renewable groundwater resources for the West Bank is distributed over the three major aquifer basins with replenishment volumes of 362 MCM, 145 MCM, 172 MCM for the Western, the North-Eastern and the Eastern basin, respectively. In addition, surface water, represented mainly by the Jordan River, is not yet accessible to the Palestinians due to Israeli control and imposed restrictions. However, the fresh water flow rate through the river is quite low due to the limited release from Lake Tiberias.

Challenges

To develop well harmonized concepts for institutional development and capacity building as part of the IWRM implementation process the challenges or leverage points were derived from the assessment of the initial situation, the overall objectives, and the necessary participative discussion process with the affected decision makers, stakeholders, and academia.

The main national interest is how to meet the demand of the Palestinians in the Jordan valley under uncertain socio-economic, environmental, and political conditions. The challenges are manifold:

- > fragmentation of governance,
- > zonal fragmentation of administration and control in the West Bank,
- > general uncertainty of the political, economic and demographic development,
- > unequal accessibility and distribution of water,
- > groundwater over-pumping caused by insufficient regulation or insufficient enforcement of regulations,
- > weak role of the tariff in the efficient use and the awareness of the value of water,
- > generally high risks for groundwater pollution due to difficult legal implementation of groundwater protection-based vulnerability,
- > no proper mechanism for stakeholder participation competition among different water sectors,
- > social and cultural perceptions.

Summary and Recommendations for Actions and Measures

According to the identified challenges the Palestinian Authority has to define and implement adequate measures and action plans. It is important to properly inform policy makers about the water related problems and challenges and to urge politicians to keep the water issue high in the political agenda. This is especially true also for the obtainment of the Palestinian Water



Figure C.2 2: Recent and continuous optimization and intensification of land use and agriculture in the Jericho area, Lower Jordan Valley: (a) Jericho wastewater treatment plant, (b) dates farm, (c) solar energy farm installation of the Jerusalem District Electricity Company in Jericho.

Rights in their resources in the realistic prospect of a full Palestinian sovereignty in not too far a future.

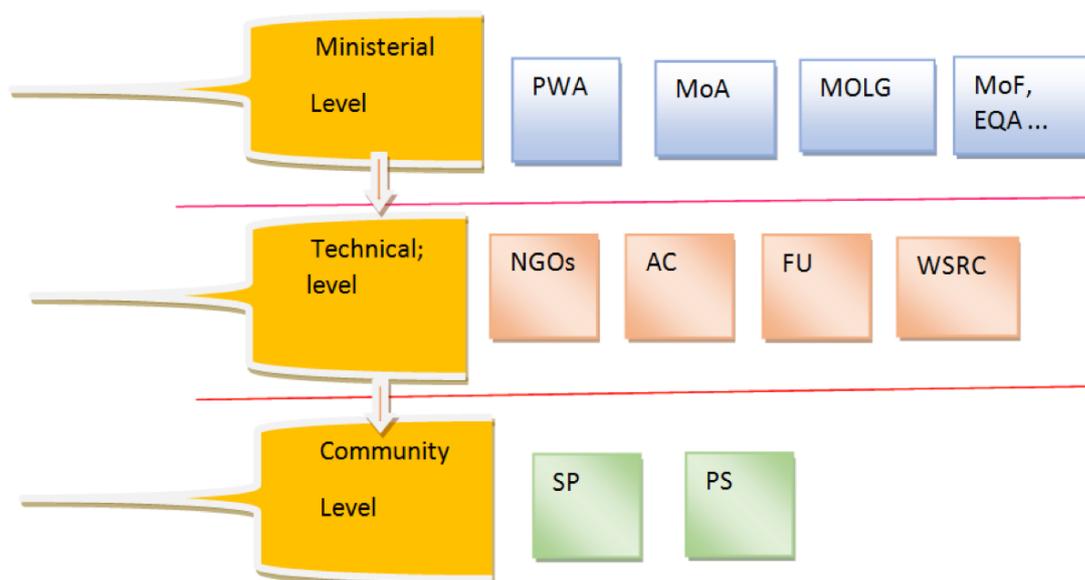
1. The national IWRM reform strategy and actions

- > Implement the new Water Law#4 and formulate all related regulations including water resources protection, pollution prevention, water tariff optimization, water resources development and monitoring, etc.
- > Ensure separation of authorities among various governmental bodies and ministries to ensure a more coordinated and integrated water management approach.
- > Develop a clear regulation for stakeholder participation in decision making related to water management and institutionalize such regulation. As one of the options, a plan for an Interministerial and Cross-sectoral IWRM Committee for the Palestinian Territories as basis for deeper discussion has been developed and provided to PWA and MoA (Figure C.2 3). The suggested framework will be a platform to support the national efforts and definition of priority strategies for IWRM implementation and to cope with water scarcity and drought events.

Furthermore, it will enhance the regional cooperation to jointly maximize the benefits of sustainable and integrated water resources management, enabling transboundary cooperation and the implementation of collective measure for climate change adaptation.

2. Measures at technical level

- > Promotion of a national water saving plan and environmental measures and certify the new saving tools.
- > Decentralized wastewater treatment plants for rural and no urbanized areas to be promoted with focus on natural and biological treatment technologies.
- > Grey water treatment and reuse at household and group of household level needs to be encouraged. This can also be coupled with modified percolation pits to ensure localized sanitation solutions.
- > Guidelines and manuals need to be produced to assist people in better understanding, managing, operating and maintaining the new technological solutions.
- > Cooperation with Jordanian Partners to adopt and adjust successful DWWT concepts und guidelines for the Palestinian conditions.



- PWA: Palestinian Water Authority
- MoA: Ministry of Agriculture
- MOLG: Min. of Local Government
- MoF: Ministry of Finance and Planning
- NGOs: Non-Governmental Organizations
- PS: Private Sector
- AC: Agricultural Cooperatives
- FU: Farmers Union
- WSRC: Water Sector Regulatory Council
- SP: Service Providers
- EQA: Environmental Quality Agency
- PS: Private Sector

Figure C.2 3 Suggested Structure for the IWRM Implementation Committee in the Palestinian Territories

3. Measures at Social and Cultural Level

- > National strategy on public awareness needs to be implemented and national campaign needs to be started to improve public knowledge about the advantages of the water saving practice and installation of devices.
- > To organize information sessions and arrange visits for pilot locations to change public perception on the reuse of treated effluent.
- > Using local media to disseminate and communicate the main messages of encouraging people to engage in national campaigns for water savings or to highlight various issues related to wrong perceptions and practices related to water and wastewater treatment, reuse and disposal.

4. Development of a regional cooperation plan,

comprising the following steps:

- > Decision makers define a complete national vision about the expectations on transboundary cooperation, with water and wastewater management as a top priority.
- > Decision makers elaborate and propose a negotiation procedure.
- > The common regional interests and development goals are defined in the negotiation process.
- > An implementation plan is developed and agreed.

5. Other key policy issues

comprising:

- > Using the technological possibilities for reducing the agricultural demand such as new technology of automation of the irrigation and using saline water tolerant crops.
- > Public awareness campaigns for reuse of marginal and non-conventional water.
- > Socioeconomic incentives for the farmers.
- > Taking institutional and administrative measures to reduce non-technical non-accounted water.
- > Promoting the concept of the Water-Energy nexus.

AUTHORS / FURTHER CONTRIBUTING PARTNERS

PHG¹, RWC², PWA³, MoA⁴, HEC⁵, UGOE⁶

CONTACT

Dr. Abdel Rahman Tamimi

Director General, Palestinian Hydrology Group
 Ramallah, PO Box 565
 The Palestinian Authority
 Tel: 00972-2-2966315/6
 a.tamimi@phg.org
 www.phg.org

References and further Reading

Further detailed information about the different studies can be found on the project website www.iwrm-smart-move.de