

Welcome

مرحباً

Agenda 29 January 2026

09:30-10:00	Walk-in & registration
10:00-10:05	Welcome by NWP
10:05-10:25	Round of introduction
10:25-10:35	Ministry of Agriculture, Fisheries & Water Resources Eng. Ahmed Salim Al Saidi
10:35-10:45	Oman Project Implementation Programme (CAPEX), investment frameworks and technology transfer opportunities Eng. Abdulhakeem Al Dhahli, Nama Water Services
10:45-10:55	Oman Water Week 2026 - Ahmed Sayed Brik
10:55-11:00	Wetskills Oman - Johan Oost
11:00-11:30	Q&A
11:30-12:30	Networking

Introduction

1. Historical context
2. Oman-Netherlands Water Taskforce
3. Interest in water cooperation in Oman? Email: s.doetjes@nwp.nl

Next stop: Oman Water Week 2026

- 19-23 April 2026
- Muscat, Oman
- Co-located with Gulf Water conference



Eng. Ahmed Salim Al Saidi
Director Water Resources Assessment Department
Ministry of Agriculture, Fisheries & Water Resources



سلطنة عمان
وزارة الثروة الزراعية
والسمكية وموارد المياه



Water Resources in Oman

Ministry of Agriculture, Fisheries and Water Resources

Netherlands study-tour
January 26 - 30, 2026

Mission and Vision of the Ministry



Values

- Creativity and Innovation
- Leadership and Excellence
- Efficiency and honesty
- Partnership and Integration
- Transparency and Accountability



Message

Efficient management and sustainable development of agricultural, fisheries, and water resources, ensuring food safety and quality through innovative methods and technologies, an advanced legislative framework, community partnership, and active private sector participation to enhance food and water security and maximize economic returns.



Vision

A sustainable food and water security and an active contribution to the national economy

Ministry Sectors



The Governance of Water Sector



The Ministry is responsible for proposing policies, strategies, and plans related to the water and wastewater sector, and submitting them to the Council of Ministers for approval.



The Public Services Regulatory Authority is responsible for regulating the activities related to water and wastewater services.



Nama Water Services, Dhofar Water Services Company, are responsible for providing water and wastewater services.

Introduction

- **Location & Physical Characteristics (Oman)**
 - **Total area:** ~309,500 km²
 - **Population:** ~5.0–5.3 million
 - **Land cover distribution:**
 - Desert & arid plains: ~**82–83%**
 - Mountain ranges (Al Hajar): ~**14–15%**
 - Coastal plains: ~**3%**
 - Located in the **Arid and Semi-Arid climatic zone**
 - **Water resources are extremely scarce**
-



Introduction

- **Climate Characteristics**
- Predominantly **arid to hyper-arid climate**
- **Summer daytime temperatures:**
 - Generally **>30 °C**
 - Frequently **>40 °C** in coastal and interior regions
- **Winter temperatures:**
 - Mild in lowlands
 - Can drop to **near 0 °C** in high mountain areas
- Strong influence of **topography and elevation**
- Southern Dhofar region affected by seasonal monsoon (local exception)



Rainfall

Rainfall Distribution

- Rainfall is **low and highly variable**
- **Annual rainfall ranges:**
 - **Mountains:** up to **300–350 mm**
 - **Foothills & plains:** **~60–80 mm**
 - **Interior desert:** **<50 mm**
- Short-duration, high-intensity storm events dominate
- Southern Dhofar region affected by seasonal monsoon (local exception)

Evaporation Characteristics

Very high potential evaporation rates

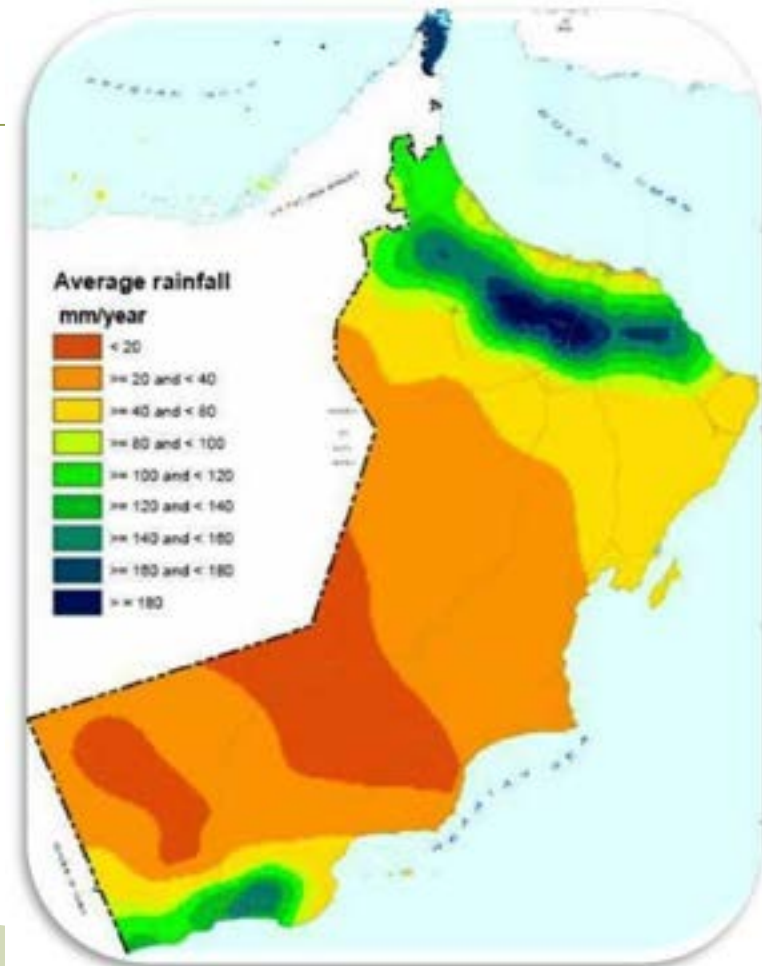
Annual evaporation:

Al Batinah coastal plain: **~1,660 mm/year**

Interior regions: **2,400–3,000 mm/year**

Evaporation **greatly exceeds rainfall** in all regions

Major constraint on groundwater recharge and surface storage

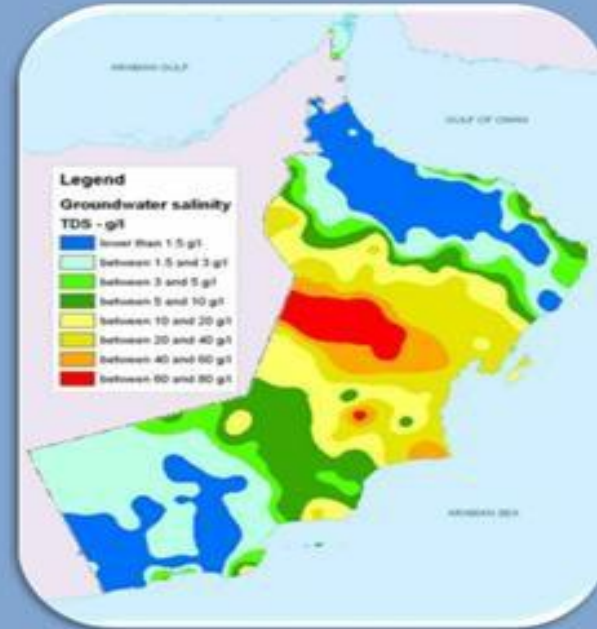


Groundwater Quality

Water Quality

Fresh water exist only in the Northern and Southern ends

The rest of the country water is brackish to saline



Water Situation

Major Water Basins

1

Al Massarat Aquifer



2

Rimal Al Sharqeyah Aquifer



3

Al Najd Aquifer



Dams

209

The Total Storage Capacity:
≈ 485 Million Cubic Meters

Groundwater Recharge Dams

69

Surface Storage Gams dam

115

Flood-Protection Dams

10

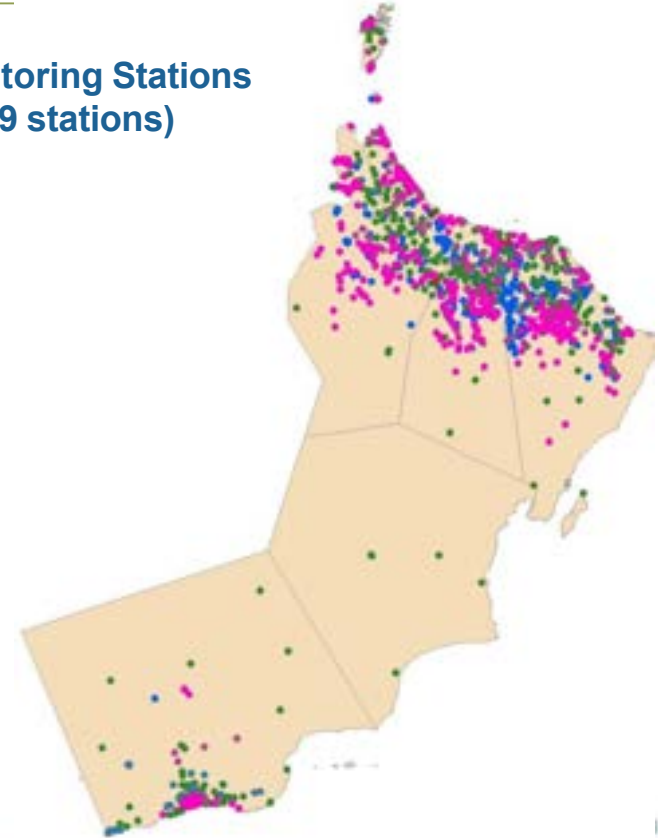


Hydrometric Stations

(Total 3475 stations)

Rainfall	• 633 stations
Wadis	• 112 stations
Springs	• 31 stations
Aflaj	• 562 stations
Wells	• 2073 stations
• Dams	• 52 stations
Climate	• 12 stations (CAA)

Remote Monitoring Stations
(Total 639 stations)



Artificial Rain Enhancement

Oman utilizes ionization stations that release negatively charged ions into the air. These ions attach to dust particles and are carried by air currents into clouds, enhancing condensation and rainfall. This method is considered environmentally friendly.

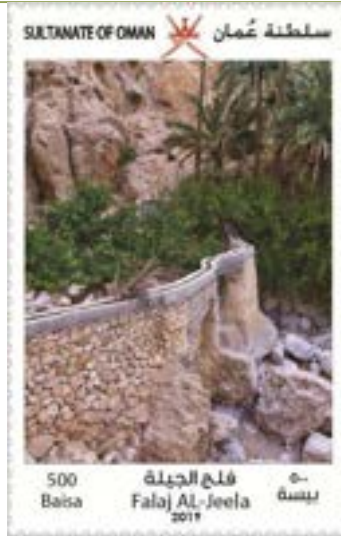
- 12 stations (operating using the pyrotechnic method)
- 2 new stations under construction in the mountains

Development Project

Use of drones for cloud seeding by dispersing salts under the cloud base



Aflaj



the *Aflaj* are integrated systems which collect water (groundwater, natural spring water or surface water), and deliver it through channels (underground or surface) for domestic and agricultural purposes. They can be broadly divided into three types of hydrological systems reflecting their type of water-source - *Aini*, *Daoudi* and *Ghaili*.

There are more than 3,000 aflaj in Oman, with an average water supply of 552 MCM/yr and losses of 128 MCM/yr due to leakage at the main canals.

5 aflaj on the world heritage List.

Update of the Water Balance Of The Sultanate of Oman



The project started : August 2025

Completion date : Feb 2027

Consultants:

Azd Engineering

Acacia Water

Water Balance Calculation (2013)

- **Total water supply:** ~1,340 million m³/year

- **Total water demand:** ~1,640 million m³/year

Water deficit = ~300 million m³/year

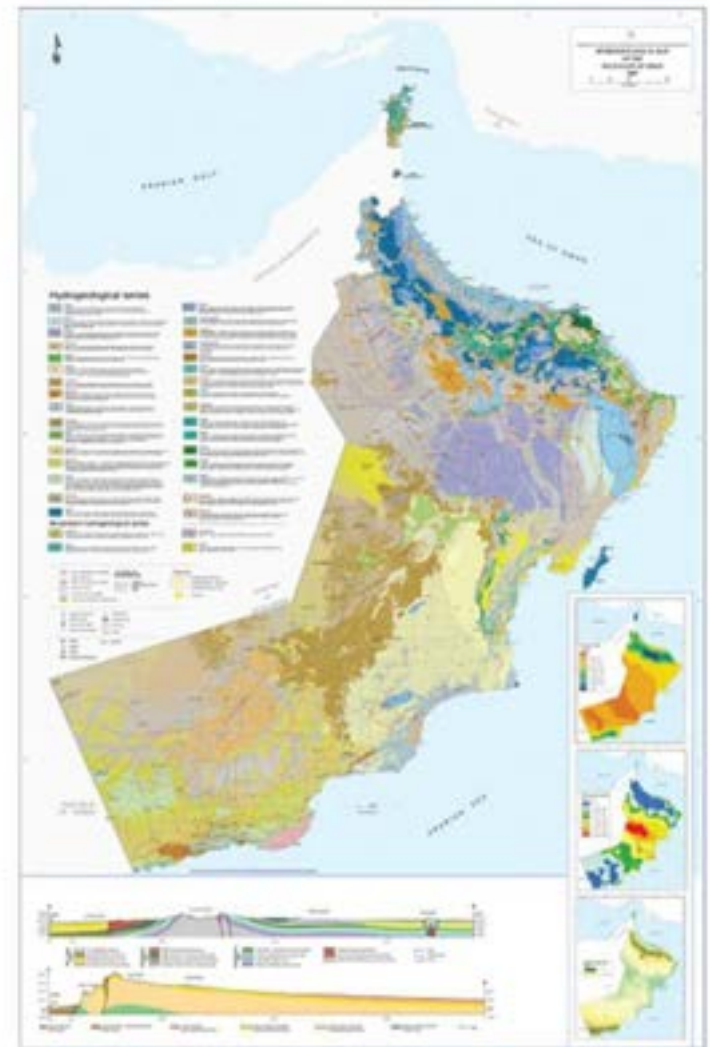
This deficit was mainly covered by **over-pumping groundwater**, leading to declining water tables.

- Groundwater abstraction exceeded recharge by **25–30%**
- Saline intrusion observed in coastal aquifers
- Increased dependence on desalination for urban supply

Hydrogeological Map of the Sultanate of Oman

The hydrogeological map illustrates the main groundwater aquifers across the various governorates of the Sultanate of Oman, such as the alluvial aquifers (Quaternary age) in Al Dhahirah, Al Batinah, Al Dakhiliyah, and Ash Sharqiyah governorates. It also shows Triassic aquifers, the Umm Er Radhuma groundwater aquifer in the Najd region, the Adub aquifer in the Salalah Plain, Wadi Razun, and the Ma'bar Depression in Al Wusta Governorate. These are considered freshwater lenses overlying regional saline groundwater.

The map also explains the method of classifying geological formations into productive, semi-productive, and impermeable (non-water-producing) layers. In addition, it includes the most important locations of seawater desalination plants, major springs, aflaj (traditional irrigation channels), caves, and major dams, as well as wellfield protection zones, groundwater flow directions, and directions of increasing salinity.



AGRICULTURAL DEVELOPMENT PLAN IN NAJD

2025-2027

Japan International Cooperation Agency (JICA)

Project Key Objectives

- Enhance MAFWR's policy-making and implementation capacity.

Development of Rolling plan and Phasing plan

- Establish Najd as a sustainable, high-value agricultural producer.

Cluster-based Agricultural Developmen



Construction of Dams

A total of eight (8) dams are currently under construction across various governorates:

➤ Groundwater recharge dams:

4 dams

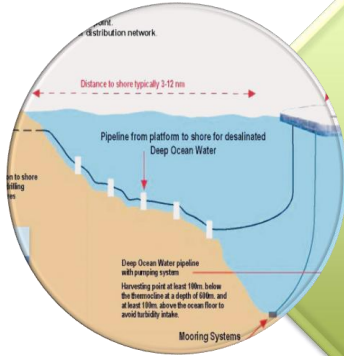
➤ Surface storage dams: 3 dams

11.5 Mm3

15.7 Mm3

83 Mm3





Development of Oman Deep Ocean Water Industrial Park (DOWIP) :

A usufruct agreement was signed between the Government of Oman and the **Transocean Fortune Integrator** to develop the Deep Ocean Water project.

- Desalination of potable water.
- Cooling for industrial and data center applications.
- Integrated aquaculture and hydroponic systems.
- Bottled water and mineral extraction.

Drinking Water Bottling Factories :

The production of bottled water has seen significant growth from 2022 to 2024, with the number of factories increasing from 67 to 89

Water Harvesting Program

Fog Harvesting in Dhofar Governorate :

- Mesh net with specific dimensions and fine openings is installed in areas where fog is present.
- The fog then condenses and is converted into water that collects in basins or tanks connected through pipes, allowing the production of reasonable quantities of water at very low cost.



Water extraction from the atmospheric humidity using a **device that condenses atmospheric moisture** and collects it, operating with clean energy (solar or wind power).

Nama Pilot Project Showed that this method was not to supply drinking water for large settlements.

The cost for Production of 1 m³ =20 OMR
For desalination =0.4 OMR



"Flood Risk Assessment Project in the Sultanate of Oman"

The Ministry of Agriculture, Fisheries and Water Resources assigned a specialized company with the tasks of drafting consultancy services project to update and prepare flood risk maps.

The company will also prepare emergency management plans for handling flood risks in the Sultanate of Oman from 2024 to 2026.

The project seeks to update earlier flood maps and cover the full range of their risks in open plains and main valleys, as well as areas of chances for the formation of all water bodies in the Sultanate of Oman. It identifies floods geographically and classifies them in terms of risks, as posing “maximum”, “medium” or “minor” danger.



Assessment of Pollution and Climate Change Impacts on Water Resources Using Nuclear Technology 2024-2026

The project aims to **assess pollution levels and the impacts of climate change on water resources** using **nuclear technology** for groundwater monitoring and analysis. It also seeks to **develop vulnerability maps of groundwater** and identify **protection zones**, supporting sustainable planning and effective water resources management.

Assessment and Quantification of Off/Near-Shore Submarine Spring Water Sources in Quriyat and north Oman Coast using Remote Sensing and GIS



Study and assessment of submarine hot springs in Dhofar Governorate, in collaboration with: GEOMAR Institute (Germany) and Sultan Qaboos University."



Eng. Abdulhakeem Al Dhahli
Master Planning & Strategic Investment Manager
Nama Water Services



OUR TEAM



Saif AL-Kindi
GM – Engineering &
Technical Support



Abdulhakeem Al-Dhahli
Master Planning & Strategic
Investments Manager



About

SULTANATE OF OMAN

SULTANATE OF OMAN

Weather



Subtropical weather - and very hot summers and warm winters



The climate is very hot, with temperatures reaching as high as 49 °C in the summer.



Annual rainfall in Muscat is about 100 millimeters



SULTANATE OF OMAN

Winter

Summer

Jabal Shams

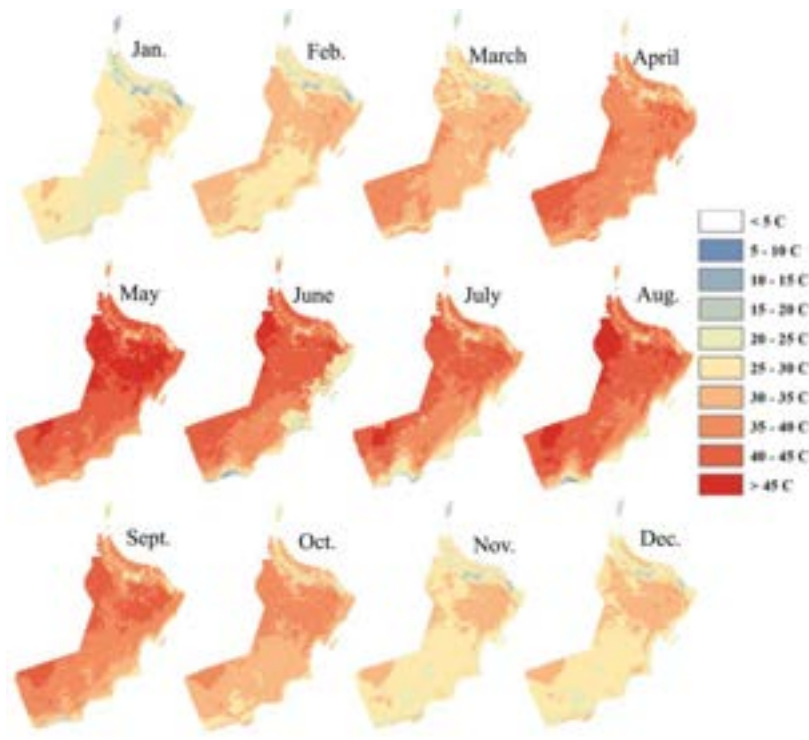


Salalah

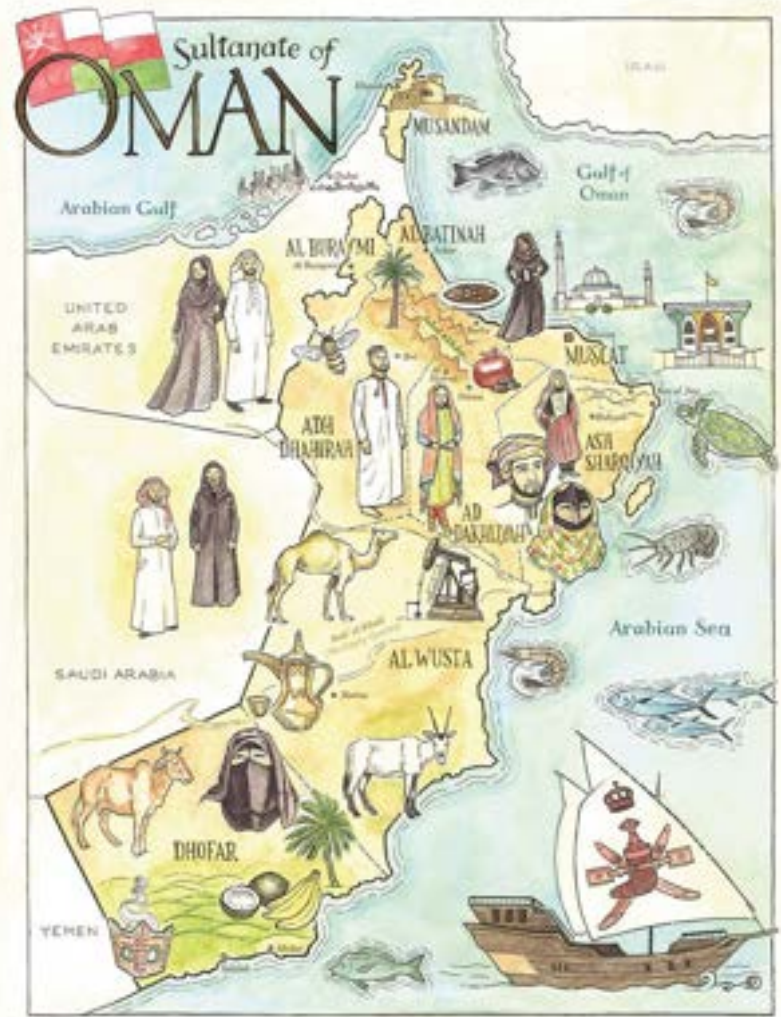
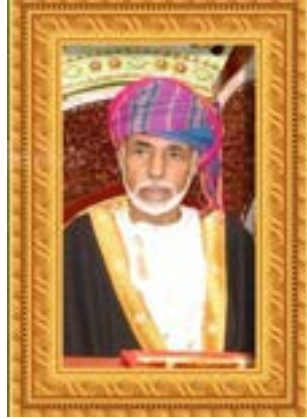


SULTANATE OF OMAN

Temperature



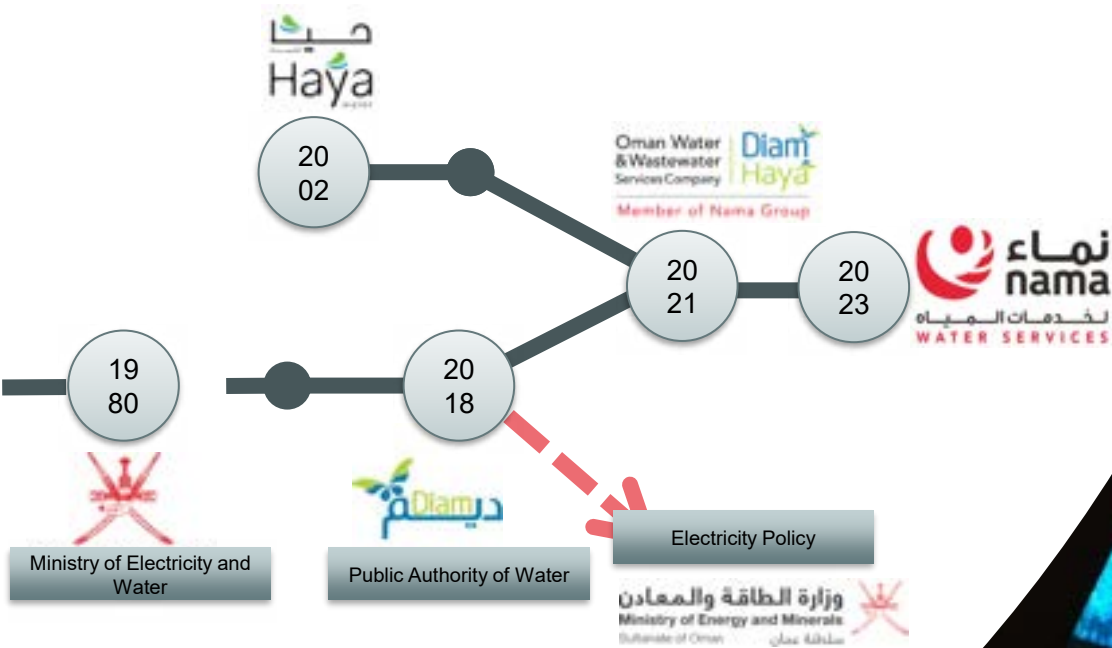
CULTURE



About

NAMA WATER SERVICES

OUR HISTORY



WATER SECTOR IN OMAN



Ministry of Agriculture, Fisheries and Water Resources

Policy Maker

هيئة تنظيم الخدمات العامة
Authority for Public Services Regulation



Regulator



Operators

About

NAMA WATER SERVICES

Water Production
445 MCM

55

Depositional Phase

1999

شبكة امدادات
المياه
Portable Water
Supply Network

رحلة مياه الصرف الصحي من المنشآت إلى محطة المعالجة
The Journey of wastewater from Buildings to treatment station

>4,000 km

390

Wolfgang Isemann, *Wissenschaftler*

Water Customers

17,159 km

>230,000
Wastewater Customers

توزع على المنشآت الصناعية
الحرفية، الخدمية والزراعية

Distributed to governmental,
industrial & agricultural facilities

245
Thousand Cubic meters)

تعالج لكاليا لضمان الحصول
على مياه عالية الجودة
Treated Supply to ensure
high quality treated water

250
Thousand Cubic meters)

60

செய்தி-செய்தி
செய்தி-செய்தி
செய்தி-செய்தி

~ 600 Km
Network Length

انتقال عبر الشبكات
المرتبطة بالصحف

4,764 km

70

Village
s

4

DPs

20

0

m³/day



Floating Desalination Plants in Musandam



NWS Integrated Master Plan In a Few Keywords

Making a significant difference in the water sector.

IMPACTING

1

Recognizing the value of water for all stakeholders.

IMPORTANT

2

Enhancing water asset management and performance.

IMPROVEMENT

3

Treating all water resources fairly and equitably.

IMPARTIAL

4

Sustainable
Water
Management



**Integrated
Master Plan**



Strategic



Data



2050



Compre-
hensive
solutions



Country wide
(except Dhofar)



Wastewater



TE

Water

Focus on Key Elements Considered in the IMP

Population

Population growth serves as a primary driver for the IMP, with projections indicating that Oman's current population will double over the next 25 years.

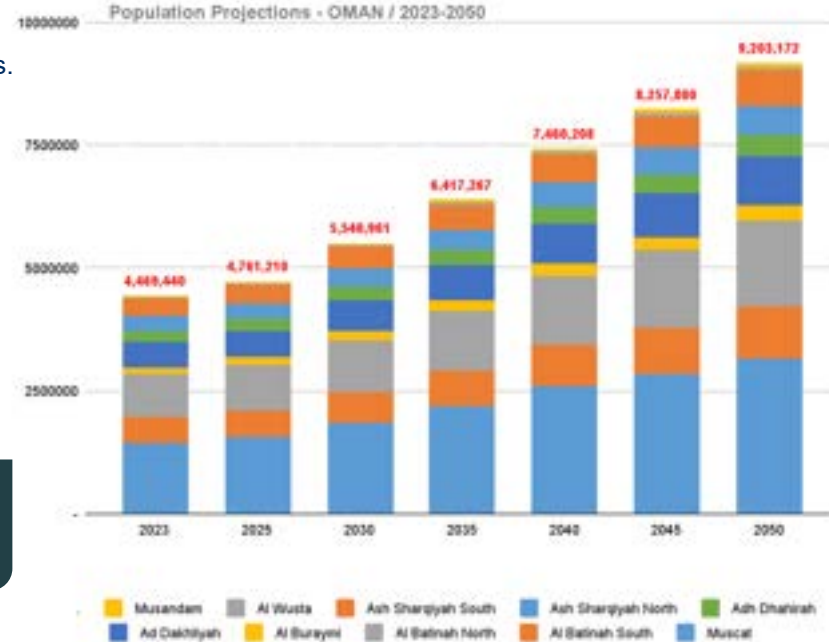
2023
~4.5M people



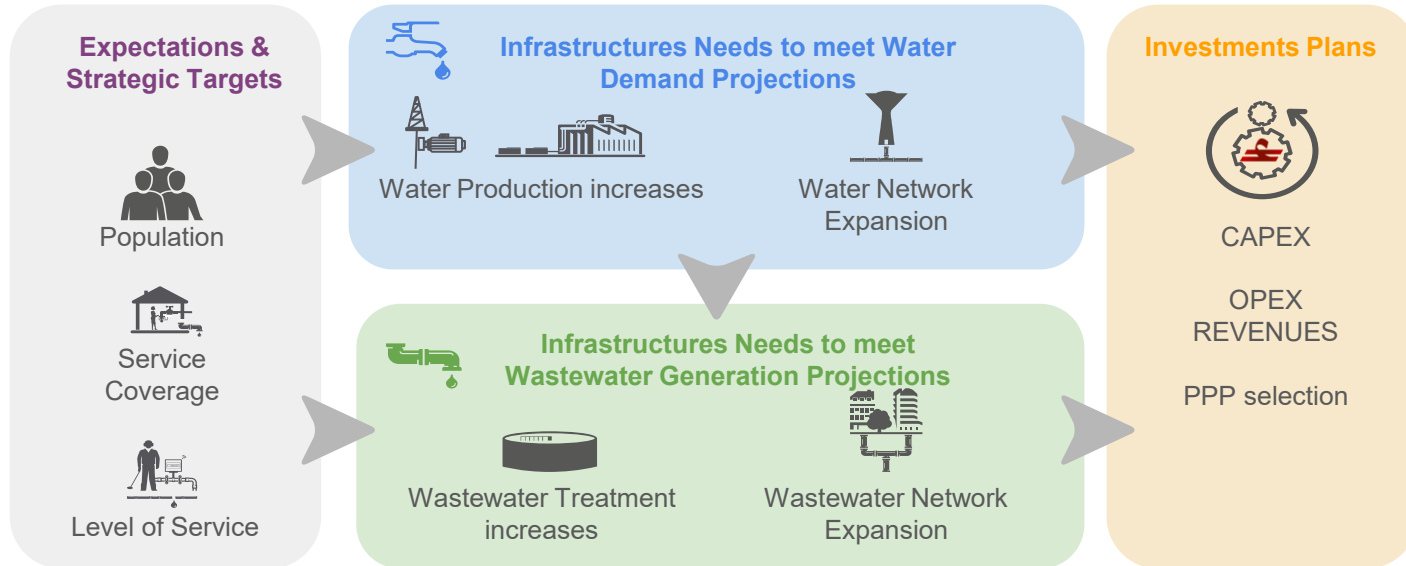
2050
~9.2M people



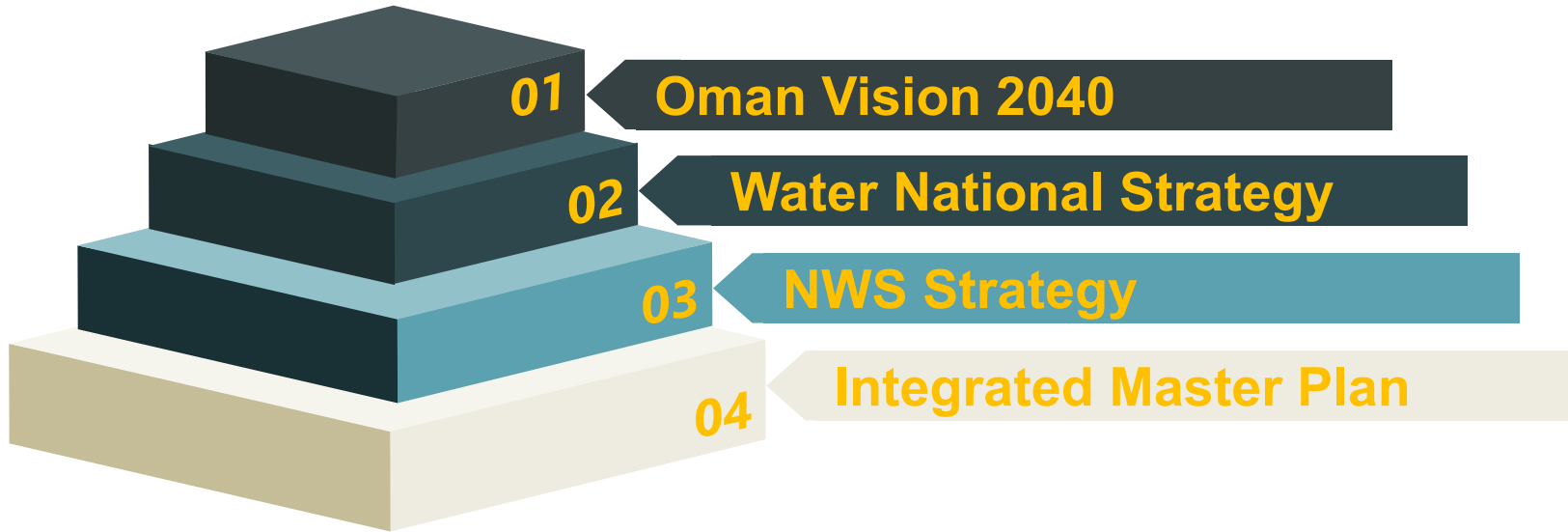
This demographic shift necessitates significant infrastructure investments to maintain and improve service levels across the country



Implementation Scenarios



NWS Integrated Master Plan with other Strategies



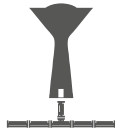
NAMA's Integrated Master Plan

Alignment with Oman Vision 2040

Targets

The IMP is guided by Oman Vision 2040 and the National Water Strategy:

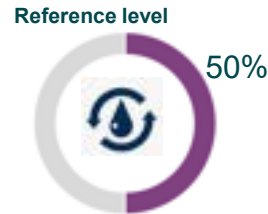
Water Coverage Rate



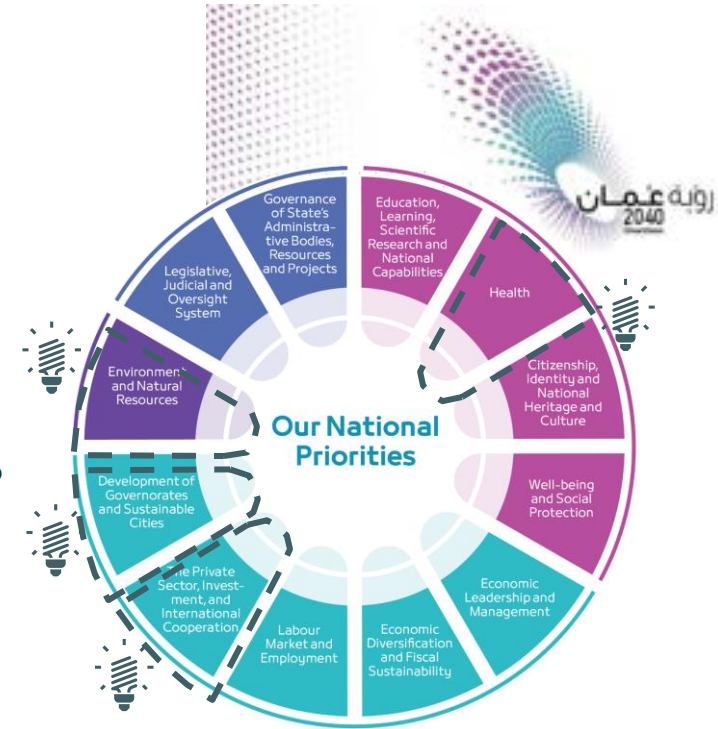
Wastewater Coverage Rate



TE utilisation



Target 2040



Targets and their feasibility has been evaluated over the next 25 years

CAPEX Program (2025-2027)



CAPEX Projects Expenditure allowance (M OMR)

Water
453.3
Wastewater
212.7
Total
666

2025

Water
72.4
Wastewater
71.7
Total
144.1

2026

Water
181.6
Wastewater
77.8
Total
259.4

2027

Water
199.3
Wastewater
63.2
Total
262.5

CAPEX Program (2025-2027) – Water Projects



> 113

No. of Projects
Ongoing and
Planned during
2025 and
beyond



> 8,000 km

New Network
length



202

New reservoirs
with capacity of
>1.8 M m3



90

New pumping
stations



> 162,000

New Customers

CAPEX Program (2025-2027) – Wastewater Projects



> 112

No. of Projects
Ongoing and
Planned during
2025 and
beyond



> 1,500

New Network
length



28

New STP with
different scales
and capacities



>42,000

New customers

NWS Master Plan 2050

Summary of Integrated Master Plan Investment Program (up to 2050)

Total Number of Water Project

139

Total Number of WW Project

192

Total Number of Integrated Project

79

Total CAPEX of Water Project

2.0

B OMR

Total CAPEX of WW Project

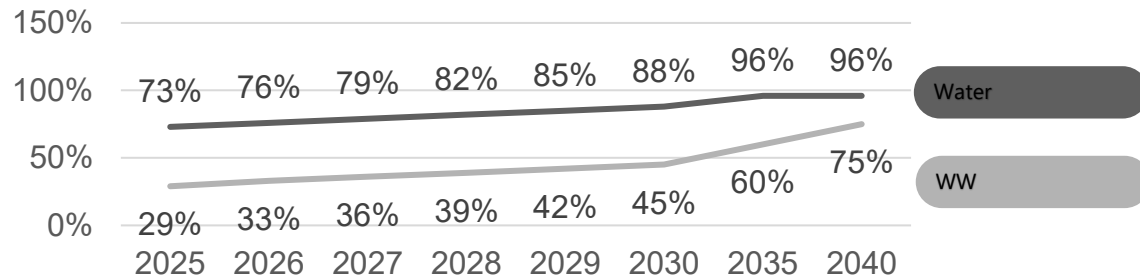
7.2

B OMR

Total CAPEX of Integrated Project

1.8

B OMR



Expected Coverage



410 Projects



11.1 B OMR

Current Coverage - 2024

% of Water Coverage

% of WW Coverage

72.5%

29.2%

*11.1 B OMR is the required CAPEX to achieve Oman vision targets including all the projects, DPs and STPs

Integrated Master Plan Overview in 2050



Wastewater Service

220,814
1,450K
Sewage connections

50%
71%
REUSE

8,000 km
30,000 km
Sewage lines

151
60
STPs

Water Service

3.5M
9.2M
People served

24,292 km
30,000 km
water distribution network

4.4 Mm³
6.6 Mm³
Storage Capacity

568 Mm³/y
932 Mm³/y
IWP Production capacity

717,156
1,754,923
water connections

The Master Plan Water CAPEX Program Projects



4 Major

Major
Desalination
Plants + Other
small scale



~ 2.5 M m3/day

The projected
potable water
demand in 2050



1 Million Customers

Expanding the
network to reach
the Oman 2040
targets ~ 96%



24 Projects

For a new
transmission
system and
Upgrade



> 6,500 KM

New network
Length

The Master Plan Wastewater CAPEX Program Projects



145 STPs

Main STPs
across the NWS
service area



~ 1.7 M m³/day

The projected
wastewater flow



1.5 Million
Customers

Expanding the
network to reach
the Oman 2040
targets ~ 75%



21,000 km

Additional
network length



Oman Water Week 2026

Ahmed Sayed Brik, Raya Services



Hosted By



Securing a resilient water future



19 – 23 April 2026

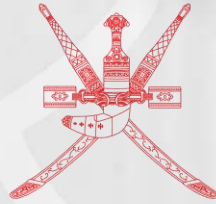


Oman Convention & Exhibition Center
Muscat – Sultanate of Oman

Scan



Under the Patronage of



Sultanate of Oman
Ministry of Agriculture, Fisheries
Wealth & Water Resources

RAYA
SERVICES

Supported by



هيئة تنظيم الخدمات العامة
Authority for Public Services Regulation

RAYA
SERVICES

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Sponsored By



OWW 1st Edition

OWW 2024

No. of
Participants

Represented
Countries

No. of
Exhibitors

No. of
Speakers

No. Technical
Hours

1600+

25+

30+

65+

30+

OWW 2nd Edition

OWW 2025

No. of
Participants

Represented
Countries

No. of
Exhibitors

No. of
Speakers

No. Technical
Hours

4200+

70+

65+

145+

30+

OWW 2nd Edition

Event Programs

The
Strategic
Program

The
Municipal
Water
Program

The
Industrial
Water
Program

Water &
Hydrogen
Synergy
Workshop

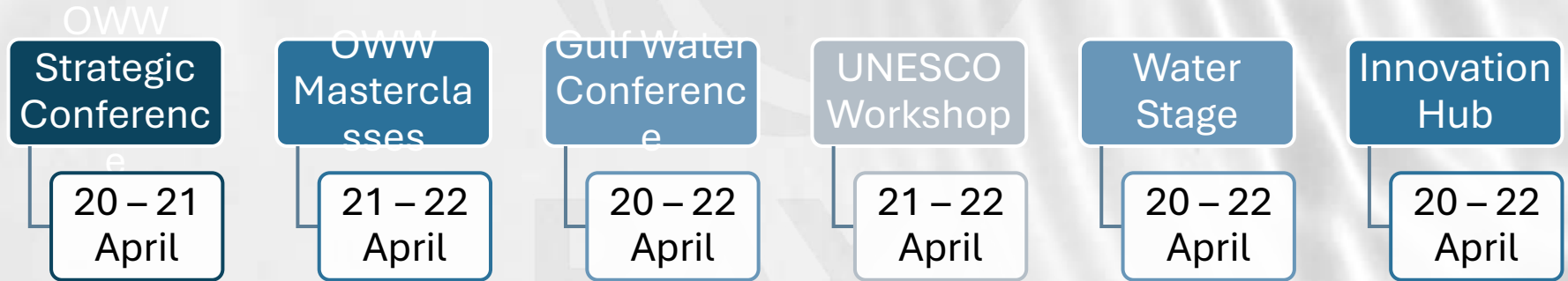
Water
Stage

Innovatio
n Hub

OWW 26 Structure



OWW 26 Side Events



Main Theme

Securing a resilient Future: Water Strategies for Security, Stability, and Sustainability

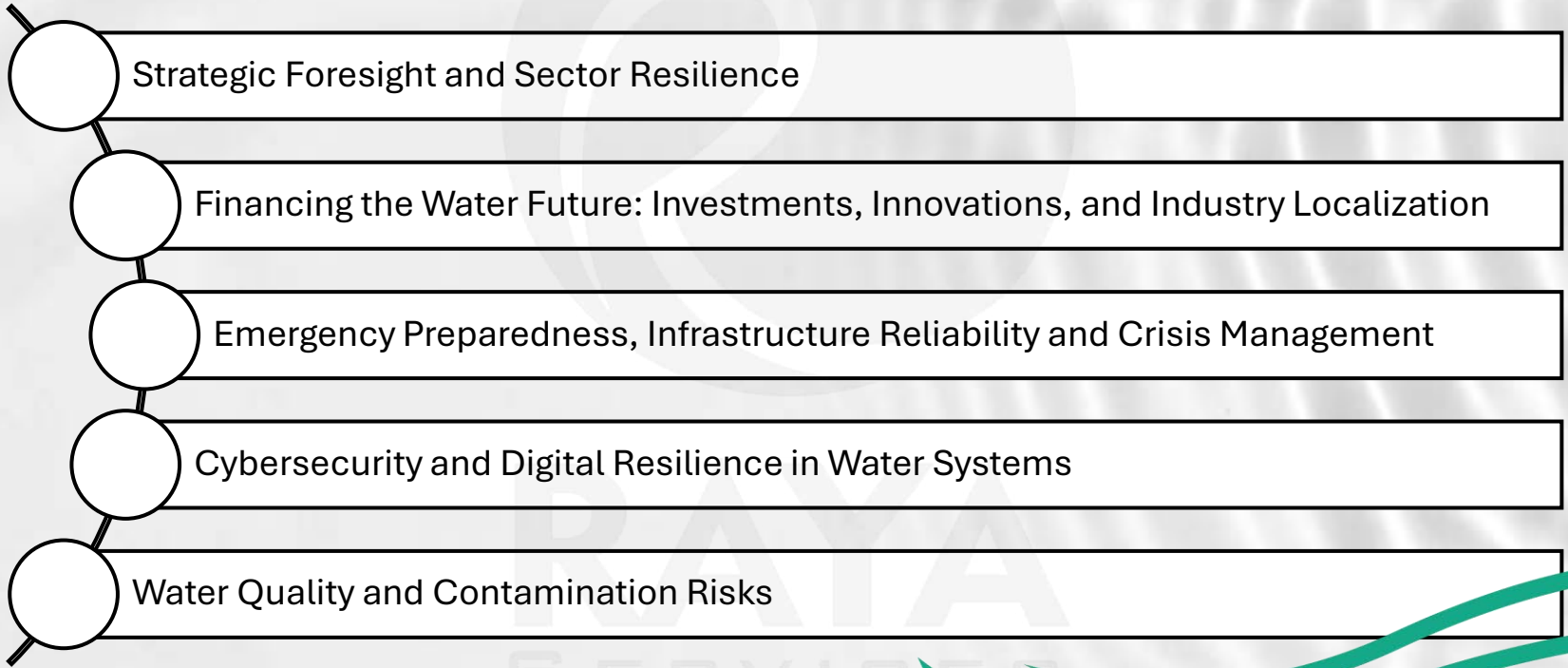
Oman Water Week 2026 will address the urgent need to safeguard and future-proof its water systems amid increasing environmental, geopolitical, and operational challenges.

As nations worldwide grapple with water scarcity, climate volatility, energy-intensive supply systems, and growing geopolitical and cyber threats, the resilience of water infrastructure and services has become a strategic imperative.

These discussions are critical for building water systems that are not only robust and adaptable but also aligned with long-term sustainability and national development visions, whether in Oman or beyond.

Oman Water Week 2026 invites stakeholders across borders and sectors to contribute to shaping a resilient water future for all.

Covered Areas



Strategic Foresight and Sector Resilience

Financing the Water Future: Investments, Innovations, and Industry Localization

Emergency Preparedness, Infrastructure Reliability and Crisis Management

Cybersecurity and Digital Resilience in Water Systems

Water Quality and Contamination Risks

Strategic Foresight and Sector Resilience

Enhancing cross-border water diplomacy and regional cooperation mechanisms.

Safeguarding national water infrastructure from geopolitical and conflict-related risks.

Establishing and managing strategic water reserves and national buffer zones.

Integrating water security into national defense and resilience planning.

Protecting desalination intakes and coastal infrastructure from oil spills, radiological fallout, and other contamination risks during conflict scenarios.

Investing in Water Future

Unlocking Investments for Resilient and Scalable Water Infrastructure.

Green Finance and Climate-Resilient Models for Sustainable Water Development.

Public-Private Partnerships (PPPs) as Drivers of Growth and Innovation in the Water Sector.

Localizing Water Technologies and Services: Building Secure and Resilient Supply Chains.

Innovation and Digital Transformation: Maximizing the Impact and Returns of Water Sector Investments.

Capacity Building and Knowledge Transfer: Developing Human Capital to Secure Long-Term Investment Value.

Emergency Preparedness, Infrastructure Reliability and Crisis Management

Risk Assessment and Threat Mapping for Water Supply Systems.

Contingency Plans and Maintenance of Emergency Water Reserves.

Emergency Shutdowns and Recovery Procedures for Desalination and Treatment Plants.

Strategies for Short-Term and Long-Term Water Storage.

Designing Decentralized, Modular, and Scalable Water Infrastructure for Resilience and Redundancy.

Cybersecurity and Digital Resilience in Water Systems

Securing SCADA and Digital Control Systems Against Evolving Cyber Threats.

Establishing Cybersecurity Standards and Protocols Tailored for the Water Sector.

Building Rapid-Response Teams and Digital Forensic Capabilities.

Leveraging Real-Time Monitoring, Predictive Analytics, and AI to Detect and Prevent Disruptions.

Deploying AI Solutions to Enhance Operational Performance and Resilience.

Water Quality and Contamination Risks

Mitigating Biological, Chemical, and Radiological Contamination Risks in Drinking Water Systems.

Assessing Vulnerabilities of Desalination Plants in High-Risk Scenarios.

Implementing Water Quality Monitoring and Early Warning Systems at Strategic Nodes.

Disinfection and Mobile Purification Technologies.

Case Studies: Lessons from Water Contamination.

Masterclasses

Track One: Utilities and Infrastructure Operations

Non-

Achieving
Net-Zero in
Water
Sector

Revenue
Water
(NRW) &
Energy
Losses in
Networks

Pipeline
Integrity &
Asset
Management

Smart
Pipelines &
Digital
Twins

Masterclasses

Track Two: Water Production and Reuse

Decarbonizing
Desalination &
Water Reuse

Water
Technologies
Updates

Advanced
Wastewater &
Effluent Reuse
Technologies

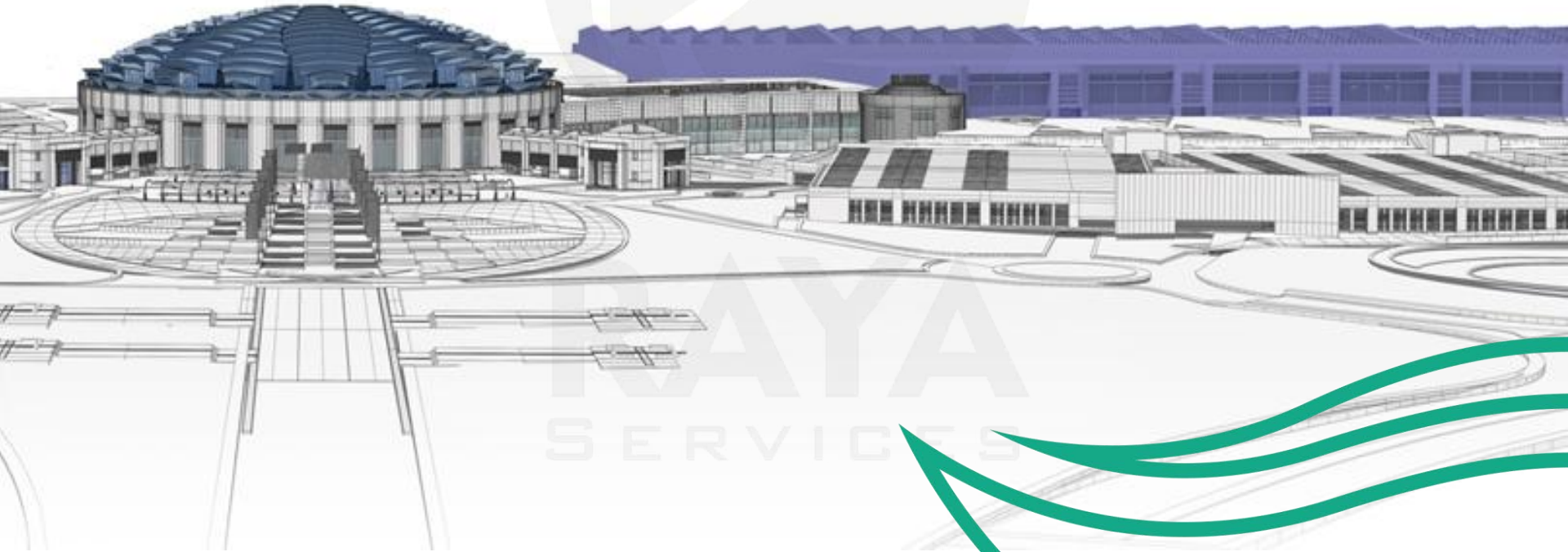
Masterclasses

Track Three: Digitalization and Water Quality

Digitalization & AI for
Water Production and
Utility Operations

Water Quality and Safety:
Advanced Monitoring,
Treatment, and Risk
Management”

Event Venue



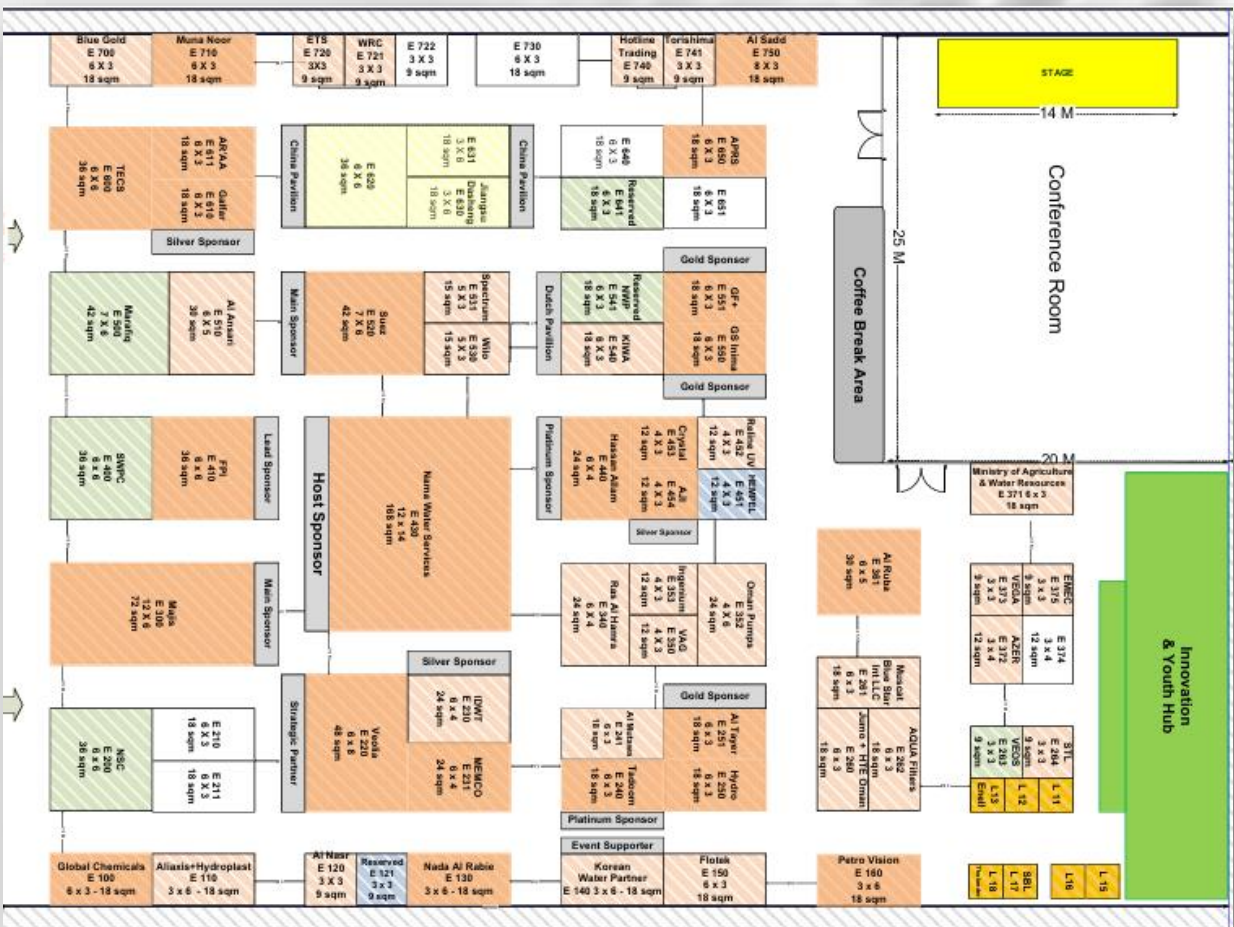
Event Venue

Exhibition
Conference
Youth Hub
Innovation Stage



100

100+ Companies
35+ Countries
3000+ Trade Visitors



Hosted By



Look forward to welcoming you at



13 – 29 April 2026



Oman Convention & Exhibition Center
Muscat – Sultanate of Oman

Scan for More Information



Wetskills Oman 2026

Johan Oost, Managing Director Wetskills Foundation



Introduction to Wetskills-Oman 2026

'Royal' Wetskills-Oman 2012

State visit of Royal Family of The Netherlands



WETSKILLS@ROYAL VISIT

2012

2025

OMAN IN 2025



Wetskills-Oman 2024

during 1st Oman Water Week





Wetskills in Oman:
11-22 April 2026



'regular' Wetskills
events in Oman

6



± 90

Alumni from Oman

Events Since 2010

1576

Participants

82

Wetskills Events

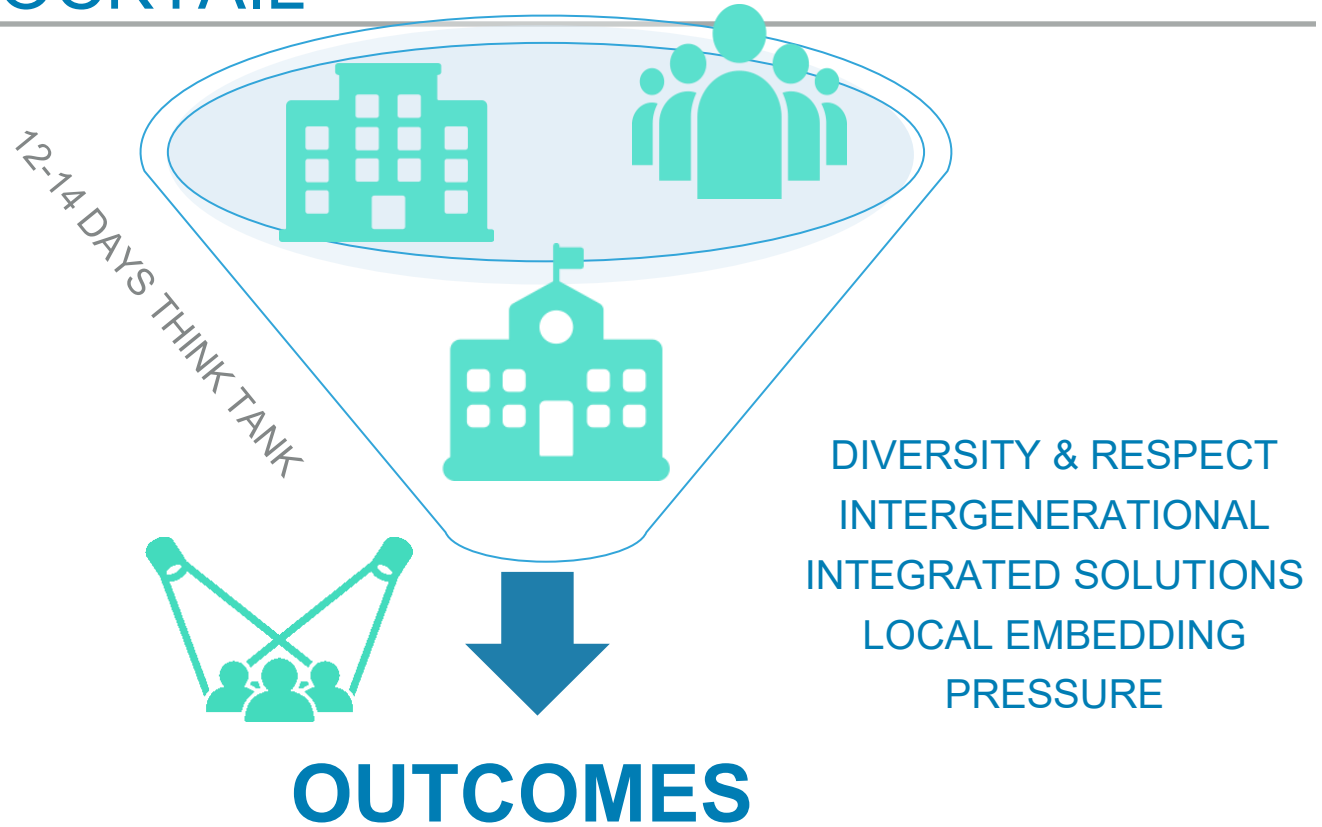
31

Countries

356

Study Cases

WETSKILLS COCKTAIL





ADDED VALUES OF WETSKILLS

1. Human capital: energizing, integrate and capacitate **Future Leaders**
2. Innovation: co-creating new ideas for case owners & **WetsNext?!**
3. Youth empowerment: ice-breaking & intergenerational input
4. Community: creating networks, crossing boundaries (incl. Alumni)
5. Communication: positive awareness for **Water**



UN
2023 WATER
CONFERENCE

NEW YORK
22-24
MARCH
2023

FOCUS WETSKILLS FOUNDATION: GULF

- ▶ Continuous flow of Wetskills events in the region
- ▶ Building a strong Wetskills Community: Participants from Oman to Wetskills events in region and worldwide!
- ▶ Innovation: follow-up of ideas (WetsNext)



Wetskills events (2026)



WETSKILLS-OMAN 2026 (@OMAN WATER WEEK)

- ▶ Around 20 participants in 4-5 Teams
- ▶ 11-22 April 2026
- ▶ Programme: Meet & Greet / excursions: Nizwa, Muscat, Al Ansab Wetlands / working: desktop study, interviews, brainstorming / trainings: teamwork and CANVAS BM / pitch & poster development
- ▶ Partners as SQU, Nama Water Services, Oman Water Week, MEDRC, and other local, regional and international
- ▶ Finals & Awarding Ceremony: 21 April, partners, jury and audience



SPECIAL REQUEST: WETSKILLS EVENT IN DUBAI

- ▶ Wetskills Foundation aims to organise a special Wetskills event during the 2026 UN Water Conference in Dubai (23 Nov-4 Dec)
- ▶ Wetskills' ambitions is to do this with some 'core Wetskills countries', as Oman, South Africa, The Netherlands, Romania, and so on. With high-level delegation, participants and cases.
- ▶ **Would Oman join this Wetskills as one of the core countries?**



**United
Nations**



United Nations Water Conference
United Arab Emirates, 2026

LET'S SHARE THE PASSION. LET'S STAY CONNECTED.



www.wetskills.com



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Questions & Answers

Sneak preview NWP events 2026

26 – 28 January:	IFAT Saudi Arabia (Saudi Arabia)
26 – 30 January:	Incoming delegation from Oman (The Netherlands)
28 January:	Mapping International Financial Instruments for Water (The Netherlands)
17 February:	Nutrient Platform member meeting (The Netherlands)
17 – 19 March:	Aqua Nederland (The Netherlands)
23 – 26 March:	Fact finding mission climate resilience to Brazil
19 – 23 April:	Oman Water week (Oman)
20 – 24 April:	ADB Learning Week (The Netherlands)
4 - 7 May:	IFAT Munich (Germany)
9 – 11 September:	IFAT India (India)
4 – 8 October:	IWA World Congress & Exhibition (UK)
20 – 22 October:	Fenasan (Brazil)
25 – 27 November:	Aquatech Asia (Thailand)
For more information:	Send an email to events@nwp.nl

Networking