



KINGDOM OF MOROCCO  
MINISTRY OF RELIGIOUS ENDOWMENTS  
AND ISLAMIC AFFAIRS



MUSÉE MOHAMMED VI  
POUR LA CIVILISATION DE L'EAU AU MAROC  
MINISTÈRE DES HABOUS ET DES AFFAIRES ISLAMIKES

## 4th International Conference of the *Global Network of Water Museums*



## Water Museums and Groundwater Making the invisible visible

### PROGRAMME

26 – 28 Octobre 2022

**Musée Mohammed VI de la Civilisation de l'Eau au Maroc – 'Aman'**  
***Museum of the Water Civilization in Morocco Mohammed VI – 'Aman'***  
**Marrakesh, Morocco**

## Organized by



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INTERNATIONAL CENTRE

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## Organizing Team

- LAMAAMLA MOHAMED, Director of Cooperation, Ministry of Habous & Islamic Affairs, Morocco
- BAGHZLI ABDERRAHIM, Regional Delegate of the Ministry of Habous & Islamic Affairs Marrakech Safi
- EL MANDOUR ABDENNABI, Director of the Musée Mohammed VI de la Civilisation de l'Eau au Maroc
- MOUHSIN GHAZOUF, Head of Budget and Accounting Division, Ministry of Habous & Islamic Affairs
- ESSABRI ABDELKADER, Head of Administrative and Financial Affairs, Ministry of Habous & Islamic Affairs
- CHITAOUY JIHAD, Museographer, Musée Mohammed VI de la Civilisation de l'Eau au Maroc
- OUHAJI CHAKIR, Museographer, Musée Mohammed VI de la Civilisation de l'Eau au Maroc
- TABROURI KAWTAR, Communication Manager, Musée Mohammed VI Civilisation de l'Eau au Maroc
- MOUFAKIR MOULAY ERRACHID, Head Teacher
- BOUAKIL HIND, Financial Manager, Musée Mohammed VI de la Civilisation de l'Eau au Maroc
- OULGRISS AMINA, Executive Assistant, Musée Mohammed VI de la Civilisation de l'Eau au Maroc
- EL ADNANI IMANE, Excursion Manager, Musée Mohammed VI de la Civilisation de l'Eau au Maroc
- SCHIAVON STEFANIA, WAMU-NET Secretariat
- CHARLERY MARIE PIERRE, WAMU-NET Secretariat

## Rationale and objectives of the 4th International Conference of WAMU-NET

The 4th International Conference of the Global Network of Water Museums (WAMU-NET) aims to shed light on the different forms of human interaction with water and promote our unique water heritage through educational and capacity-building programs for just and sustainable water management.

This year, the conference will focus in particular on the 'water culture' of Morocco and other Arab and Maghreb countries. Different conceptual perspectives and frameworks will be combined with interactive sessions to outline new ideas and proposals for water resilience, participatory approaches, water awareness education and project fundraising aimed at restoring and rehabilitating ancient practices.

Past societies built sophisticated technologies based on the natural hydrological cycle which provided adaptive responses to cope with challenges related to water scarcity and floods. Also, the conference will provide insights on how cultural values - social, symbolic, spiritual - shape our relationship with water.

Ancient hydro-technologies represent a wealth of water wisdom that must be recognized and preserved as an integral part of our cultural heritage - but they also provide, from a contemporary perspective, key insights to imagine new practices in a rapidly changing global context where addressing climate change, food security and peace have become critical challenges confronting our shared waters.

The conference also includes specific sessions for the presentation of projects implemented by WAMU-NET and its members on water awareness education for their potential contributions to the 9<sup>th</sup> Phase of the IHP Operative Strategy focused on science and society.

### Objectives

- Outline and share with WAMU-NET members concrete projects and activities that might contribute to the implementation of the Operative Program of the 9<sup>th</sup> phase of IHP
- Highlight the relevance of historical/ancestral groundwater management practices, concepts, and farsighted visions as a source of inspiration for just and sustainable water management
- Recognize and promote further the potential of ancestral hydro-technologies as a possible response to the current climate and biodiversity emergency
- Identify a number of potential projects for the rehabilitation and restoration of ancestral technologies as demonstration sites for replication in other Arab and African countries
- Develop educational and capacity-building programs to foster new projects aimed at supporting both researchers and local communities to preserve and manage ancestral water systems
- Stimulate museums and interpretation centres to consider the historical uses of groundwater as key assets to create awareness of its vulnerability through permanent and temporary exhibitions

## Day 0 – Tuesday 25 October

15.00 – 18.00 **Early Registration**

Venue: **Musée Mohammed VI pour la Civilisation de l'Eau au Maroc**

Abdelkrim Avenue El Khattabi - Road of Casablanca, Marrakesh

*Entrance from the Palm Grove circuit - Circuit de la Palmeraie*



*Palm grove with camels in the outskirts of Marrakesh (left) and aerial wells of the 'khattara' (underground canal system) of Akrich (right).*

## Day 1 – Wednesday 26 October [conference available online - see link on back cover]

8.30 – 10.00 Registration

### 10.00 – 11.00 OPENING SESSION – WELCOME SPEECHES

Chair: **El Mouden El Hassan**, Dean of the Faculty of Science, Univ. of Semailia Cadi Ayyad, Morocco

**Ahmed Toufiq**, Minister of Islamic Affairs and Religious Endowments ‘Habous’, Morocco

**Audrey Azoulay**, General Director of UNESCO

**Samir Addahre**, Permanent Ambassador-Delegate of the Kingdom of Morocco to UNESCO

**Eric Falt**, UNESCO Maghreb Office in Rabat

**Eddy Moors**, President of the Global Network of Water Museums

**Francesca Tarocco**, Director of THE NEW INSTITUTE - Centre for Environmental Humanities (NICHE), Ca’ Foscari University of Venice, Italy

**Eriberto Eulisse**, Executive Director of the Global Network of Water Museums

**Abdennabi El Mandour**, Director of the Musée Mohammed VI de la Civilisation de l’Eau au Maroc ‘Aman’, Morocco

**Awarding ceremony of the youth contest and award TWWW (2022) with Mohamed Bayo (High School ‘Imam Al Boukhari’, Morocco) - Winner of the category ‘Drawings’**

11.00 – 11.30 Coffee break

### 11.30 – 13.30 SESSION 1 – THE HERITAGE OF WATER IN MOROCCO AND MAGHREB

#### ANCESTRAL HYDROTECHNOLOGIES FOR FARSIGHTED USE OF GROUNDWATER

Chairs: **Sara Ahmed** (Living Waters Museum, India) and **Alexander Otte** (UNESCO-IHP)

**Jordi F. Moratò**, UNESCO Chair, Polytechnic University of Catalunya, Barcelona, Spain

*Ancestral hydrotechnologies to increase resilience to climate change*

**Souad Belkeziz**, architect and urban planner, Marrakech

*The miracle of water. Marrakech, the ideal garden-city*

**Thierry Ruf**, IRD, Montpellier, France, and **Mohamed Madane**, Univ. of Agadir, Morocco

*Learning sustainable groundwater management: the case study of the Morocco ‘khattaras’*

**Said Boujrouf**, LERMA, Université Cadi Ayad, Marrakech

*Tourism and hydraulic heritage in Marrakech: how to use local resources sustainably?*

**Toufik Ftaita**, University of Nice, France

*The hydraulic heritage of Morocco between disappearance and safeguarding.*

**Lahcen Kabiri**, Moulay Ismail University and Oasis Ferkla Association for Environment and Heritage, Errachidia, Morocco

*Community actions for conservation and enhancement of water resources in the oases*

13.30 – 14.30 Lunch

14.30 – 15.30 **Massimiliano Borroni**, UNESCO Chair on Water Heritage, Ca’ Foscari Venice Univ., Italy

*The place of water in the premodern Maghreb: a review of topics and trends*

**Abdullah S. Al-Ghafri** and **Majid Labbaf**, UNESCO Chair on Archaeo-Hydrology, University of Nizwa, Oman

*Philosophy, structure, and goals for designing the National Water Museum of Oman*

**Mourad Maroc**, Institute of Architecture, Blida University 1, Algeria

*Outline plan for the open-air water museum of Ihrir in Tassili, World Heritage Site, Algeria*

15.30 – 17.00 VISIT OF THE MUSÉE MOHAMED VI DE LA CIVILISATION DE L’EAU AU MAROC ‘AMAN’

17.00 – 18.00 Coffee Break



Model of khattara system at the Museum of Water Civilization Mohammed VI – ‘Aman’, Morocco



## Day 2 – Thursday 27 October *[conference available online - see link on back cover]*

### 10.00 – 11.30 **SESSION 2 - PROPOSALS, SOLUTIONS, AND GOOD PRACTICES FOR WATER RESILIENCE: THE CONTRIBUTION OF WATER MUSEUMS**

Chairs: **Gisela H. Guerra** ('Agua para siempre!', Mexico) and **Ian-Kerr Wilson** (Canada)

**Alexander Otte**, Intergovernmental Hydrological Programme, UNESCO

*The expected contribution of WAMU-NET to the 9th Phase of IHP*

**Hanane Benqilou**, National Office of Electricity and Drinking Water, Morocco

*Water education, heritage, and knowledge sharing to face water scarcity and climate change in Morocco and Africa. A contribution to the World Inventory of water museums*

**Samoura Alassane**, Musée de l'Eau de Ouagadougou, Burkina Faso

*Promoting water awareness education for a wider network of African museums*

**Joana Lessa**, Algarve University, Portugal

*Water museums' response to COVID-19: the importance of digital media*

**Karin Wundsam**, Engelhartzeller Donau-Welt, Engelhartzell, Austria, and **Ralf Braun**, Haus am Strom, Jochenstein, Bavaria, Germany

*How to raise awareness on the 17 SDGs? Build them a house and an adventure trail!*

**Mario Mesquita**, Parque Patrimonial das Aguas de Porto, Portugal, and **David R. Pujol**, Museu de les Aigües de Barcelona, Spain

*Industrial water heritage: a worldwide inventory and exhibition project*

**Amy Sharrocks**, artist, United Kingdom

*Unlearning museums*

**Betsy Damon**, artist, USA

*Water museums as centers for information and solutions for resilience*

11.30 – 12.00 Coffee Break

12.00 – 12.30 **Paola Roman**, Yaku Parque Museo del Agua, Quito, Ecuador

*The contribution of ancestral knowledge to build just and sustainable futures*

**Hugo Snabilie** and **Ron Karels**, Broekerveiling Museum, Netherlands

*Inclusive museums and disabilities: the Sign Language International Potential*

**Caroline Delcourt**, Musée de l'Eau et de la Fontaine, Ottignies, Belgium

*Beyond museums: how to make a collection live without an exhibition space*

12.30 – 13.30 **Interactive Sessions**

#### **BREAKOUT ROOMS ON INNOVATIVE PROPOSALS AND SOLUTIONS FOR WATER RESILIENCE**

Rapporteurs: presentation of proposals from the breakout rooms

13.30 – 14.30 Lunch

14.30 – 15.15 **'THE CHILDREN OF WATER'** - A documentary film by **Joy Penroz** and **Sylvain Grain**

Projection of *"The miracle of oasis"* (26', episode n.5 in Tafilalet, Morocco; Raki Films and Senal Colombia production) and discussion with the producer, **Sylvain Grain**.

*Children from all over the world discover the knowledge of ancient cultures to protect the most important treasure they have inherited: water.*

15.15 – 19.00 **VISIT OF THE MEDINA (HISTORICAL CITY) OF MARRAKECH**



*The Medina of Marrakech and the historical souk*

## Day 3 – Friday 28 October *[conference available online - see link on back cover]*

10.00 – 11.30 **GENERAL ASSEMBLY OF THE GLOBAL NETWORK OF WATER MUSEUMS (WAMU-NET)**

Chair: **Eddy Moors**, President of the Global Network of Water Museums

**Inauguration of the new WAMU-NET web site**

**'Water museums for Peace': inauguration of the restyled WAMU-NET logo**

**Eriberto Eulisse**, Executive Director of the Global Network of Water Museums

**Presentation and discussion of WAMU-NET ongoing projects**

- Contribution of WAMU-NET to UN-Water Summit on Groundwater (Paris, 6-8 December 2022) with the side-event titled 'Rethinking Sustainable Groundwater Management. Ancestral Knowledge and Hydro-technologies as Inspiring Source of Innovation'
- World Inventory of Water Museums
- Youth Contest and Award 'The Water We Want' (TWWW)
- Worldwide Exhibition 'I Remember Water'
- Fundraising activities and e-commerce platform
- The way forward

**Interactive Session**

**BREAKOUT ROOMS ON WATER EDUCATION, SCIENCE AND SOCIETY, PROJECT FUNDRAISING**

11.30 – 12.00 Coffee break

12.00 – 12.30 **Discussion on the way forward (Plenary Assembly)**

Chairs: **José Soria** and **Javier Pastor** (Tribunal of Waters of Valencia, Spain) and **Victor Croitoru** (Water Museum of Cluj 'L.Truta', Romania)

Rapporteurs: presentation of findings and proposals from the interactive session

Discussion with all WAMU-NET members

12.30 – 13.30 **PRESENTATION OF NEW MEMBERS (2021-22)**

**Riccardo Seccarello**, The Aqueduct Museum of Venice / VERITAS, Venice, Italy

**Manuel Sapiano** and **Natalino Spiteri**, GAHJN Water Museum, Malta

**Francesco Fioretti** and **Alessandro Capati**, Museum of the Marmore Waterfalls, Piediluco, Italy

**Alan J. A. Gomez**, Water Museum 'Iurhekua', Mexico

**Marco Iamiceli**, Waterland / Paese d'Acqua, Sassinoro, Benevento, Italy

**Loredana Leordan**, Water Museum 'Aquapic', Timisoara, Romania

13.30 – 14.30 Lunch

14.30 – 15.30 **Conference conclusions (Plenary Assembly)**

Panel discussion with the Management Board members: Eddy Moors, Eriberto Eulisse, Abdennabi El Mandour, Sara Ahmed, Gisela Guerra, Ian Kerr-Wilson, Victor Croitoru

15.30 – 16.00 Coffee break

16.00 – 18.00 **SITE VISIT OF THE HISTORICAL BASIN AND ROYAL GARDENS OF THE MENARA (12TH CENTURY)**

20.30 – 23.30 **GALA DINNER** at the traditional restaurant '**Chez Ali**'

For WAMU-NET members and by invitation only



*The Menara historical basin (12th cent.) and Royal Gardens with the High Atlas covered by snow*



## Day 4 and Day 5 (optional) – Saturday 29 and Sunday 30 October

### FIELD TRIP TO THE HIGH ATLAS MOUNTAINS AND THE HAOUZ PLAIN

Cost of the field trip: 140 € (all-inclusive fee). The fee includes: bus transfers from and back to Marrakech, lunches, the dinner, and the hotel accomodation at La Bergerie Hotel (incl. breakfast).



## Day 4 – Saturday 29 October

9.00

### DEPARTURE FROM MARRAKECH TO OUIRGHANE AND MARIGHA

**First station:** Piedmont of the High Atlas and Village of Tahanaout

**Second station:** Traditional Village of Tahanaout  
(with flow measurement station of Oued Rherhaya)

**Third station:** Traditional Village of Marigha  
(the hydraulic mill and the traditional techniques of water sharing for irrigation)

**Fourth station:** Ouirgane Dam



Map and Route of the 1st Day Trip



From left to right: Marigha, Tahanaout, Ouirgane Dam



## Day 5 – Sunday 30 October

9.00 DEPARTURE FROM OUIRGHANE TO IMLIL

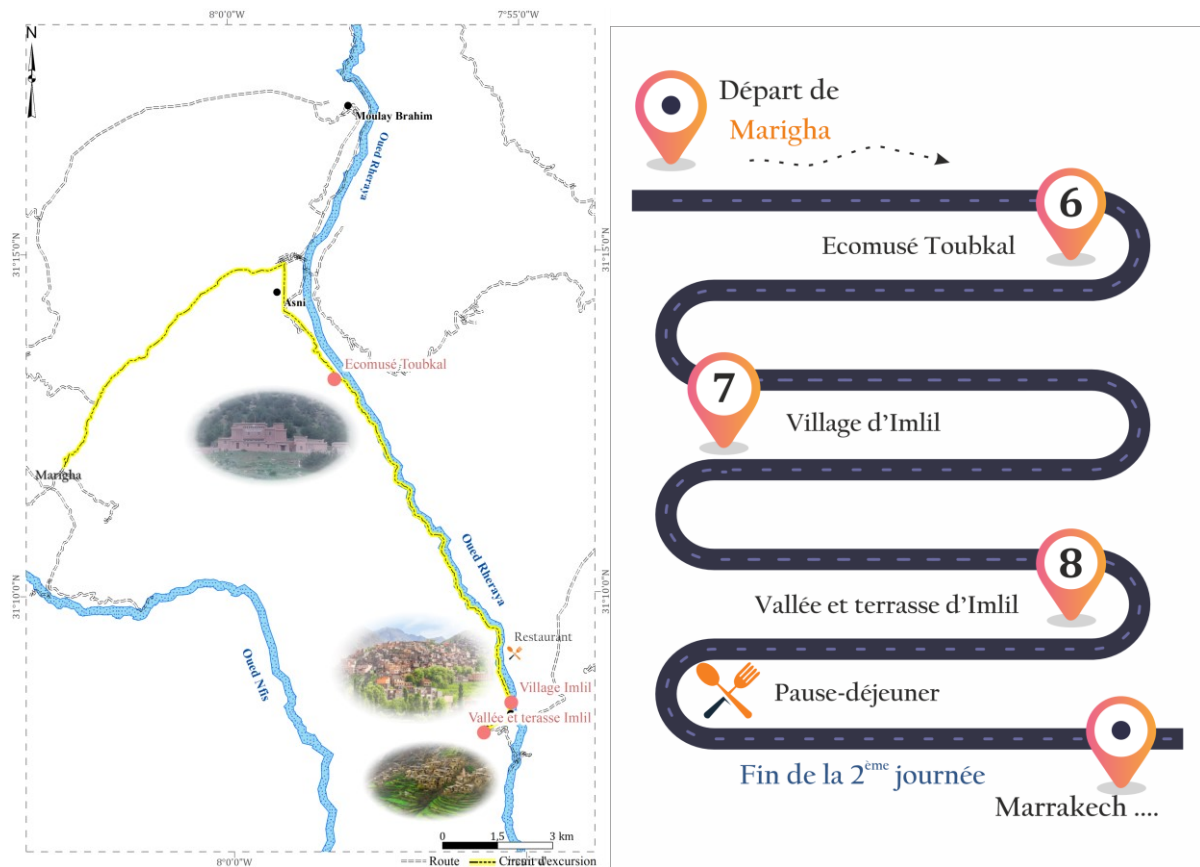
**First station:** The Gherhaya Valley and the Toubkal Ecomuseum

**Second station:** Hiking field trip to Aremd valley and terraces: departure from Imlil to Aremd and return to Imlil (easy hiking of almost 3 hours to visit: the water sharing techniques, the 'seguias' underground canals, agricultural terraces, the water mill)

Lunch and walk in the village of Imlil

17.00 Return from Imlil to Marrakech

19.00 Arrival to Marrakech



Map and Route of the 2nd Day Trip



From left to right: The Gherhaya Valley, Imlil terraces, and the Amred village

## Links available for attending the conference

**Day 1 – Wednesday 26 October (from 09:30 am CEST – local time 08:30 am Casablanca)**

Zoom link:

<https://us02web.zoom.us/j/83969148109?pwd=MEdmVlVQdVFuNVNlY3V3c014RTc2UT09>

ID: 839 6914 8109 - Code: 658133

**Day 2 – Thursday 27 October (from 09:30 am CEST – local time 08:30 am Casablanca)**

Zoom link:

<https://us02web.zoom.us/j/83393145176?pwd=K2czZHZlNm5RTU1NYUwwL0hCWU9odz09>

ID: 833 9314 5176 - Code: 539974

**Day 3 – Friday 28 October (from 09:30 am CEST – local time 08:30 am Casablanca)**

Zoom link:

<https://us02web.zoom.us/j/86969556005?pwd=OHpneUQ4dEFEB1VpZVh0Q3hCQUVDUT09>

ID: 869 6955 6005 - Code: 458603

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