

Water in Jordan: The way forward



Hashemite Kingdom of Jordan  
Ministry of Water and Irrigation authority

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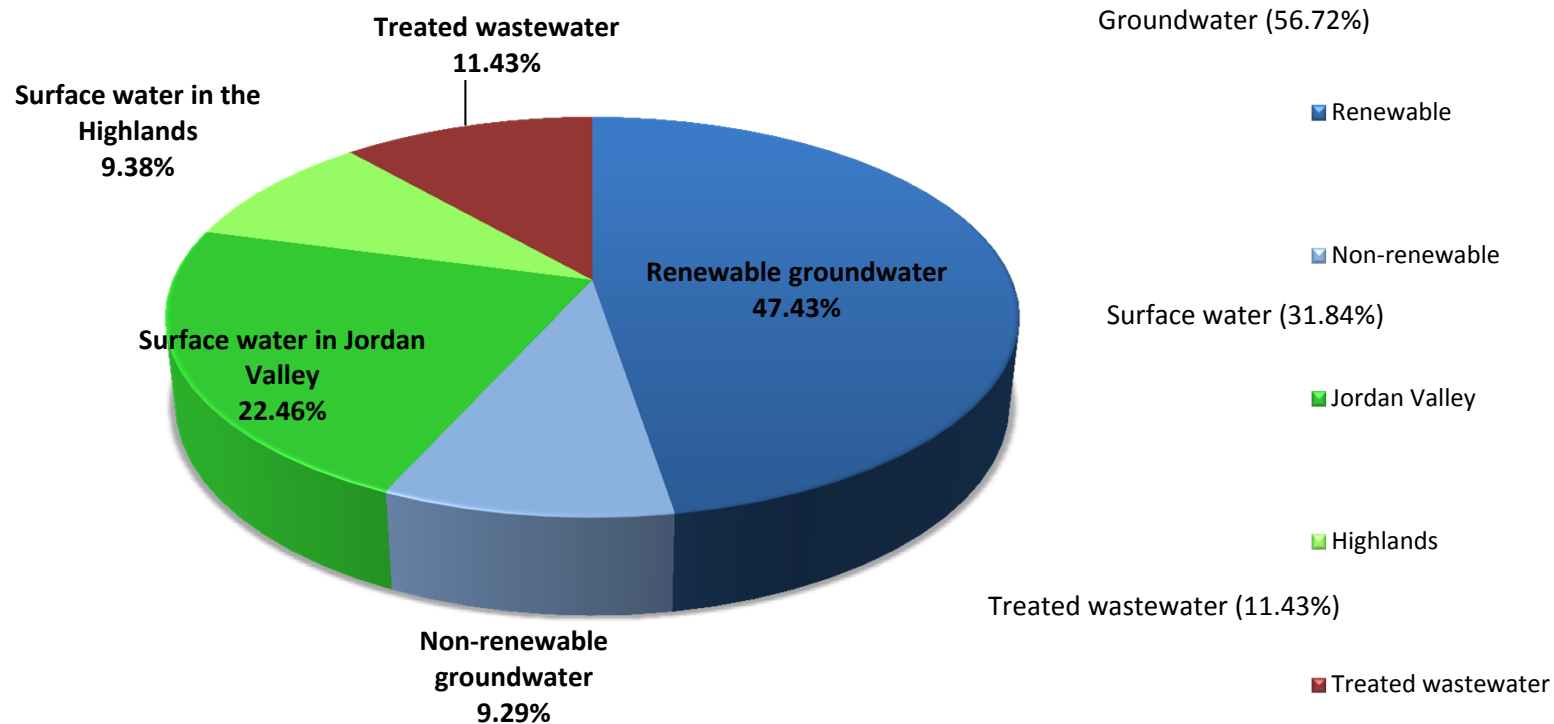
## **Context:**

# **Challenges , constraints:**

- The UNDP Human Development report classifies Jordan as one of the 10 most water-poor countries in the world with an annual per capita water availability of 120 – 145 m<sup>3</sup>/per capita/year (far below the international water poverty line of 500 CM/a/cap).
- Jordan is located in arid to semi arid part of the world where water resources are limited and scares.
- Water resources are highly dependent on rainfall which is less than 200mm\yr for 93%of Jordan areas.
- In 2010, water demand exceeded water supply by roughly 200%. 10 out of the 12 groundwater aquifers are over-exploited.
- Agriculture is the largest water consumer with 56% of the water use in Jordan in 2010.

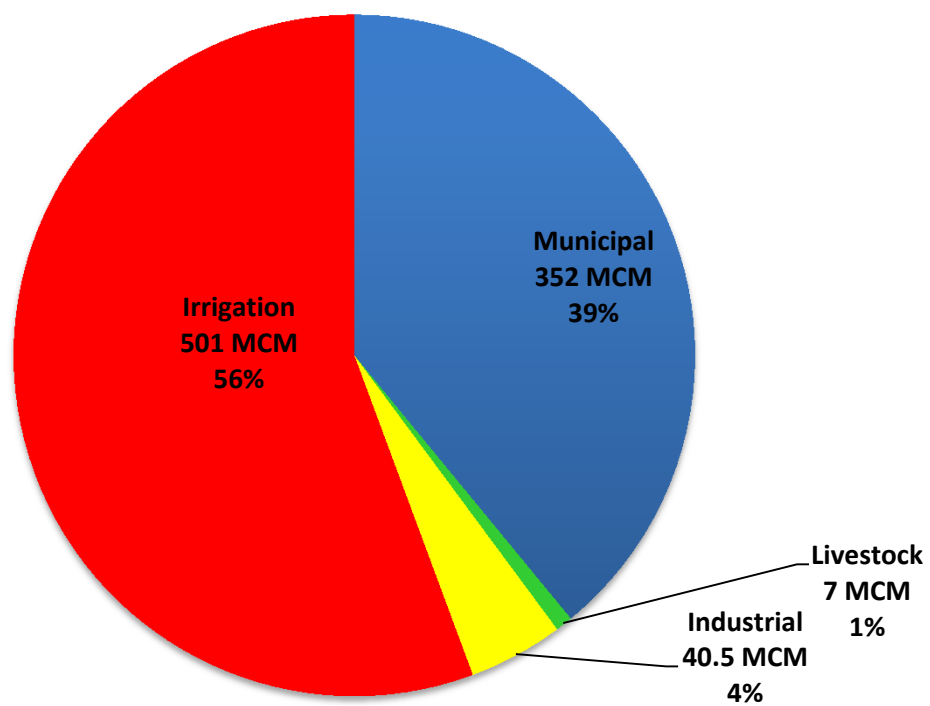


## Water usages per resources in Jordan (2010)





## Water consumption in Jordan by sector (2010)





## Challenges:

- High population growth (2.5%/year) and large refugee influxes.
- Limited funding and private sector participation for the implementation of water projects .
- Limited energy sources available for water projects and Jordan is highly dependent on foreign energy sources (96% of energy comes from imported oil and gas ).
- Lack of coordination with neighboring countries regarding the management of water resources (surface and groundwater) .



## National goals for the water sector:

1. Water supply is secured for the Jordanian population in sufficient quantities and according to appropriate specifications and standards at suitable prices.
2. Water supply is secured for all sectors in sufficient quantities to fulfill the social, economic and environmental goals sustainably at suitable prices.
3. All cities and housing communities are covered with wastewater services.
4. The efficiency of water usage by all sectors is maximized.
5. Water institutions are organized and strengthened in a way that they can fulfill current and future functions.



TIME FOR SOLUTIONS



# Water supply:

In its quest to secure water resources for future demand, the Ministry of Water and Irrigation (MWI) aims to:

1. Develop conventional and non-conventional water resources:
  - 1.1 The conventional water resources to ensure the largest possible quantity of fresh water for drinking purposes:
    - Surface water
    - Exploitation of aquifers: DISI project, the potential of the deep aquifers,
    - Transboundary and shared water
  - 1.2 The non-conventional water resources:
    - Desalination: brackish groundwater in the Jordan,
    - Water reuse, especially for agricultural purposes:
2. Improve water services & sanitation services:
  - Upgrading networks and sewerage systems provided to citizens,
  - Decentralized water utilities and,
  - Reducing non-revenue water
3. Protect of the water resources.



# Water demand

## 1. Efficient water demand management

- **Water demand management policy:**

Elaboration of a five years Water Demand Management Strategic Plan (2011-2015) with the support of IDARA/USAID.

Development of 'standards, codes and regulations (update of the sanitation plumbing code, testing lab, etc.) and tools and technologies (audits, Water-use and water-demand management information program, databases, public-private partnership, etc.).

- **Water efficient practices:**

Promotion of efficient water using practices in all sectors (households, irrigation, tourism, industry, hospital, offices) to reduce the gap between available water supply and water demand (rainwater harvesting, the reuse of greywater, assistance for low income consumers, training programmes, etc....).

- **Heightened public awareness:**

Awareness campaigns with school students, women as main water users at household level, religious sector using media outlets (radios, TV, newspapers, publications, etc.) and 'water clubs' in schools.

Promotion of water savings at the household level through the establishment of Water Wise Women groups with support of GIZ and BGR.





## Next steps: The way forward:

MWI will continue and strengthen actions in the field of:

1. Conventional water resources:

- **Upgrading networks** to reduce non-revenue water and **rehabilitation and expansion of sewage systems** (63% of households are currently connected to the sewage system).
- **Enhancement of energy efficiency** of water utilities and pumping stations and up-scaling nationwide Energy.
- Development of **water harvesting** through recharging dams.
- **Regional cooperation** for shared water resources.
- **Development of the protection** of the water resources and catchment areas.



## Next steps:

### 2. Non-conventional water resources:

- **Development of desalination treatment plants** with the priority of implementing the first phase of the **Red-Dead Sea Conveyor Project**.
- **Heighten wastewater treatment capacities**, to reach the objective of 250 MCM/year of treated wastewater in 2025, and capture treated effluent for reuse. We seek further cooperation with the private sector world wide to be able to expand these best practices nationwide.

### 3. Water demand management:

- Continue to promote **efficient water demand management** and up-scaling best practices in all sectors (rainwater harvesting, greywater, reuse, irrigation efficiency at farm level, etc).
- **Improve awareness** of water scarcity and the importance of conserving and protecting our limited water resources.

### 4. Strengthened water institutions:

- **Updated strategy** has to be endorsed by the Water Advisory Council and applied.
- **Establishment of a reliable and dynamic databank** helping the decision-making process through the automation of the water resources monitoring system.
- **Improving local capacity building** to enhance the quality of water planning (information base, modeling capability, etc.) and desalination techniques.

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Thanks you for your kind listening.