SWIM and Horizon 2020 Support Mechanism

Working for a Sustainable Mediterranean, Caring for our Future

SWIM-H2020 SM Regional Activities: Water Supply and Distribution Mapping South Mediterranean Region

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Presentation Overview

Water Supply Mapping Scope

- Water Use and Value Added
- Utilities' Identification
- Utilities' PPP
- Utilities' Services Level
- Stakeholders
- Pricing
- Remuneration
- Distribution

Geographical Scope

- Algeria
- Egypt
- Israel
- Jordan
- Lebanon
- Morocco
- Palestine
- Tunisia

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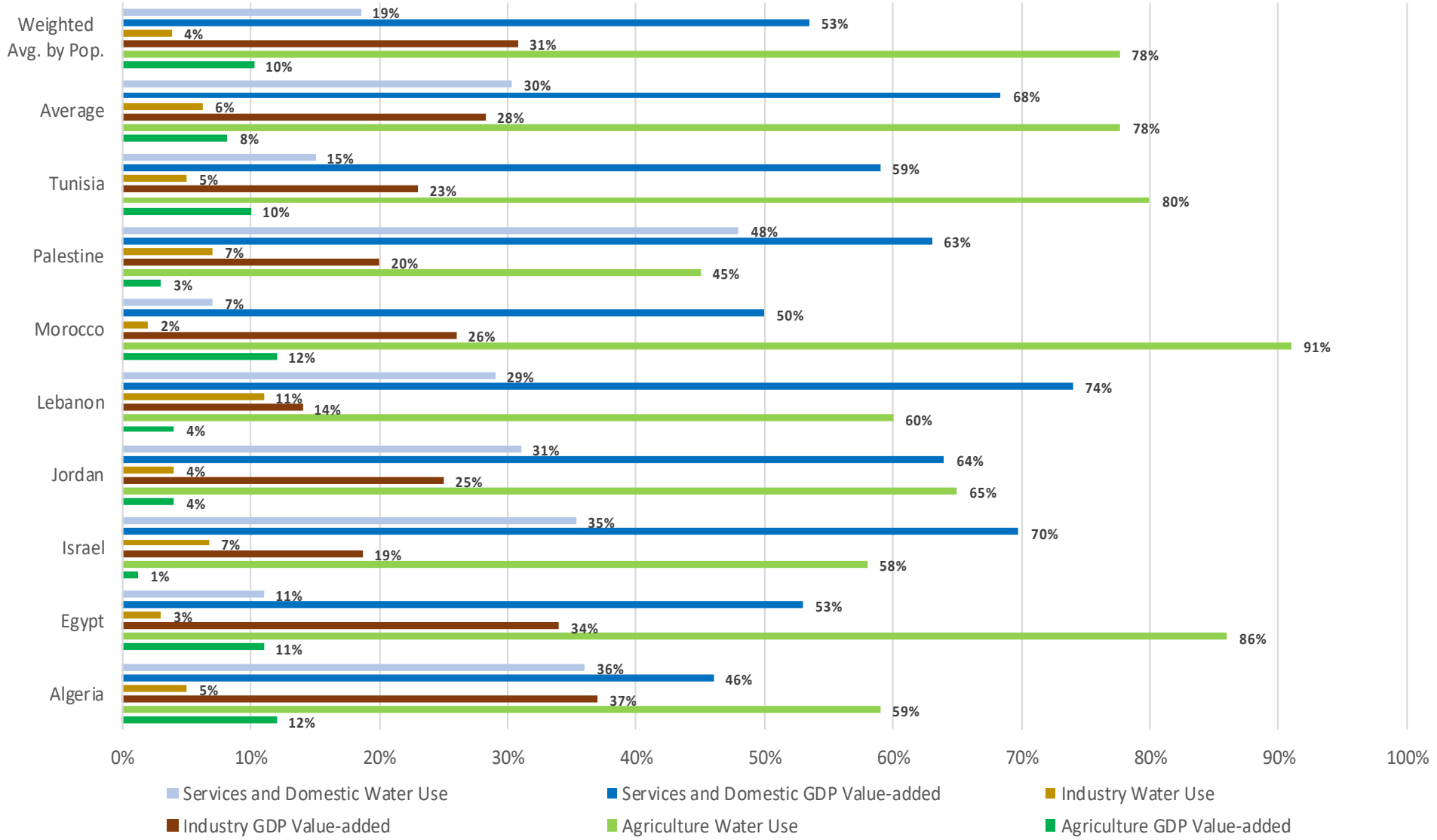
Regional Sectorial Value Added vs. Water Use - W Avg: Agr: 10%/78%; Ind: 31%/4%; Dom-Services: 53%/19% in 2017



Note: Figures may not add up due to rounding

Utilities' Identification: Typology is Diverse

Algeria and Tunisia

- 2 centrally-based monopolies, managed on commercial basis, responsible for water and waste water services at the local level throughout the country.
- Algeria allows a hybrid model where the 3 largest cities are managed by international operators under Management Contracts (MCs) that are renewed every 3 years or so.
- Whereas the Tunisian model is over stretched, the Algerian model lacks efficiency except in the 3 cities under MCs.

Egypt

- 26 regional public commercial utilities or ACs, managed on commercial basis, created under the tutelage of a central public holding, HWWC, where the aim is a divesture and corporatisation of all the utilities.

Jordan and Palestine

- MWI and PWA attempted to manage utilities at the central level.
- In Jordan, WAJ under MWI manages 3 public utilities providing services to 6 governorates, which are managed on commercial basis, and is directly managing the 4 other governorates.

Utilities' Identification: Typology is Diverse

Palestine:

- A full reform of the sector is underway due to exogenous and endogenous challenges.

Lebanon:

- Water & WW amalgamated at the regional level by creating WEs (managed on commercial basis), to provide services at the local level but include the provision of irrigation services as well.
- There is an overlap with LRA regarding water resources management upstream and some confusion with the municipalities regarding network and sometimes WWTP operations downstream.

Utilities' Identification: Typology is Diverse

Morocco:

- Accommodates several models
  - ✓ a monopoly utility which is managed on commercial basis is providing electricity as well as water & WW services,
  - ✓ The utility, is responsible for water and waste water services at the local level, except where regional or local authorities (régies) as well as concessions (30-year contract) operate.
  - ✓ The latter 3 models have contracts negotiated under the MdI, the Wilayas under which they operate and their respective municipalities.
- The RAI (autonomous intercommunal authorities) and concession utilities cover both electricity, water and waste water which help them balance their budget.

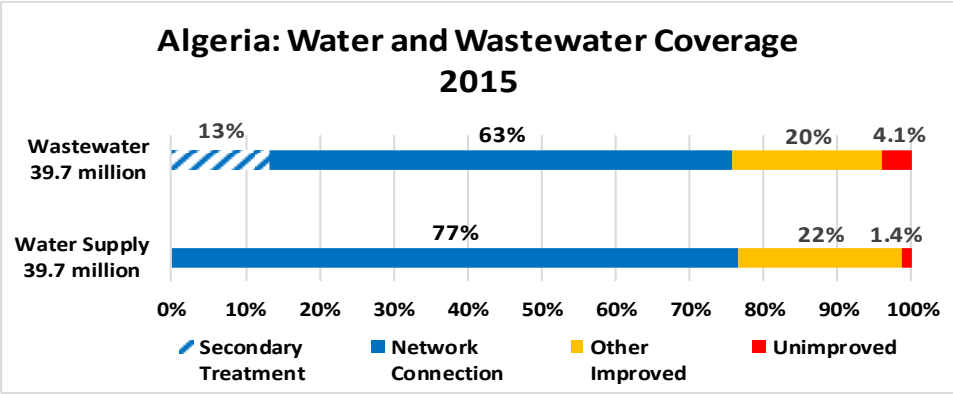
Israel:

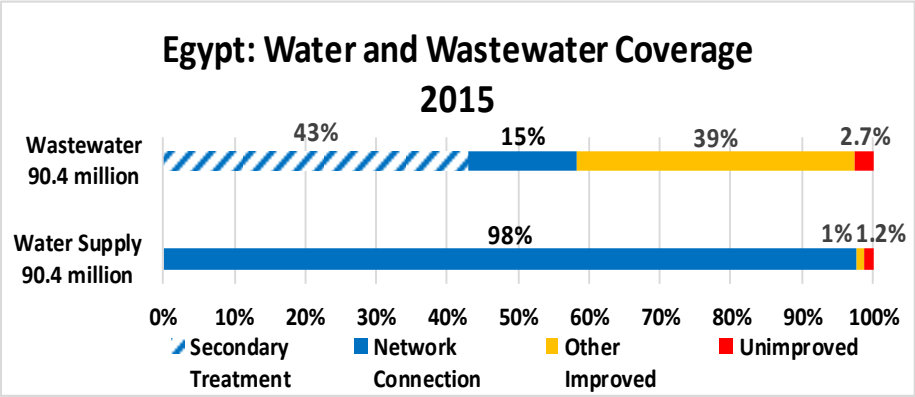
Regional and local utilities (Water and Sewer Companies) are gradually taking over water and wastewater services from municipalities.

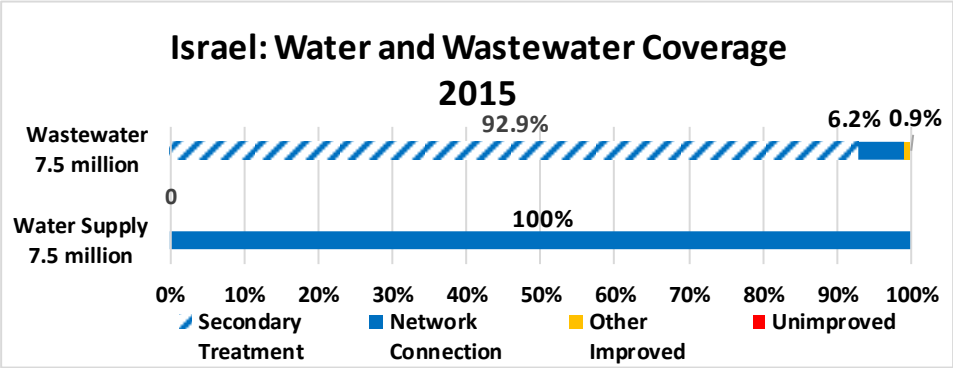
Utilities' PPP: Various Types of Contracts are Gaining Grounds

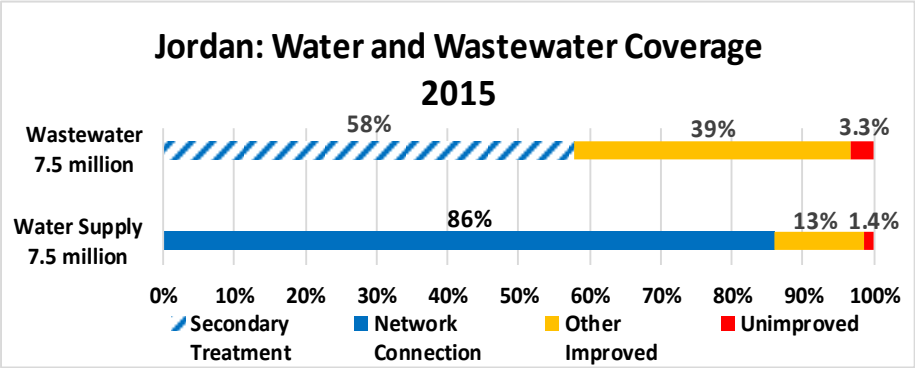
- **All countries have experienced various types of PPP contracts**
- **Most countries (except Israel and Palestine) have or are about to have**
  - ✓ PPP Laws (Morocco and Tunisia have concession laws) or
  - ✓ a procurement system that allows PPP contracts in terms of DBOs, BOT, BOO, MCs and Concessions
- **All countries have a dedicated PPP unit (mostly based at the MoFin.)**
- **Most countries have mixed experiences with PPP:**
  - Algeria has 3 MCs;
  - Morocco has 4 utility concessions and 1 water basin concession;
  - Algeria and Egypt have Desalination Stations procured by third parties;
  - Israel has Desalination Station BOTs and BOOs procured by Mekorot and by third parties;
  - Algeria, Jordan, Lebanon and Palestine had MCs that were not renewed or cancelled;
  - Tunisia cancelled desalination Station BOTs in 2011.

Utilities' Services Level is Quasi Universal with Exceptions









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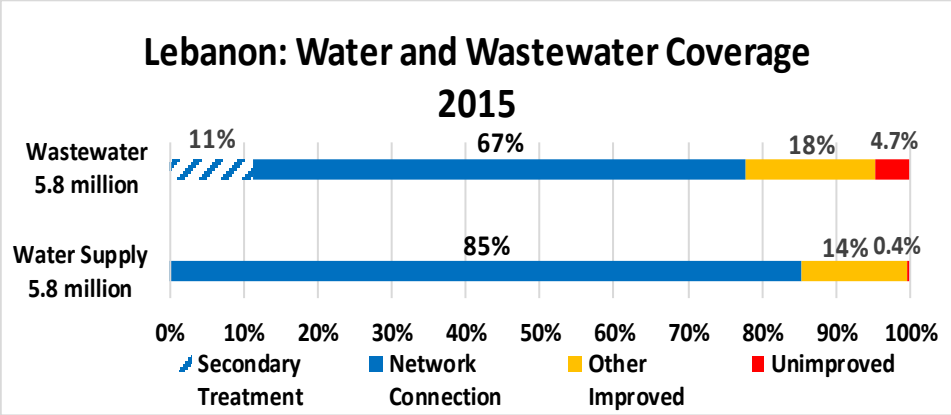
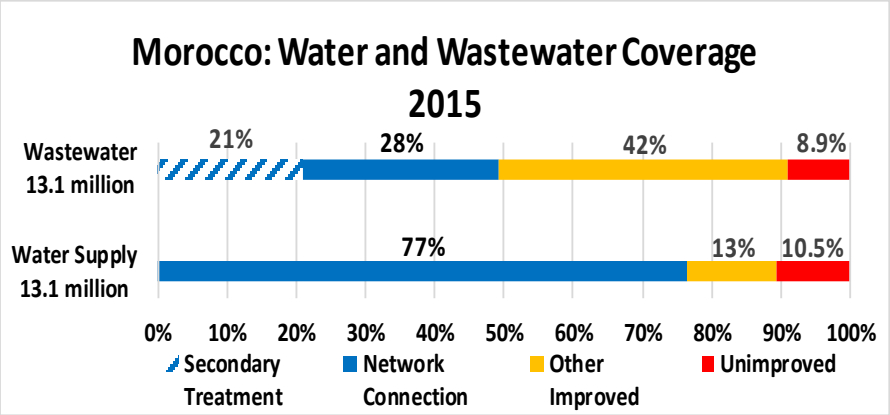
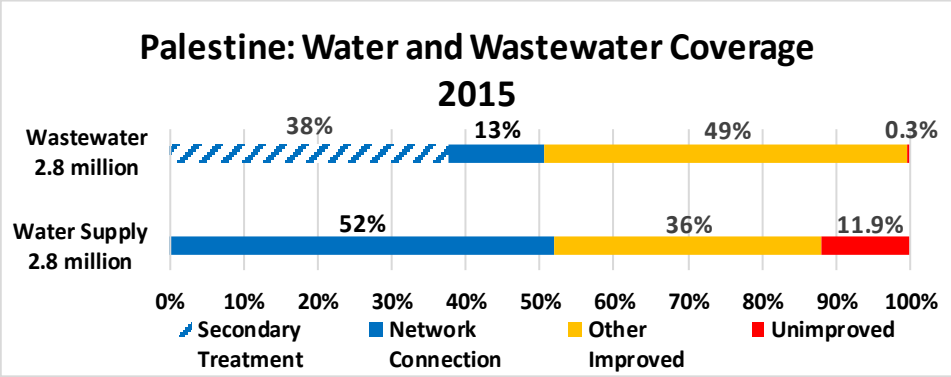
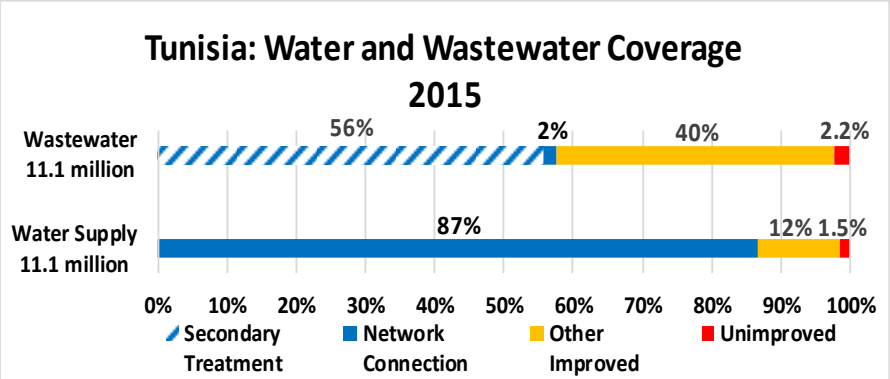
Utilities' Services Level is Quasi Universal with Exceptions









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Stakeholders are Numerous esp. when Transfers Exist

All countries have an overarching inter-ministerial council, committee or commission to coordinate water resource management at the strategic, policy and allocative levels.

The countries have a system of water management where:

(i) the anchor ministry centrally manages the resource, e.g., MWRI in Egypt and MWI in Jordan;

(ii) several bodies help the anchor ministry to centrally manage watersheds at the regional level, e.g., ABH in Algeria and Morocco;

(iii) several bodies help the anchor ministry to manage dams and water transfers between watersheds (e.g., ANBT in Algeria, Mekorot in Israel and SECADENORD in Tunisia);

(iv) the anchor ministry devolved water management at the regional level to 4 WEs and LRA (Lebanon); and

(v) the anchor ministry is not allowed to be fully in charge of water resources, e.g., Palestine.

Pricing Shows Variations & Regulators Embedded in Anchors

- Most countries have regulators or about to have regulators but are housed at the Ministry responsible for water → defeats its purpose
- Some tariffs were not adjusted since 2005 (Algeria) whereas some tariffs are being adjusted to try to cover OMEX (Egypt)
- All tariffs have a volumetric element and some have fixed, other and VAT elements. Only Lebanon still has a gauge-based tariff that is being gradually replaced by volumetric
- The Volumetric element range between 1 block tariff (Lebanon) to 7 dual block tariff (Tunisia)
- The Fixed element is meant to cover operation costs (e.g., Jordan and Lebanon)
- The Other element is meant to cover transfer cost (e.g., Algeria)
- The VAT element is applied in 5 countries and the rate ranges from 7% to 17%
- The price of 1 m^3 when the consumption is 15 m^3 per month varies

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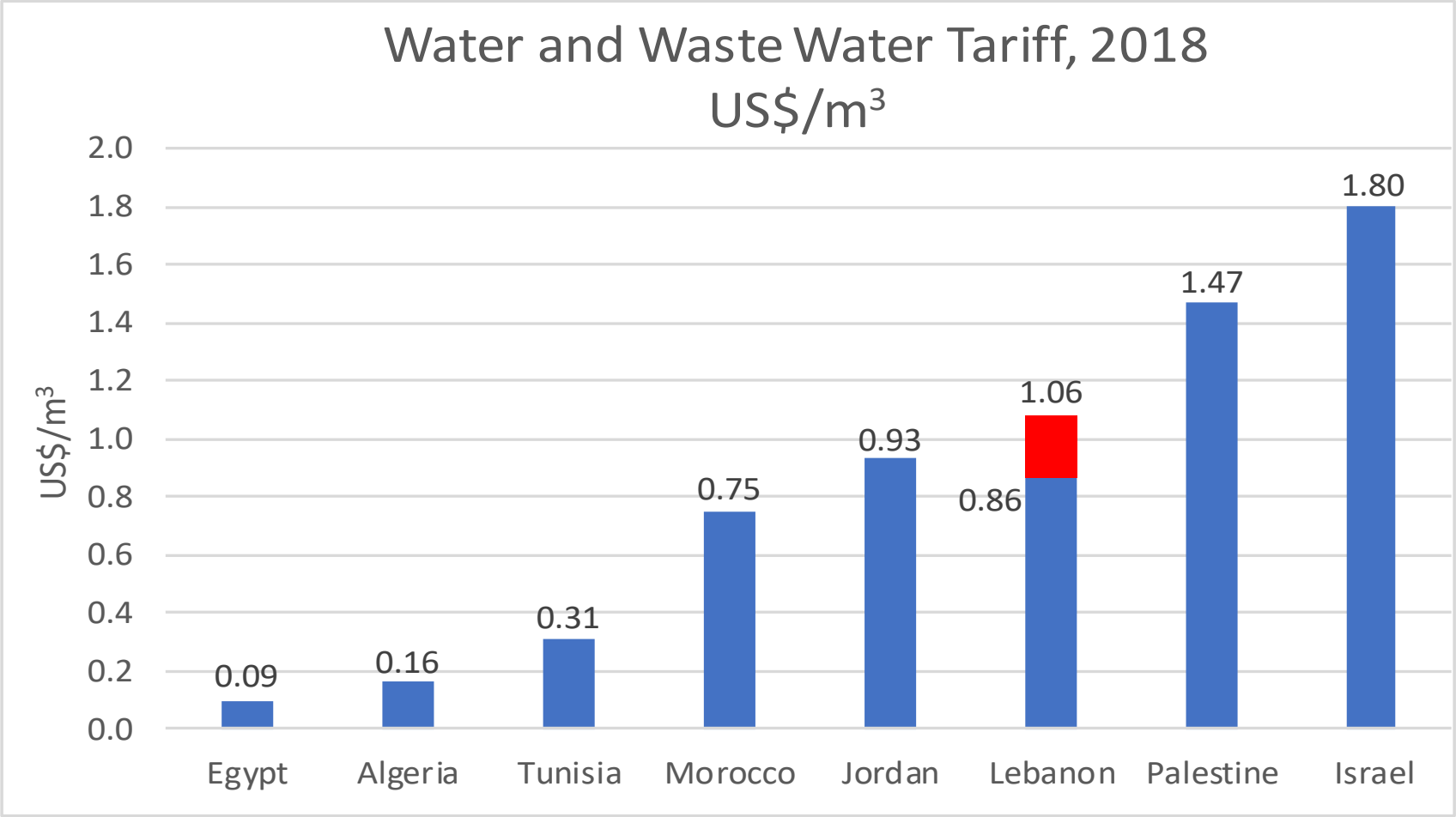
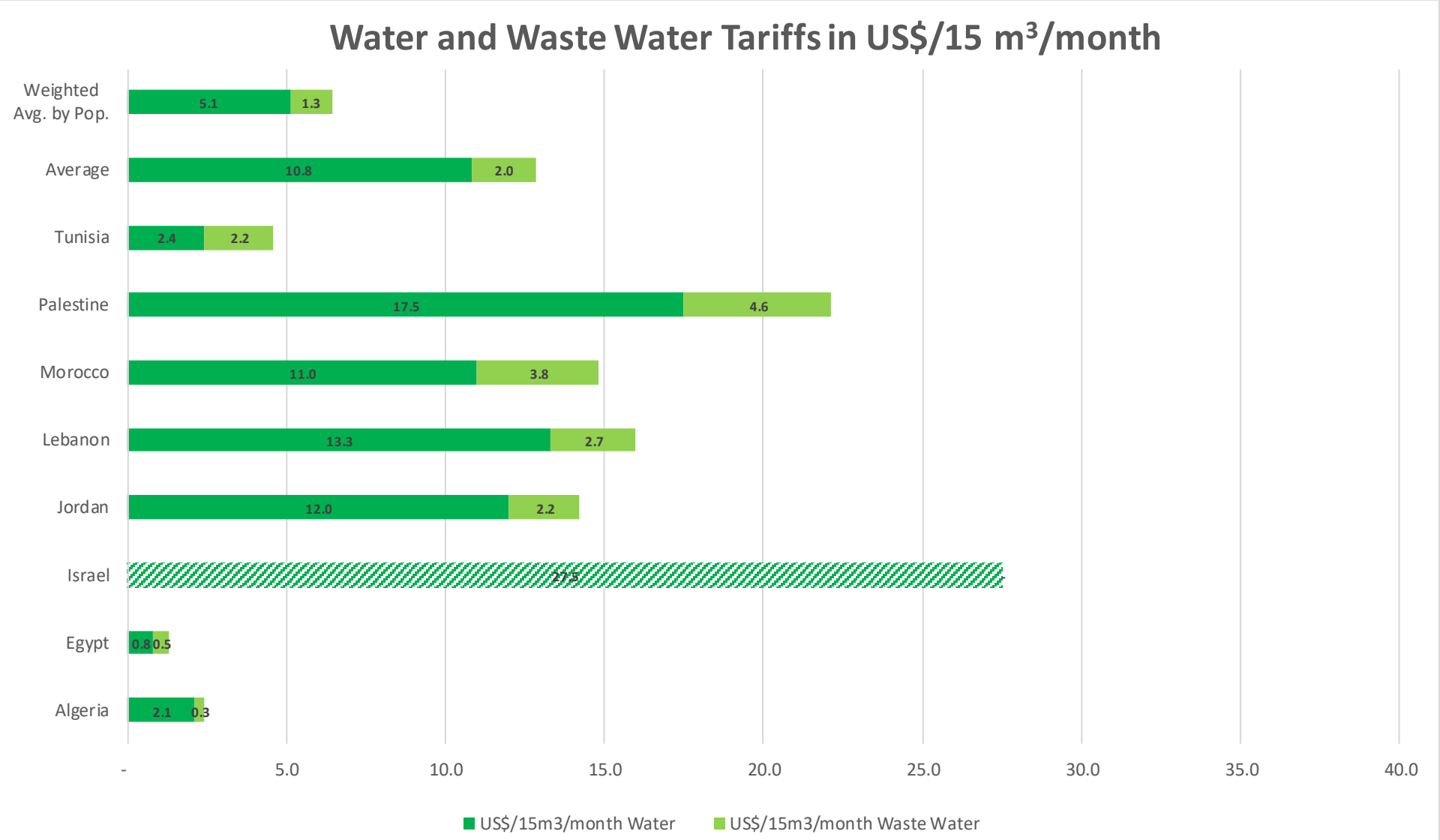
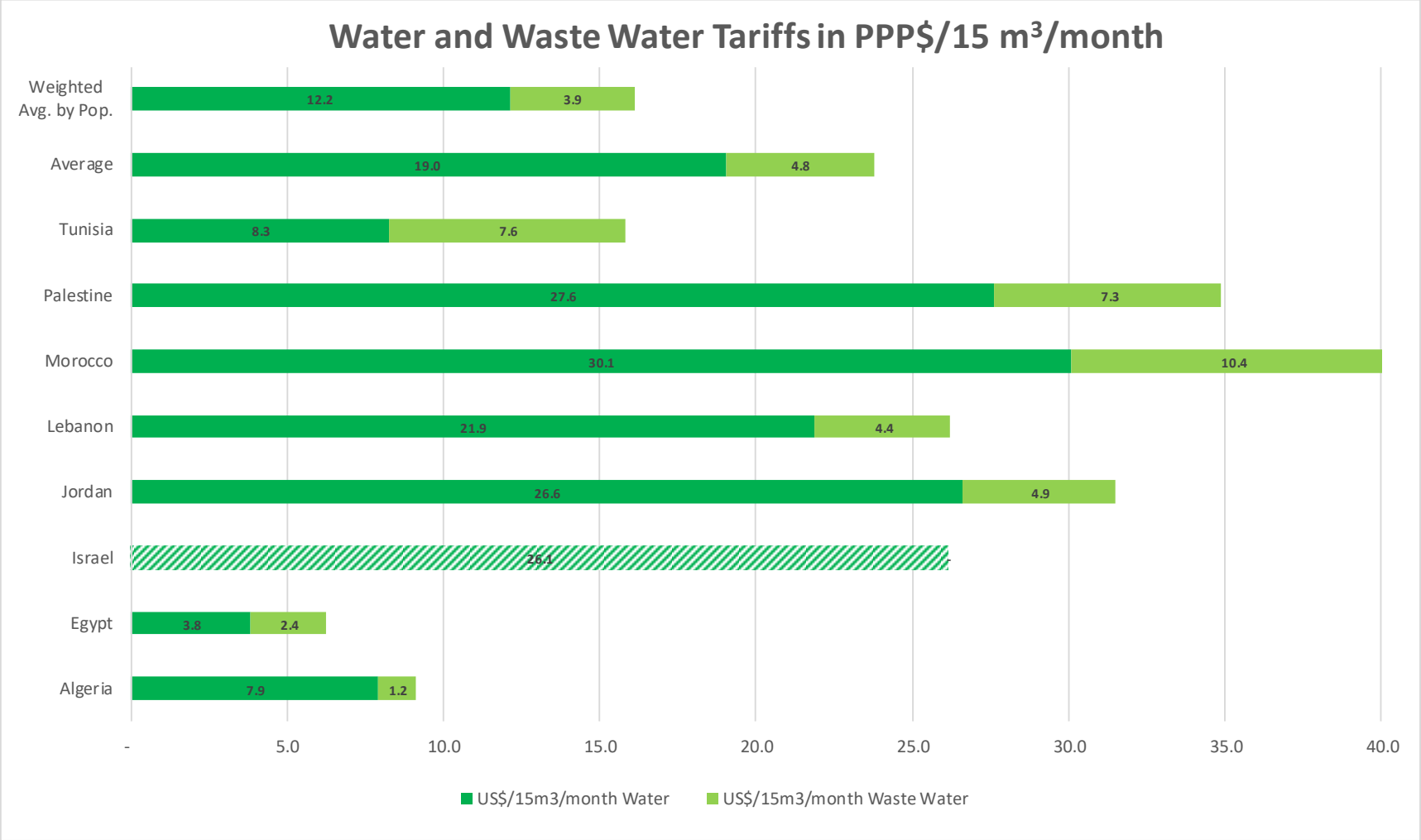
Pricing Based on a Consumption of 15 m³ per Month



Pricing Does not Reflect Real WW Treatment Costs



Pricing Does not Reflect Real WW Treatment Costs in Purchasing Power Parity (PPP$)



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Remuneration Suffers from UfW, NRW and/or Low Tariffs

OMEX of most utilities are being subsidised to a certain degree with variations:
Breaking Even are:

- **SONEDE in Tunisia as a water utility,**
- **The 12 RAIs and concessionaires in Morocco that are cross-subsidising their activities as they also sell electricity.**
- **In Jordan, WAJ is showing a balanced budget in 2016, but the OMEX budget is financed up to 56% by grants.**

All other utilities either receive mainly budget transfers and possibly grants to balance their budgets.

Most utilities could at least recover their operational costs should they focus on:

- **improving bill collection,**
- **reducing unaccounted for water and**
- **adjusting tariffs.**

All suffer from at least one of these weaknesses.

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Remuneration for CAPEX Remains Dismal; Financing Gaps

- CAPEX of most utilities are financed through:
  - ✓government programs and plans,
  - ✓special funds (Algeria),
  - ✓International Financial Institutions (IFI)
  - ✓grants and loans, and
  - ✓exceptionally through their own funding
    - ➢such as Water and Sewage Corporations (WSCs) in Israel,
    - ➢the RAIs and concessionaires in Morocco
    - ➢BMLWE in Lebanon that will cover the cost of the conveyor from the South to Beirut.
- Jordan's WAJ issued bonds in the late 2000s that almost bankrupt the utility: few IFIs saved the utility by structuring a rescue package.
- Actually, the water utility sector in these countries still needs to mature before envisaging the introduction of bonds <u>although Mekorot is a public shareholding company.</u>
- investment needed over the long run in most countries, (except Israel and Morocco due to an excellent credit rating), are beyond the governments' allocations and IFIs' leveraging.
  - ✓ This will require the rapid setting up of a trusted enabling environment that will attract PPP schemes to bridge the financial gaps.

Distribution Made on Political Instead of Economical Grounds

- **International Water Rights: well defined except for EG, IL, LB and PS**
- **National water rights enshrined in Constitutions or Water Laws as human/citizen rights, meant for domestic use;**
- **Water is considered as a public good in Israel that is entrusted to the government for its management**
- **By Law, domestic water supply distribution is a priority among water uses in all countries: in Morocco, Suez Water has a concession on Casablanca (Lydec) and Oum erRbia Water Basin that supplies Casablanca. Excess water is sold to other utilities**
- **Water distribution among uses is more of a political decision than economical one:**
  - Most decision-making is done by the Anchor institution and sometimes by the Cabinet and favors industries as a second use, agriculture as a third
  - Few countries consider the need for environmental flow even if it is required by Law
- **Decisions on distribution range from Command and Control in most countries to allowing the market to clear the allocation among competing uses thanks to a flexible price mechanism (determined by water quality, drought and scarcity) for industries and agriculture (Israel): water use lobbies are active in environments experiencing poor governance**

For further information

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