



# Flanders

State of the Art

Flanders International  
**Business  
Weeks** /2023



# Water & Wastewater Management in the Middle East

## Challenges & Opportunities

Flanders International  
**Business  
Weeks** /2023



# Water & Wastewater Management in Saudi Arabia

## Jurisdictions

- Saudi Arabia
- Oman
- Bahrain
- Yemen

## • Our office



Nusaiba

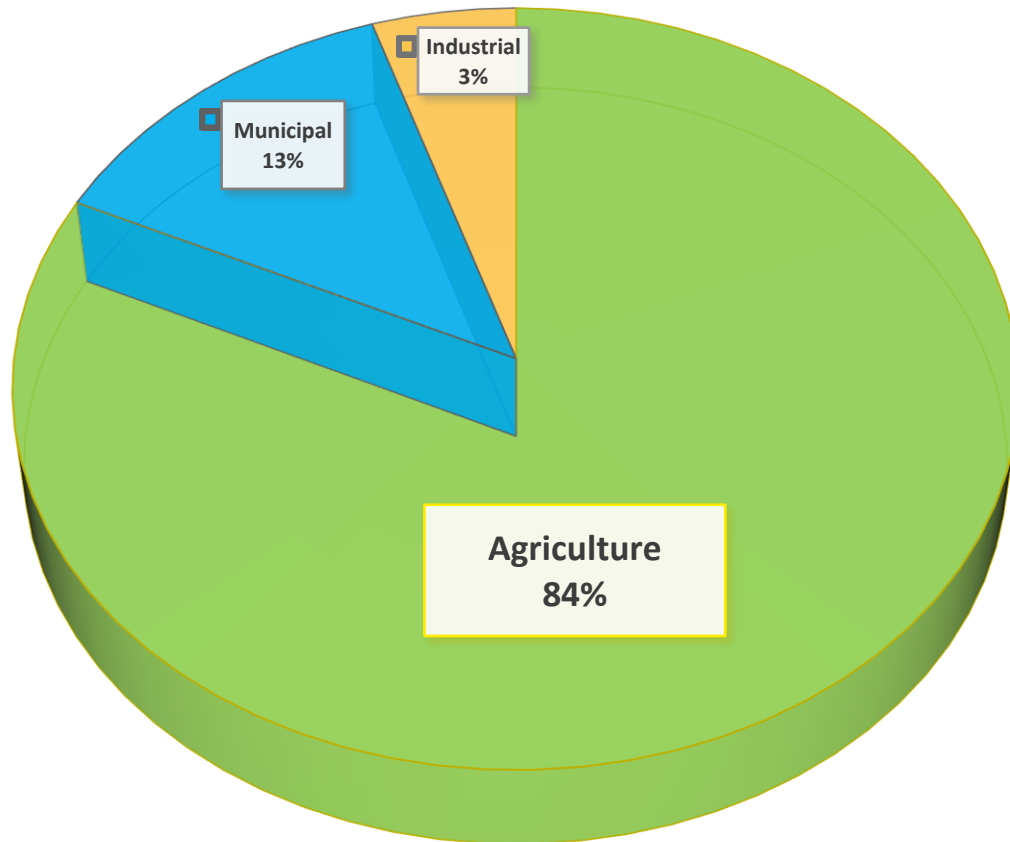


Ebtisam

- We're two - we also host Interns from Flanders



## Growing demand for groundwater



## Water Crisis in Saudi

- Limited sources
- high consumption rate
- growing population
- growing demand
- high cost on desalination
- water losses
- environmental impact
- limited private sector participation

# Major Players

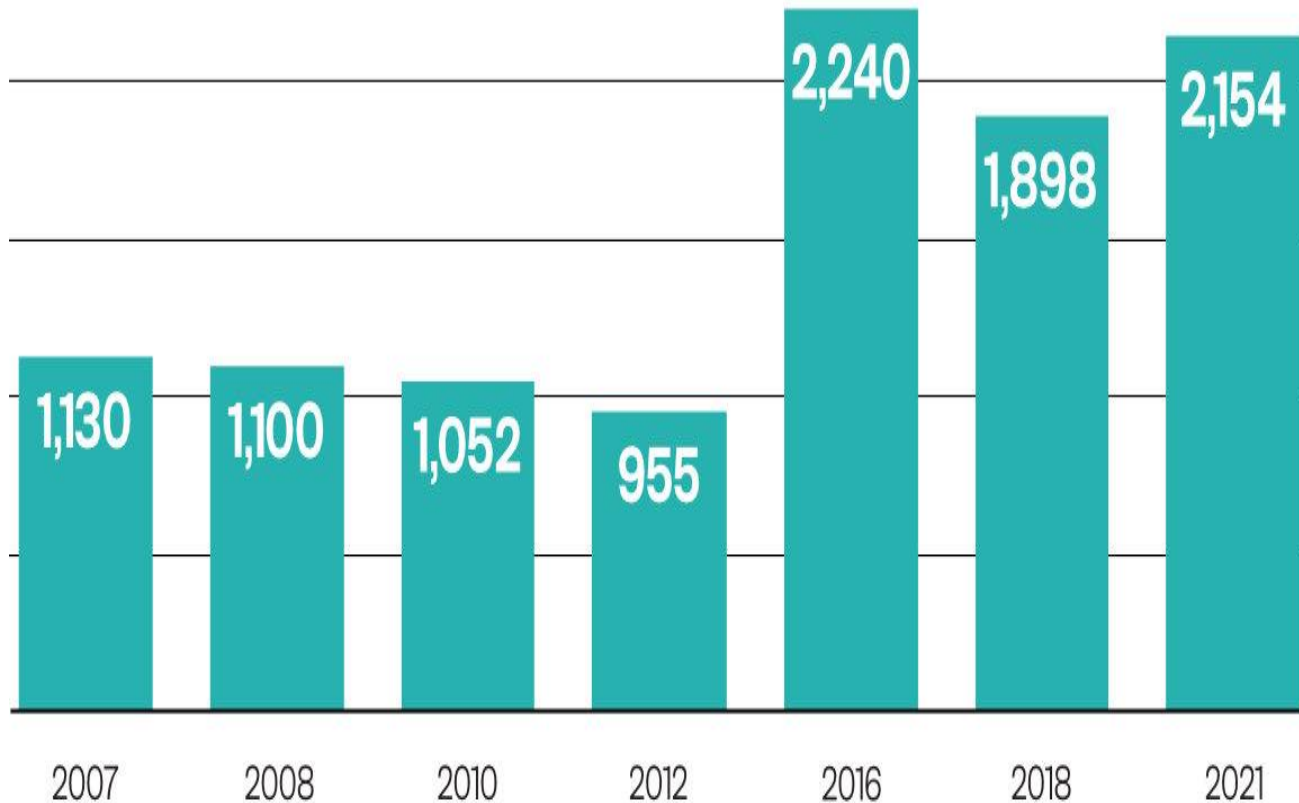
- MEWA
- NWC
- SWCC
- WERA
- SWPC
- WTTC
- SIO
- WSM
- NCP



MEWA

## SAUDI ARABIA'S PRODUCTION OF DESALINATED WATER DOUBLED OVER THE PAST DECADE

(million cubic meter)



Source: Saline Water Conversion Corporation, industry research reports 2000-2020

ARAB NEWS

## Saudi Arabia quenches its thirst for water = Potential

- strategic development plans for sustainable water resources
- Desalination
  - tech for improving desalination efficiency, reliability and sustainability.
  - solar energy for increasing
- Building more Dams
- managing wastewater - increase capacity
- privatization & PPP models
- end agricultural subsidies and regulate the cultivation of green fodder
- new tariff on water and sanitary drainage

# New Projects = Potential

## What

- 7 IWPs
- 4 IWPTs
- 10 IWPs
- 5 ISTPs & 1 SSTP

## Where

- Tabouk
- Asir
- Hail
- Ashariqia
- Aljouf
- Western Province

## Developers of IWPs

- Acwa Power
- Ajlan & Bros Holding
- Alkawthar
- Aljomaih Energy and Water Company
- Nesma
- Mowah
- Alfanar





# Doing Business in Water & Wastewater Management

- Visiting Saudi
- Finding a partner
- Setting up an office
- Working with projects owners

## Regulations

- Saudi Procurement law = Etimad Portal
- SASO standard – [www.saso.gov.sa](http://www.saso.gov.sa)
- Saber platform – [www.saber.sa](http://www.saber.sa)
- Import docs
- Fasah – [www.fasah.sa](http://www.fasah.sa)



Waterleau with a partner at TAIF's Independent Sewage Treatment Plant

## Events to visit/participate

- Saudi Water Expo - Riyadh
- Saudi Agriculture – Riyadh
- Circular KSA 2024 - Riyadh
- Big5 Saudi - Riyadh & Jeddah
- Petro Environment – Dammam
- Water, Energy, Technology, and Environment Exhibition (WETEX) - Dubai





**FLANDERS  
INVESTMENT  
& TRADE**

FIT Riyadh - Saudi Arabia

[Riyadh@fitagency.com](mailto:Riyadh@fitagency.com)

Tel: +966 11 480 3259/1760

Mobile: +966 503 999 646

**Thank you  
for attending**

Flanders International  
**Business  
Weeks** /2023



## Water Treatment and Waste Management – UAE



Source: www.nationsonline.org

## FIT Dubai (UAE consists of 7 emirates)

- Yoke Wagemans

- [yoke.wagemans@fitagency.com](mailto:yoke.wagemans@fitagency.com)

- Mobile + WhatsApp: +971 50 745 82 03

# Water Treatment - UAE Water Security Strategy 2036

The Strategy aims to

- **Implement integrated water resources management**

Increase the **water productivity**

Substantially increase **water-use efficiency** across all sectors

- **Improve water quality** by reducing pollution, eliminating dumping and minimizing the release of hazardous chemicals and materials and **substantially increasing recycling and safe reuse of treated water**

Achieve universal and **equitable access to safe and affordable drinking water**



Source: [www.power-technology.com](http://www.power-technology.com)

# Water Treatment - Desalination

The UAE has limited natural water resources and the UAE is amongst the world's **desalination leaders**

Today it uses thermal desalination as the **dominant technology** to make seawater potable

The aim is to:

- Ditch high energy-consuming thermal desalination technologies
- Replace it with reverse-osmosis-based plants powered by renewables



Source: [www.zawya.com](http://www.zawya.com)

# Water Treatment - Municipal Wastewater Treatment

ZLD or Zero Liquid Discharge - solutions that enable the recovery of usable water and treated contaminants from wastewater before reducing it to solid waste without any harmful environmental impact

The aim is to recover 95% of the wastewater and reuse it for agricultural purposes

Municipality of Ajman - Ajman Sewerage

100% of the water is being cleaned

80% with reusable energy of the own plant

Water stations are available for trucks to collect water



Source: [www.besix-concessions.com](http://www.besix-concessions.com)

## Opportunities

- Replace old pipelines to stop water contamination
- Clean storage tanks and tank cleaning
- Drip irrigation systems used by farmers
- Improve water quality
- Different ways of water treatment & water efficiency



# Waste Management - UAE efforts to manage waste

Waste Issues are handled through:

- Recycling
- Improved waste separation & and collecting systems
- Converting waste to energy

Most of the waste ends up in municipal landfills or dumpsites

Waste Management is coordinated by local authorities:

Dubai - DUBAI MUNICIPALITY

Abu Dhabi - TADWEER

Sharjah - BEE'AH



Source: [www.archdaily.com](http://www.archdaily.com)

# Waste Management – UAE efforts to manage waste

## Waste to Energy Projects

BEEAH Energy is currently developing a concept for our waste-to-hydrogen plant, which when complete will be the first of its kind in the Middle East. The facility aims to convert plastic waste and waste wood to produce fuel-cell grade green hydrogen, the emissions-free fuel of the future.

## Tendering for public sector contracts

<https://www.meed.com/industries/water>

<https://www.constructionweekonline.com/projects-tenders>

## Advanced procurement system via Ministry of Finance Portal

<https://mof.gov.ae/government-procurement-operations/>

## Trade Fairs

WETEX

World Future Energy Summit

## Tips & Tricks to do business in the UAE

<https://www.flandersinvestmentandtrade.com/export/landen/verenigde-arabische-emiraten/zakendoen-verenigde-arabische-emiraten>

Flanders International  
**Business  
Weeks** /2023



# Water Treatment & Waste Management - Qatar



# FIT Doha

- Alejandro Bru Garcia
- [doha@fitagency.com](mailto:doha@fitagency.com)
- 00974 3077 1814



## Waste Management

- Integrated National Solid Waste Management Program launched in June 2022 (Ministry of Municipality)
- Comprehensive approach: less waste, more recycling, PPP structures
- Targets: accounting for 100% of all wastes, 15% material recycling rate of municipal wastes and using 35% of circular procurement in public infrastructure.



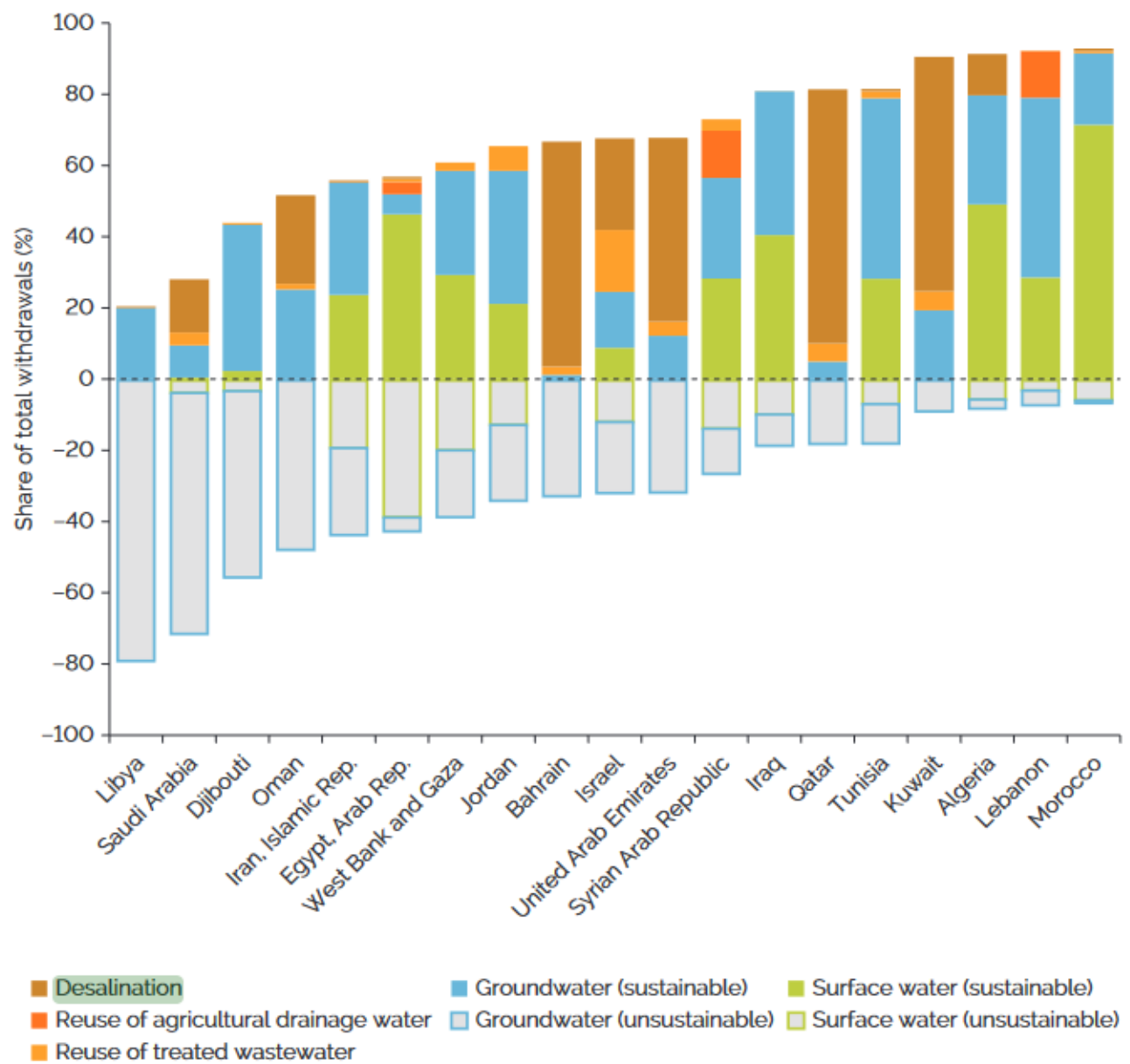
## Water Treatment

- Desalination – main source of drinking water in the country
- Municipal wastewater treatment (TSE) – landscape and agricultural use
- Produced water – coming from oil and gas industry

**Qatar heavily depends on water treatment activities to maintain its population and economy**

# Some numbers

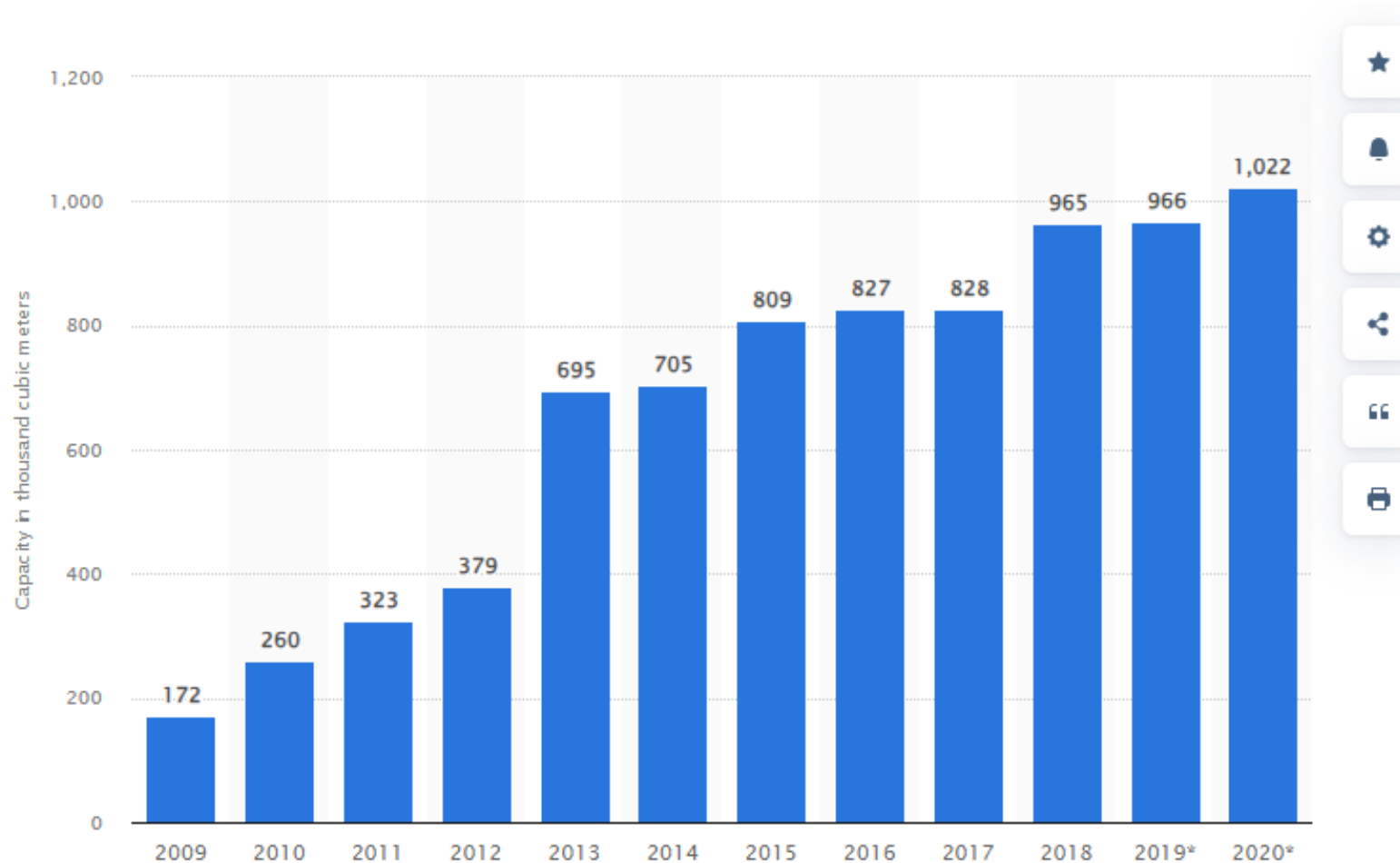
**Figure 2.6 Sustainability of water withdrawals in the Middle East and North Africa, by source**



Source: World Bank 2017.

## Some numbers

### Designed capacity of wastewater treatment plants in Qatar from 2009 to 2020







## Who's doing what?

- **Ashghal:** Wastewater treatment plants (municipal, industrial)
- **Qatar Energy and Water company:** desalination plants
- **Kahramaa:** distribution of drinking water
- **Ministry of Municipality:** legislation on the use of TSE for landscaping and agriculture

All public tenders are published in the Ministry of Finance portal (Monaqasat):  
<https://monaqasat.mof.gov.qa/eservices/Account/Login>



## Presenting the results of “The safe use of treated wastewater in fodder irrigation” study

In the presence of His Excellency Dr. Abdulla Bin Abdulaziz Bin Turki Al Subaie, Minister of Municipality, the Ministry of Municipality represented by the Agricultural Research Department held a press conference this morning (Tuesday), to announce the results of “The safe use of treated wastewater for fodder irrigation and its impact on meat and dairy products” project in the State of Qatar. The conference was attended by HE Dr. Saad Bin Ahmad Al Mohammadi, President of the Public Works Authority “Ashghal”.

### Speakers:

- Mr. Hamad Al Shamri  
Director of the Agricultural Research Department at the Ministry.
- Mr. Arnoud Lust  
CEO of VITO - Middle East.
- Mr. Alejandro Pro  
Business Development Manager - VITO Middle East.
- Mr. Siegfried Hoffmann  
Project Manager and Awards Coordinator.

### Information about the study:

- 300 pages of test results
- 114 pages of a technical report
- Accredited laboratories
- 800 samples
- 17,000 analyzes

### Study summary:

There was no evidence of negative effects from the use of treated wastewater, whether in milk or tissue samples taken from slaughtered cattle, and no evidence of possible accumulation of pollutants in soil or forage crops.



## Doing business in Qatar



- Trust is the foundation for any business interaction
- Communication style: not an email culture, calling or WhatsApp is more effective
- Pace: patience is key!
- Hierarchical decision-making processes



**FLANDERS  
INVESTMENT  
& TRADE**

# Thank you!

Flanders International  
**Business  
Weeks** /2023



***The GCC Office of Kuwait***

# Kuwait Office

- Kuwait office:  
Embassy of Belgium in Kuwait  
Block 13, Street 4, Villa 8  
Bayan, 13033 Kuwait City  
Kuwait
- Deputy Trade: Laurence Heyblom
- Assistant: Nala Heloui



# Kuwait Office Territory

Kuwait (Hub, Awex, Fit)

Bahrain (Hub, Awex)°

Qatar (Hub, Awex)

Dubai (Hub)



Flanders International  
**Business  
Weeks** /2023



# *Waste Water Treatment in the GCC*



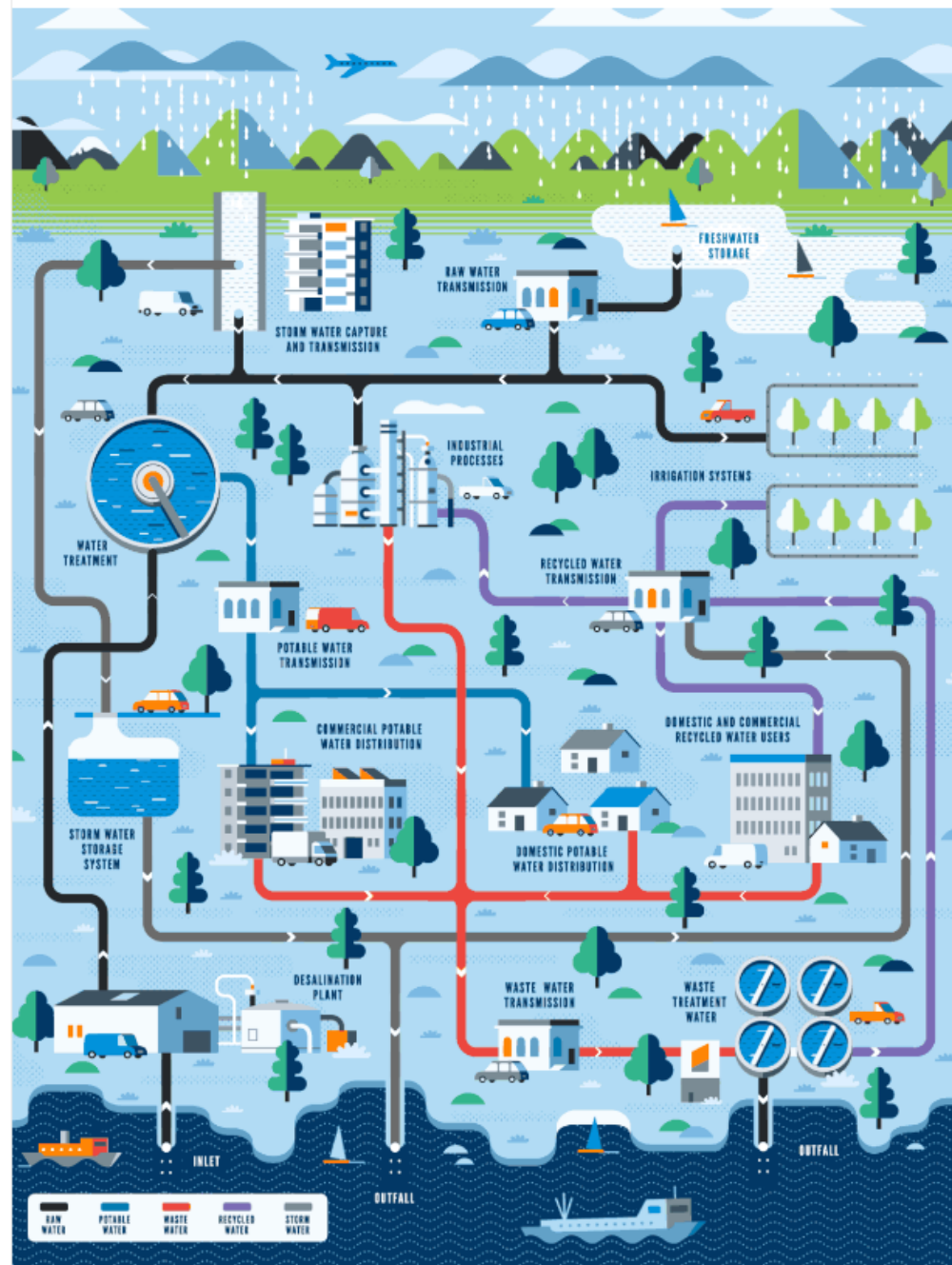
## **Embracing the Circular Economy: Transforming Waste Water into Valuable Resources**

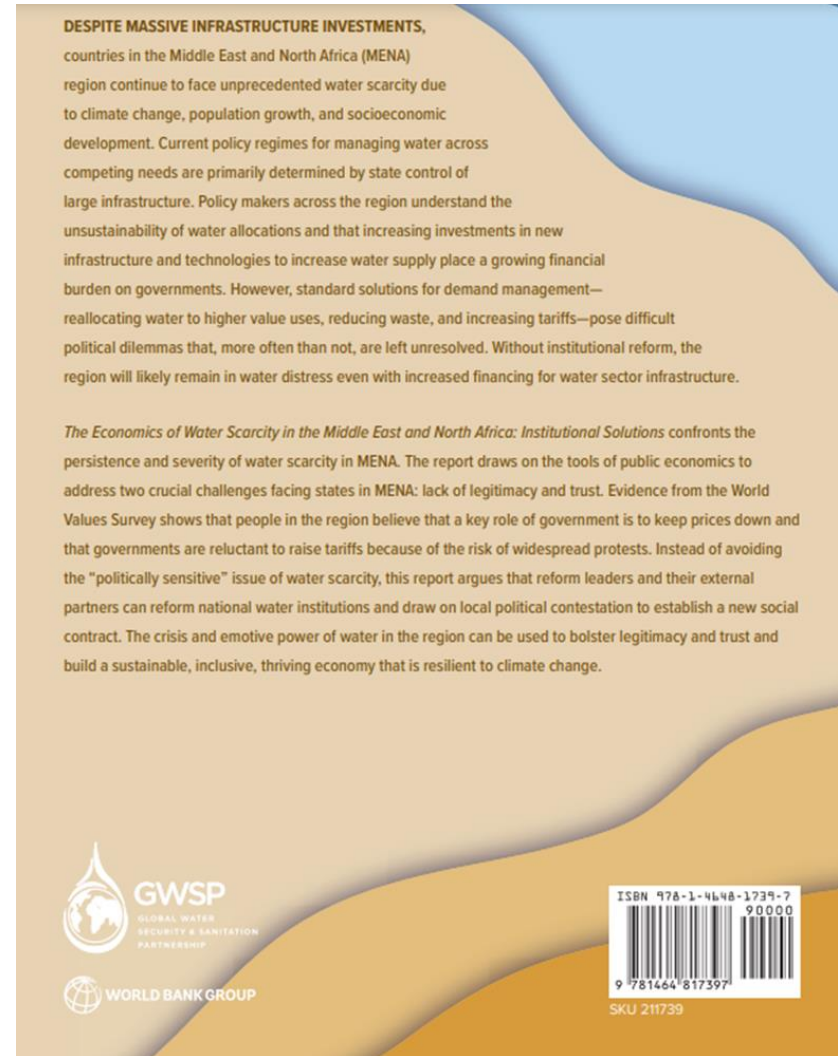
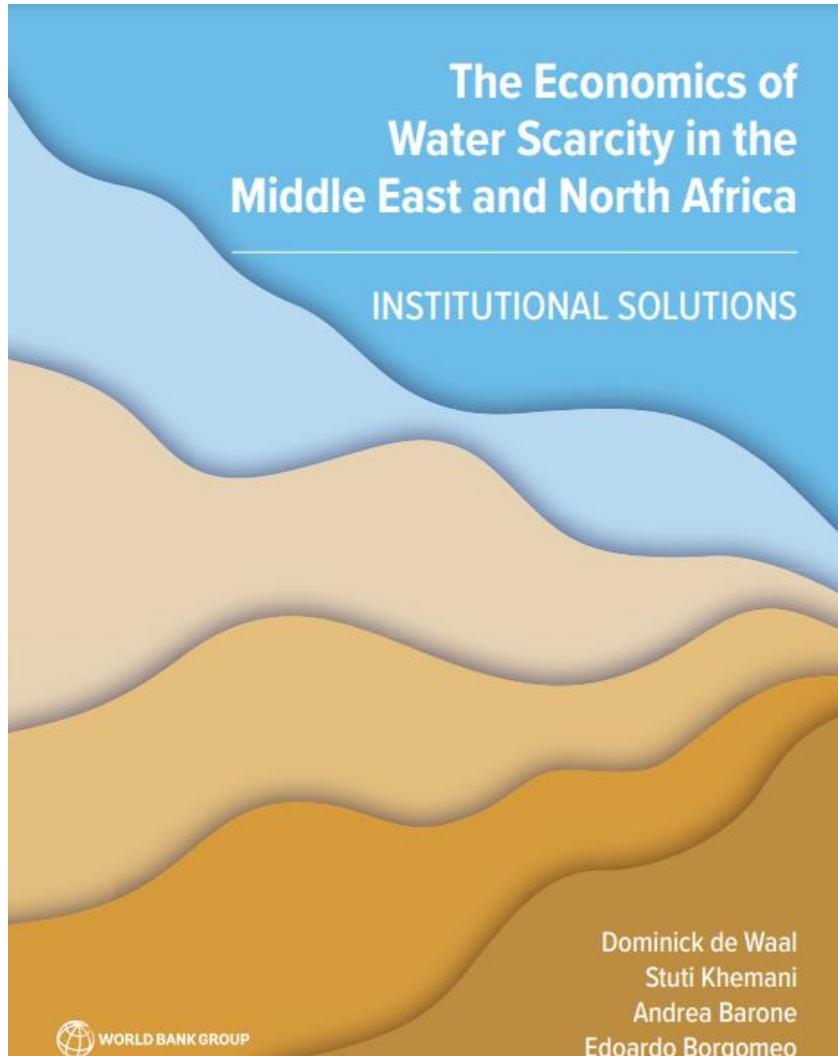
**In the journey towards sustainability, waste water treatment is a cornerstone of the Circular Economy. By converting wastewater into valuable resources, we're not only protecting our environment but also unlocking economic and social benefits.**

Proper wastewater treatment enables the recovery of nutrients like phosphorus and nitrogen. These resources can then be reused in agriculture, reducing the need for synthetic fertilizers and promoting a closed-loop system.

Recycling treated wastewater for industrial processes or irrigation conserves precious freshwater resources. This sustainable practice helps mitigate water scarcity challenges and contributes to the overall well-being of ecosystems.

Industrial symbiosis, a key concept in the Circular Economy, can also thrive through wastewater treatment. By collaborating among industries, the byproducts of one can become the valuable inputs of another, minimizing waste and maximizing efficiency.





**The Middle East and North Africa (MENA) region faces unprecedented water scarcity, both for life and to sustain livelihoods. Farmers and cities are competing for water, which is stretching water systems to the brink of collapse.**

- **By 2030, the water available per capita annually in MENA will fall below the absolute water scarcity threshold of 500 cubic meters per person per year.**

- Water scarcity will become even more acute as the population grows. The region's population grew from just over 100 million people in 1960 to more than 450 million in 2018. It is estimated to reach more than 720 million by 2050.

- With current water management strategies, a conservative estimate of water demand in 2050 is that an additional 25 billion cubic meters a year will be needed, equivalent to building 65 desalination plants the size of the Ras Al Khair plant in Saudi Arabia—currently the largest in the world.

- Without action, water shortages will have a detrimental impact on livelihoods and agricultural output and **may raise tensions among users.**



**MENA has tackled water scarcity by exploiting multiple ways to increase water supply (building more dams, tapping into groundwater, and increasing desalination) without adequately addressing critical efficiency and governance issues. This is fiscally and environmentally unsustainable.**

- There has been little focus on reducing water losses and introducing efficiency measures that would conserve water. For example, half of the utility service providers reported that more than **30 percent of the water they produce is not billed** to customers due to a combination of leaky pipes, inaccurate water meters, and illegal connections.
- **Unsustainable withdrawal of groundwater** has enabled policy makers to delay tackling water management and services reforms. Unsustainable withdrawals of water and increasing brine discharges from desalination are degrading marine ecosystems.
- MENA has relied increasingly on **imports of virtual water**—water used to produce commodities such as cereals—which doubled between 1998 and 2010. Reliance on virtual water imports exposes countries to supply shocks, such as the recent war in Ukraine.
- Existing institutions that manage the allocation of water across competing needs—particularly between agriculture and cities—are highly centralized and technocratic—which limits their ability to resolve **trade-offs in water use at the local level.**
- Reforms are needed to increase autonomy and **decentralize decisions** about water management and service delivery.

The report identifies **a series of institutional policy reforms** for national water agencies and utilities and **proposes delegating decision making over water allocations** to locally representative governments, which would help the region tackle and overcome water distress.

- The report addresses **two crucial challenges: lack of legitimacy and trust**. Evidence from the World Values Survey shows that people in the region believe that a key role of government is to keep prices down and that governments are reluctant to raise tariffs due to the risk of widespread protests.
- Devolving greater powers over water allocation **decisions to locally representative governments**, within a national water strategy, could lend legitimacy to difficult trade-offs in the use of water, compared to top-down directives from central ministries.
- Giving **greater autonomy to utilities** to reach out to customers on tariff changes could also win greater compliance with tariff structures, lowering the risk of protests and public unrest.

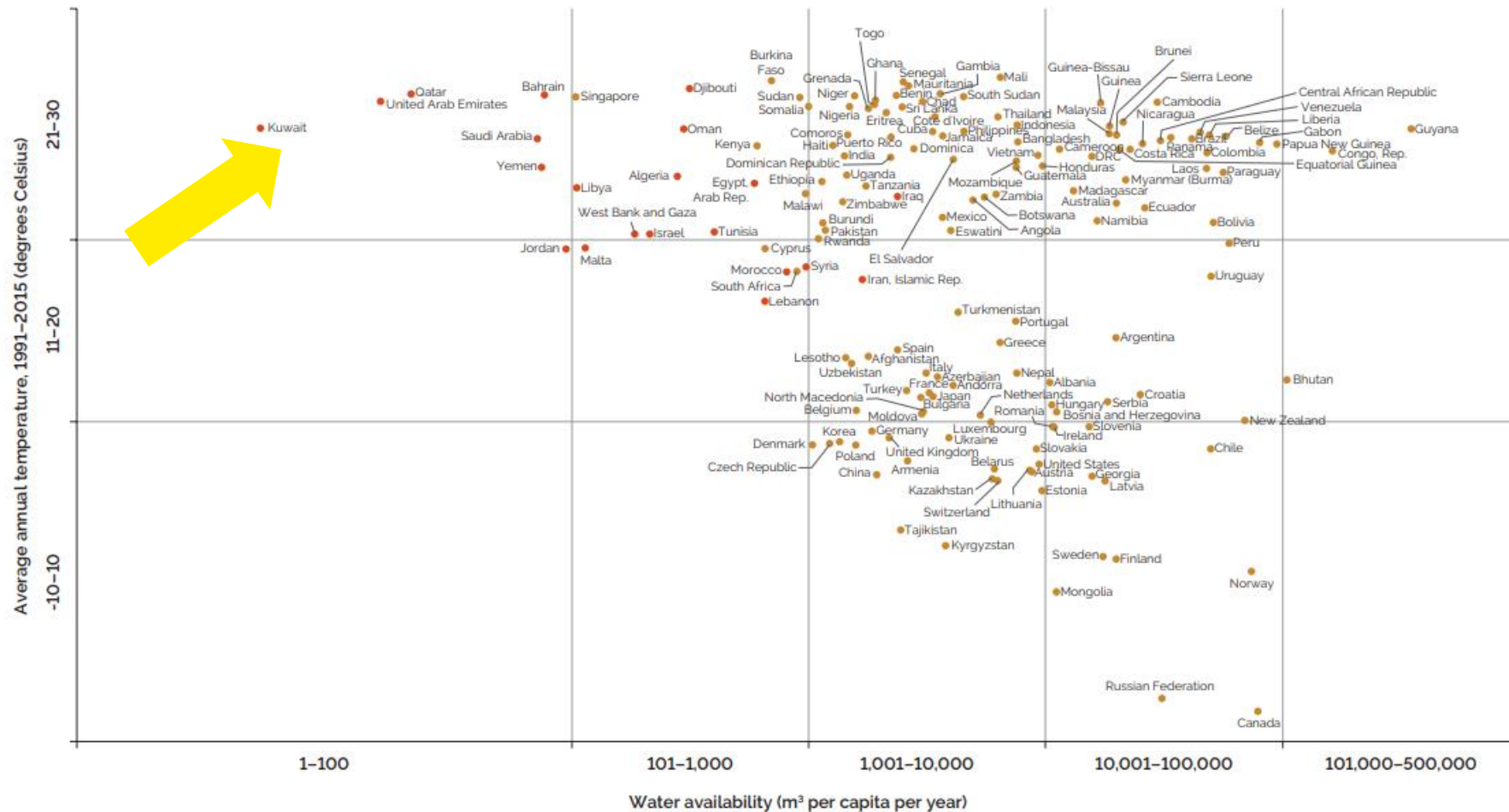
...

- Management reforms in utilities could help to build trust in government agencies **to manage long-term financing for water infrastructure**, by delivering reliable services, reducing waste and leakages, and generating revenues to service long-term debt.
- For institutional reforms to succeed, there must be **better communications** around water scarcity and national water strategies. **For example, a “water dashboard”**, which gives weekly updates on total water usage in the city as it approached “Day Zero” (when water was set to run out). Such transparency by a locally elected representative city government persuades residents of the urgency and makes them more likely to comply with restrictions.
- In sum, **institutional reforms could help governments to renegotiate the social contract with the people** of MENA. Instead of “top-down” directives to price and regulate water use, greater delegation to technical water resource management agencies, utilities, and local governments could build the legitimacy of and trust in the state to manage water scarcity.

# Renewable water resources per capita per year

14 | The Economics of Water Scarcity in the Middle East and North Africa

Figure 2.1 Renewable water resources per capita per year, by economy, 2017

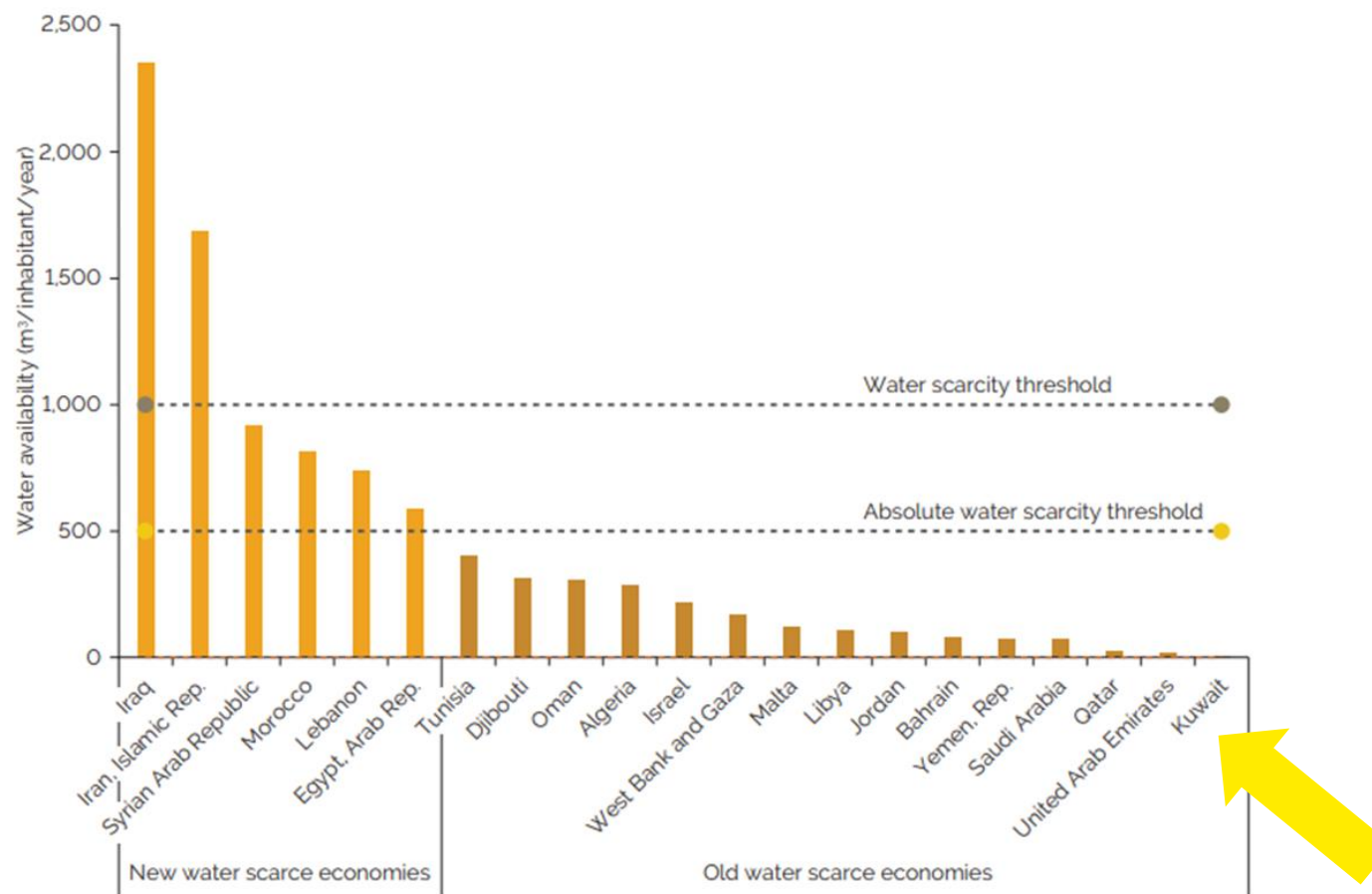


Sources: For temperature, Food and Agriculture Organization of the United Nations, AQUASTAT (<https://climateknowledgeportal.worldbank.org>). World Bank Climate Change Portal (<https://climateknowledgeportal.worldbank.org/country>)  
 Note: m³ = cubic meters.



# Renewable water resources per person per year

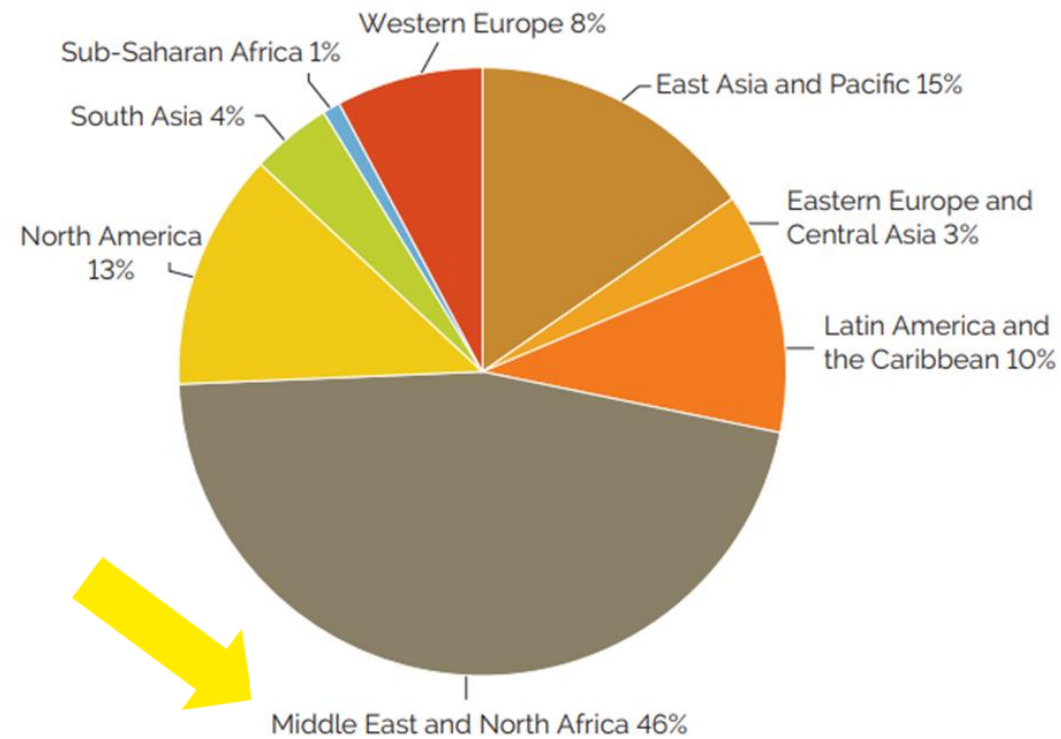
Figure 2.2 Renewable water resources per person per year, Middle East and North Africa, 2018



Source: Food and Agriculture Organization of the United Nations, AQUASTAT (<https://www.fao.org/aquastat/en/>).  
Note: m³ = cubic meters; MENA = Middle East and North Africa.

# Global share of desalinated water capacity

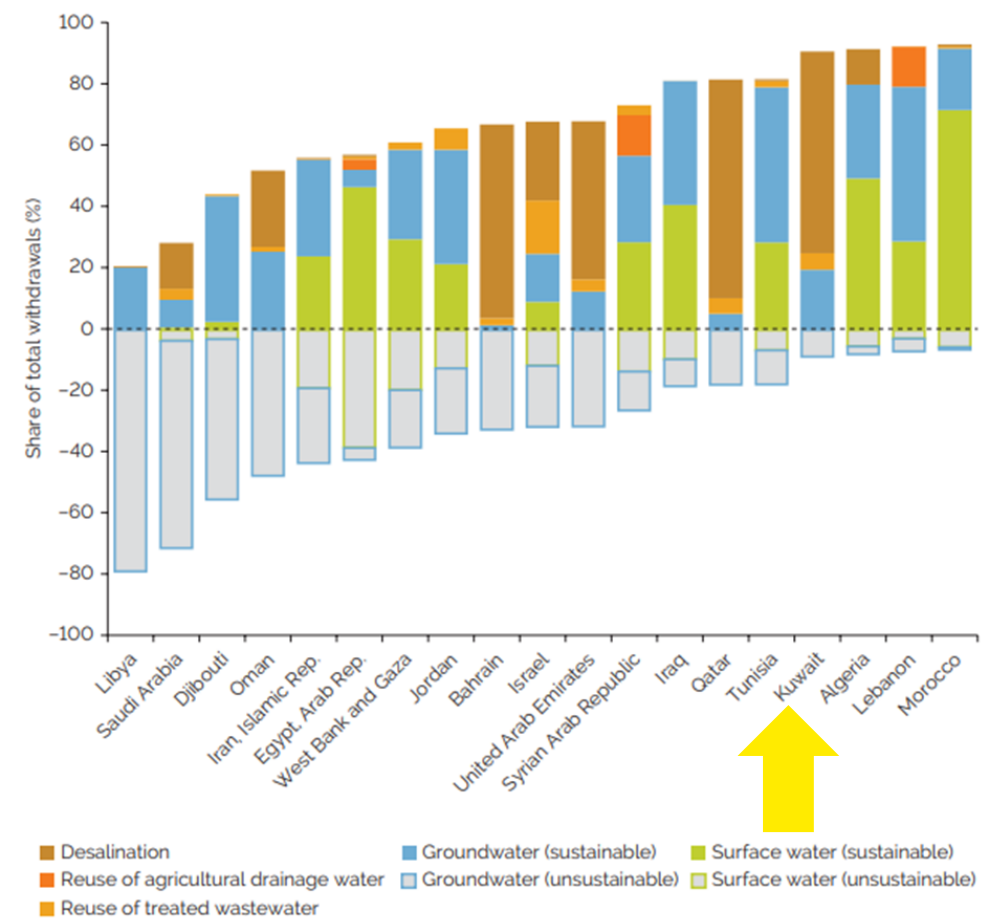
**Figure 3.3 Global share of desalinated water capacity, 2021**



Source: Global Water Intelligence, GWI desalination database (<https://www.globalwaterintel.com/articles/topic/desalination>).

# Sustainability of water withdrawals

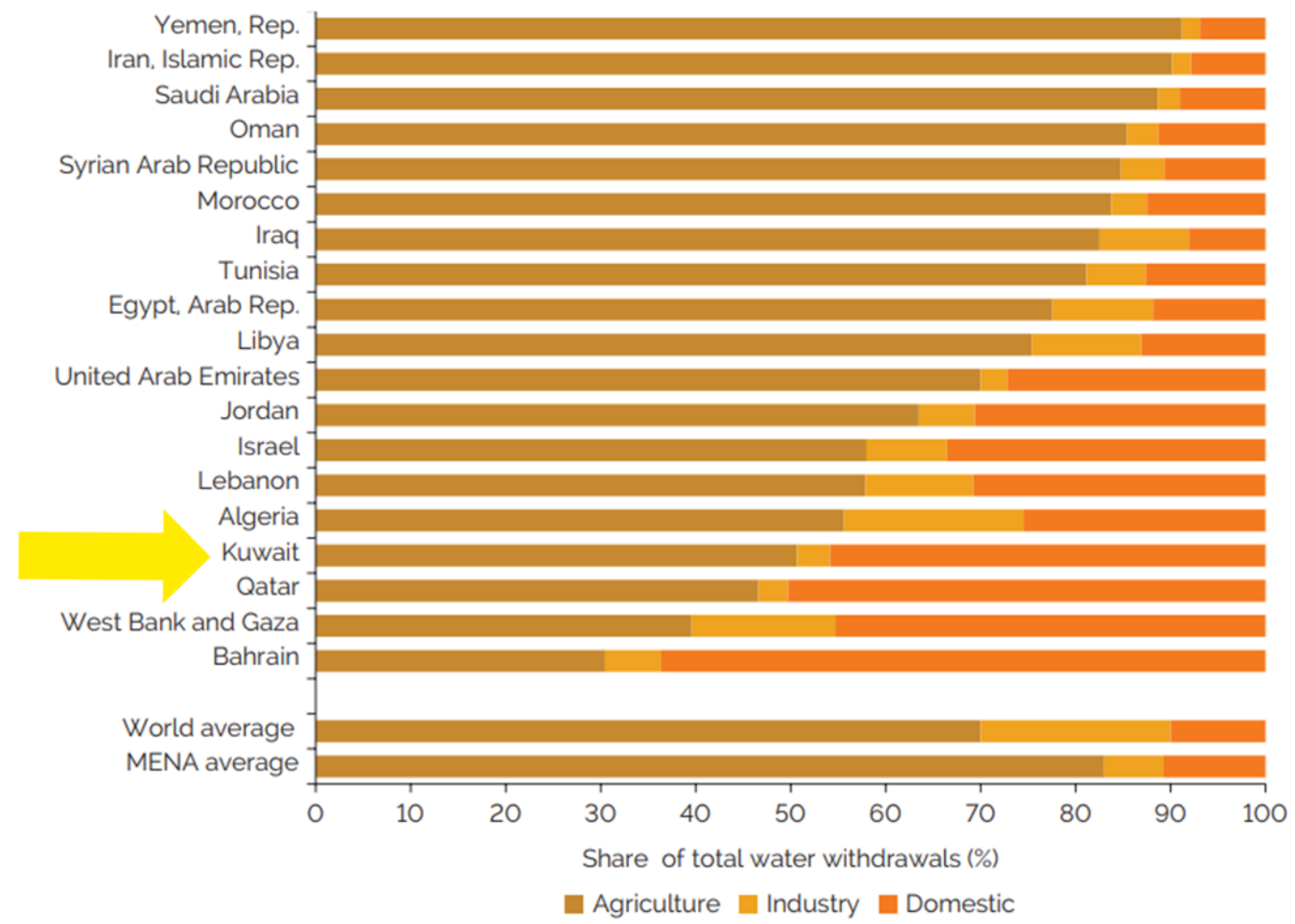
**Figure 2.6 Sustainability of water withdrawals in the Middle East and North Africa, by source**



Source: World Bank 2017.

# Water withdrawals by sector and economy

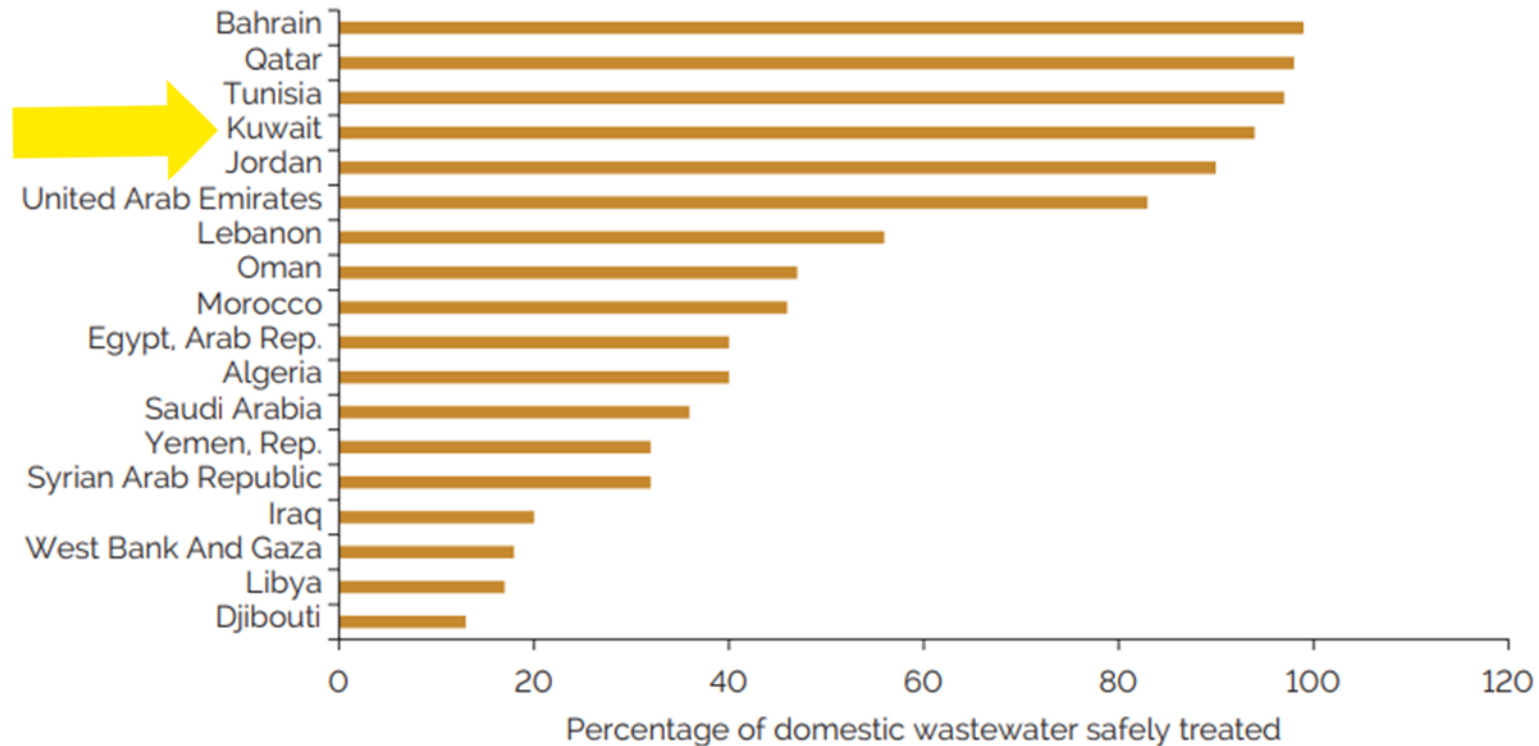
**Figure 4.1** Water withdrawals, by sector and economy



Source: World Bank 2017.  
 Note: MENA = Middle East and North Africa.

# Safely treated wastewater flows from households

**Figure 5.4 Safely treated wastewater flows from households**



Source: AbuZeid et al. 2019.

# When will it run out?

**Table 5.3** When will it run out? Large uncertainties about overall groundwater stocks and depletion rates make it difficult to identify the “exhaustion dates” of aquifers

Aquifer	Countries	Estimated exploitable reserves (million cubic meters)	Depletion rate (cubic kilometers per year)	Estimated years to exhaustion
<b>Arabian Aquifer System</b>	Bahrain, Iraq, Jordan, Oman, Qatar, Saudi Arabia, United Arab Emirates, Yemen, Rep.	500,000–2,185,000	15.5	32–140
<b>Northwestern Sahara</b>	Algeria, Libya, Tunisia	1,280,000	2.7	475

Sources: Foster and Loucks 2006 (exploitable reserves); Richey et al. 2015 (depletion rates).



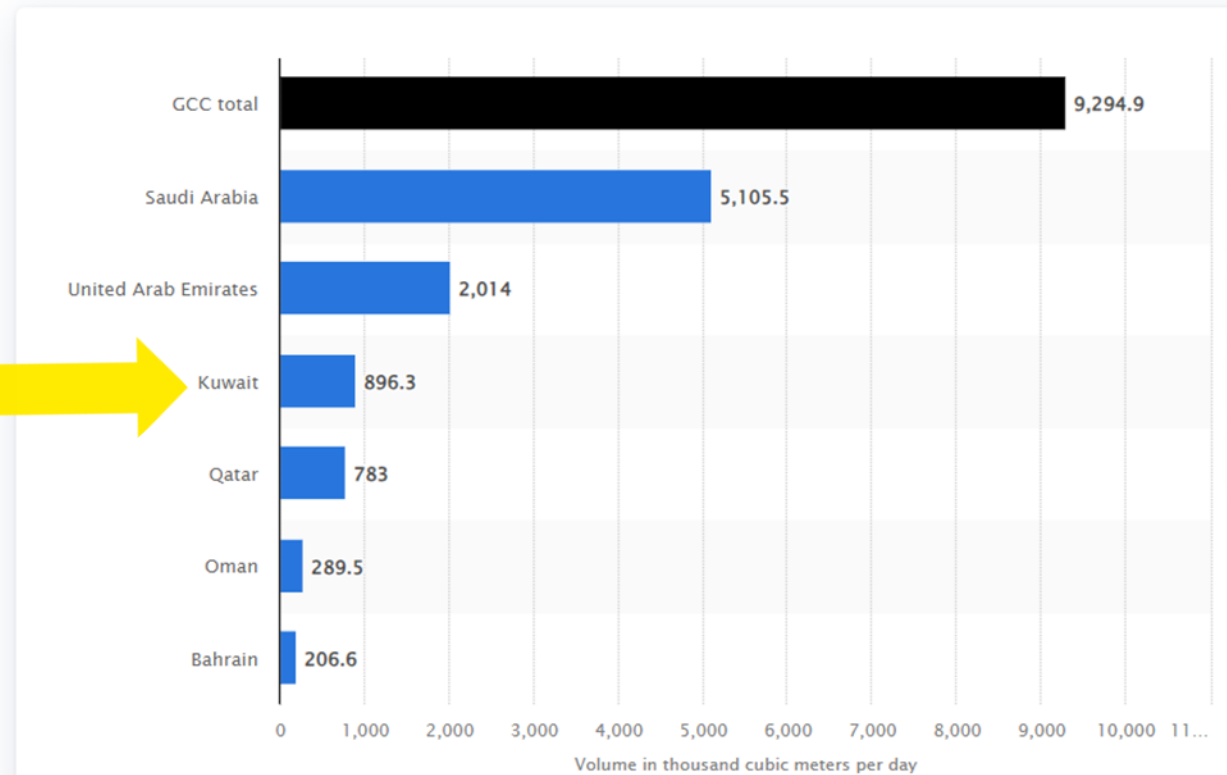
# Volume of treated wastewater in GCC

Energy & Environment > Water & Wastewater

PREMIUM +

## Volume of treated wastewater in the Gulf Cooperation Council region in 2020, by country

(in 1,000 cubic meters per day)



### DOWNLOAD



### Source

- [Show sources information](#)
- [Show publisher information](#)
- [Use Ask Statista Research Service](#)

### Release date

November 2021

### Region

Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, United Arab Emirates, MENA

### Survey time period

2020

### Citation formats

- [View options](#)

© Statista 2023

Show source

Additional Information

Flanders International  
**Business  
Weeks** /2023



# *Waste Water Treatment in Kuwait*





# Kuwait Institute for Scientific Research



العربية |

Discover | Research Centers | Support Services | Publications | KISR News and Events | Careers & Training | Information Disclosure





PETROLEUM RESEARCH CENTER



Partnering with the Local  
Petroleum Industry



WATER RESEARCH CENTER



Sustainable Water  
Development



ENVIRONMENT & LIFE SCIENCES  
RESEARCH CENTER



Reducing Risks, Improving  
Health



ENERGY & BUILDING RESEARCH CENTER



Sustainable Energy, Building  
Materials, & Infrastructure

Programs

Facilities

Academic Resources

Patents



Wastewater Treatment and Reclamation Technologies Program

Kuwait is a water-stressed country with a high demand for groundwater and potable water. The efficient reclamation of...

[Read More](#) →



Water Resources Development and Management Program

Kuwait is a country of significant economic capabilities but very limited natural water resources. These conditions h...

[Read More](#) →



Thermal Desalination Technologies Program

The availability of thermal desalination by multistage flash distillation technologies has provided the population of...

[Read More](#) →



Innovative Desalination Technologies


For more than half a century, Kuwait has successfully managed its self-sufficient freshwater independence by using wa...

[Read More](#) →

## WASTEWATER TREATMENT AND RECLAMATION TECHNOLOGIES PROGRAM

### Efficient Reclamation of Wastewater

Kuwait is a water-stressed country with a high demand for groundwater and potable water. The efficient reclamation of wastewater generated from municipal, oil-related and other industrial activities is necessary in order to enhance the country's ability to provide sufficient water for agricultural purposes as well as for greenery and landscaping needs. According to the Ministry of Public Works (MPW), only about 65% of its treated wastewater is reused. The WTRT Program develops physical, chemical, and biological system solutions tailored to the particular characteristics of each wastewater stream. The program conducts research to efficiently reclaim and reuse Kuwait's wastewater to improve water availability and contribute to the welfare of the country.



**65% of treated wastewater  
is reused**

[← Back to list](#)

## INTEGRATED FILM PROCESS FOR THE TREATMENT OF PETROCHEMICAL WASTEWATER

### Enhancing the biodegradation process

In this study, the integrated fixed film activated sludge (IFAS) process was modified to include a high surface area growth support medium, which is granular activated carbon (GAC). This innovative configuration was developed to evaluate its ability to enhance the biodegradation process utilizing both suspended and attached growth in a manner that can be optimized and aid in the removal of contaminants by adsorption when GAC is used as a support material. In this phase of the project, laboratory-scale studies as well as mathematical modeling were conducted to assist in understanding the process behavior and aid in future piloting/upscaling at a later phases. The process was found to be feasible with very encouraging design parameters. Additionally, a mathematical model was validated to fit the experimental results and is expected to aid greatly in the design of an upscaled version of the process.





[← Back to list](#)

## TREATMENT OF ODOROUS HOSPITAL EFFLUENT

### Improving the water quality of Sulaibikhat Bay

This in-house study aims to assess the removal efficiency for odorous compounds from wastewater using aeration with activated sludge technique. Samples will be collected from the culvert discharging wastewater to Sulaibikhat Bay, which receives wastewater from nearby hospitals. Collected samples will be transferred to a laboratory to characterize the wastewater before treatment, and part of the sample will be treated in an activated sludge process. The removal efficiency of sewage parameters will be evaluated for several relevant water quality coefficients. Influence of aeration intensity for pollutants removal efficiency will be studied (two levels of dissolved oxygen will be applied), and the possibility of hospital wastewater treatment in packaged units will be evaluated.





## WATER RESOURCES DEVELOPMENT AND MANAGEMENT PROGRAM

### Strategies to Maximize Water Security

Kuwait is a country of significant economic capabilities but very limited natural water resources. These conditions have created a rather fragile water sector that is 90% dependent on expensive seawater desalination. KISR initiated the WRDM Program to identify ways to sustainably optimize the use and management of Kuwait's water resources through applied research. The program was also designed to develop integrated strategic water policies, management options, and action plans to alleviate water problems, maximize socioeconomic growth and increase the nation's water security.

**90% dependent on expensive  
seawater desalination**



## THERMAL DESALINATION TECHNOLOGIES PROGRAM

### Economically Sustainable Desalination

The availability of thermal desalination by multistage flash distillation technologies has provided the population of Kuwait with unrestricted access to safe, clean potable water for more than half a century. Continuing this standard of living will depend very much on how well the water sector in Kuwait can improve the technical and economic competitiveness of thermal desalination. The TDT program will work with Kuwait's water sector to determine which development strategies improve the sustainability and competitiveness of Kuwait's freshwater supply while radically improving the efficiency, economy, and flexibility of desalination technologies.

**unrestricted access to  
safe, clean potable water**



[← Back to list](#)

## ASSESSING THE VIABILITY AND EFFICIENCY OF MEMBRANE CONTACTORS FOR DEAERATION

### A benchscale water treatment study

Kuwait and other GCC countries depend mainly on seawater desalination using multistage flash (MSF) distillation plants. To properly treat the waters feeding these MSF desalination units, dissolved gases, such as oxygen and carbon dioxide, must be removed. The presence of such gases in the feedwaters can lead to severe corrosion, premature equipment failure, excessive maintenance and shutdowns as well as performance degradation. The TDT Program initiated a project to investigate how to improve on current desalination methods and carried out a bench-scale study to assess the potential of using a new membrane-based technology, known as membrane contactors, capable of more reliably and efficiently dissolving gas from water. The study found that membrane contactors is suitable for all conditions and is a reliable technology for removing dissolved oxygen from different feedwater streams.





## INNOVATIVE DESALINATION TECHNOLOGIES

### Environmentally Sustainable Desalination

For more than half a century, Kuwait has successfully managed its self-sufficient freshwater independence by using water desalination systems to convert readily accessible seawater into salt-free potable water using locally available fuel. After such a long time, major concerns have emerged about the effect burning fossil fuels to meet the demands for freshwater has on the environment and about its economic sustainability. KISR launched the Innovative Desalination Technologies (IDT) Program to expand Kuwait's ability to develop emerging desalination technologies and expand its freshwater facilities. The Program addresses the challenge of providing Kuwait with a more environmentally and economically sustainable desalination infrastructure under the circumstances of preserving fossil fuel resources and growing concerns about the impact desalination technologies have on the environment.



**more environmentally and economically sustainable desalination infrastructure**



## KISR's innovative water desalination technology granted patent by America



thetimeskuwait • Follow



thetimeskuwait The Water #Research Center of the Kuwait #Institute for #Scientific Research has been granted a patent by the United States Patent and #Trademark #Office for a groundbreaking water desalination #technology.

Read full story on:

<https://timeskuwait.com/news/kisrs-innovative-water-desalination-technology-granted-patent-by-america/>

3w



5 likes

JULY 24



**Fred Abou Saada**

Head of Events at TALEA MARCOM # Board member at GBCK - German Business Council # Comm...  
2mo



A very unique project .  
The biggest project in kuwait.



**Stefan Nalbach**

General Manager at WTE Wassertechnik GmbH, Kuwait Branch  
2mo

UAH Wastewater Teeatment Plant

#WTE

We are making Progress

May 2023



[https://www.linkedin.com/posts/fred-abou-saada-52a2a27\\_a-very-unique-project-the-biggest-project-activity-7070997621212946432-tHUg?utm\\_source=li\\_share&utm\\_content=feedcontent&utm\\_medium=g\\_dt\\_web&utm\\_campaign=copy](https://www.linkedin.com/posts/fred-abou-saada-52a2a27_a-very-unique-project-the-biggest-project-activity-7070997621212946432-tHUg?utm_source=li_share&utm_content=feedcontent&utm_medium=g_dt_web&utm_campaign=copy)



**FLANDERS  
INVESTMENT  
& TRADE**

Laurence Heyblom

[lheyblom@hub.brussels](mailto:lheyblom@hub.brussels)

+965 99061271

# Thank You



**FLANDERS  
INVESTMENT  
& TRADE**

# Thank you!

Flanders International  
**Business  
Weeks** /2023



**AFME (Africa Middle East)**

# **Water & Wastewater - Jordan**



## **FIT BEIRUT**

### **Jurisdiction Lebanon & Jordan**



**Nada Abdul Rahim**  
**[beirut@hub.brussels](mailto:beirut@hub.brussels)**



# Why Jordan?



- ▶ Politically **stable** and secure
- ▶ **Gateway** to Iraq and Syria
- ▶ **Reliability upon imports**
- ▶ **EU technology**, quality of products and brands appreciated
- ▶ **Major infrastructure projects**

# Overview of the water sector

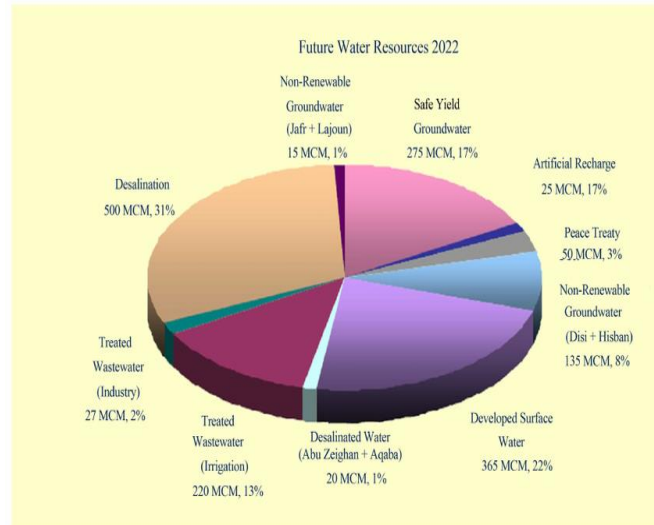


## Jordan, one of the most water-stressed countries in the world :

- Low occurring water resources and recurring droughts
- Increasing population and a large influx of refugees
- Decreasing water supply and negative impact of climate change
- Non-revenue water (NRW)
- Pollution and over abstraction

## Water availability: 10% of the internationally recognized water scarcity level

→ Importing water from Israel



## Water strategies

- The 2023-2040 National Water Strategy
- The Financial Sustainability Roadmap for the Water Sector
- The National Water Loss Strategy (2022-2040)
- The Water Sector Green Growth Action National Action Plan 2021-2025

# Opportunities



## Main donors and development funding

USAID  
World Bank  
EBRD & European Investment Bank  
German Development Bank (KfW) –  
Agence Française de Développement (AFD)  
Swiss Agency for Development and Cooperation (SDC)  
Etc.

## Leading Sub-Sectors

- ▶ **Wastewater treatment and management**
- ▶ **Desalination**
- ▶ **Smart Efficiency Solutions**

# Main Water & Wastewater Projects



## ▶ National Conveyance Project (NCP)

## ▶ Water-for-Energy deal

## ▶ Wastewater Treatment Projects:

- Ain Ghazal Pre-Treatment-As-Samra Wastewater Plant Pipeline Project
- Al Ghabawi Wastewater Treatment Facility
- Expansion of As-Samra Wastewater Treatment Plant
- West Irbid Wastewater Network
- Halabat Industrial Wastewater Treatment Plant
- Wadi Al Sir Wastewater Treatment Plant Renovation
- Zarqa-Al Samra Plant Wastewater Pipeline
- Central Irbid and Wadi Al-Arab Wastewater Treatment

## ▶ Projects for the Reduction of Non-Revenue Water

## ▶ Jordan Water Sector Efficiency Project



# Stakeholders



- ▶ **Ministry of Water and Irrigation (MWI)**
  
- ▶ **Ministry of Environment (MoE)**
  
- ▶ **Water utility companies:**
  - **Jordan Water Company (Miyahuna)**
  - **Yarmouk Water Company and**
  - **Aqaba Water Company**
  
- ▶ **Donors**

# Upcoming Event

**Belgian Economic Mission 2023**  
**Jordan and Palestine**  
**25/11 - 01/12**



 **hub**  
.brussels  
our business is to help yours

 **ABLCC**

Arab-Belgian-Luxembourg  
Chamber of Commerce  
الغرفة التجارية العربية  
البلجيكية اللوكسمبورجية

**Economic Mission to Jordan and Palestine presided over by Brussels Ministers**

**Date: 26 November to 1 December**

**Sectoral focus :**

- ▶ **Jordan**      **Energy / Environment / Water / Infrastructure / Health**
- ▶ **Palestine**      **Tech / Digital**

**Closing date for registration: 30 September**

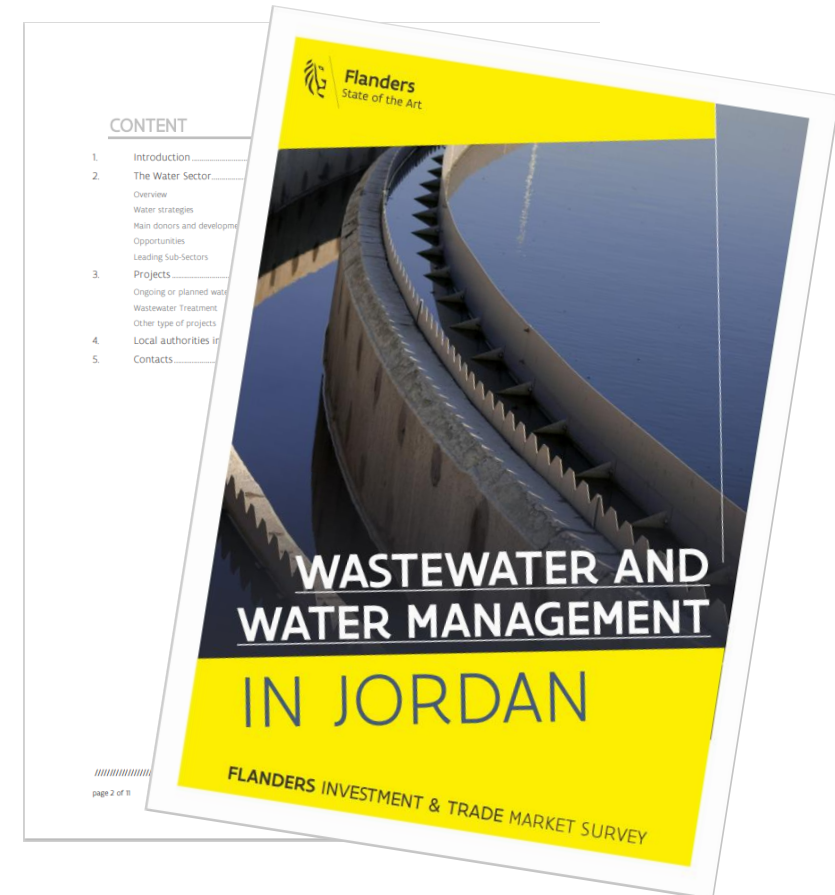
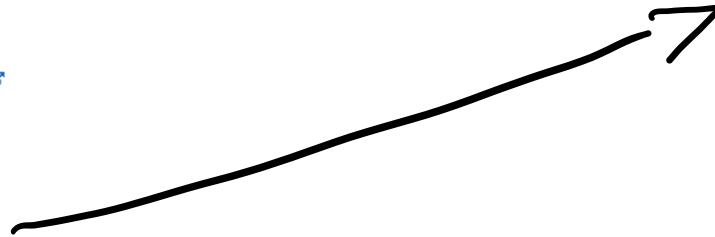
# New market study online: Wastewater and water management in Jordan



Home > Landen > Jordanië

## Exporteren naar Jordanië

- > Jordanië in cijfers
- > Bilaterale handel met Vlaanderen [↗](#)
- > Kansrijke sectoren
- > Zakendoen in Jordanië
- > Wet- en regelgeving
- > Reisinformatie en nuttige adressen
- > Acties en events
- > **Marktstudies**
- > Nieuws





**FLANDERS  
INVESTMENT  
& TRADE**

**FIT Beirut  
Lazarieh Building – Block A  
Emir Bechir Street  
Beirut Central District  
Beirut - Lebanon**

**THANK YOU**