

An IAHR Journey through African Hydro-environment

From 2 to 16 July 2023

After a year of planning by the [IAHR Africa Regional Division](#) and [IAHR Hong Kong SAR China Chapter](#), a team of IAHR representatives embarked on a two-week field trip of three different African countries - Ethiopia, Morocco and Tunisia - from 2 to 16 July 2023. The country visits were supported by Addis Ababa University (AAU), Université Mohammed VI Polytechnic (UM6P) and the University of Tunis El Manar (UTM), who acted as local organising committees of enriching workshops and meetings that boosted academic and professional exchange. The visits also served to promote forthcoming IAHR events, such as the [40th IAHR World Congress](#) in Vienna, 21-25 August 2023, the [4th IAHR Young Professionals Congress](#), 22-24 November 2023, and in particular, the **6th IAHR Africa Congress** to be held in Morocco from 9 to 12 December 2024. Extensive discussions were held around the topic of institutional collaboration, and the targets, actions, and role of IAHR in Africa, especially that of the Regional Division.

Led by [Prof. Joseph Lee](#), IAHR President and President of Macau University of Science and Technology (MUST), and [Dr Moez Louati](#), IAHR Regional Division Chair for Africa and Assistant Professor at Hong Kong University of Science and Technology (HKUST), the IAHR team members consisted of: [Prof. Mohamed Ghidaoui](#), Chair Professor at HKUST and Chief Editor of the Journal of Hydraulic Research (JHR); [Dr David Ferras](#), Senior Lecturer at IHE Delft and Chair of the IAHR Education and Professional Development committee; Dr [Hok Shing Lee](#) of the Hong Kong Environmental Protection Department and Vice-Chair of the IAHR Hong Kong SAR China Chapter; [Prof. Li Yiping](#), Professor in the Department of Environmental Science and Director of the International Office at Hohai University; [Prof. Saiyu Yuan](#), Professor in the Department of Water Conservancy and Hydropower Engineering at Hohai University; and **Prof. Aliana Leong**, Associate Vice-President (International Affairs) at MUST.

Visit to Ethiopia: Addis Ababa University

The first stage of the journey was based in Addis Ababa (Ethiopia). The highlight was the International Workshop on Climate Change and Technology Innovation in Hydro-environment Engineering held on 3 July 2023. The forum started with presentations of the Africa Center of Excellence for Water Management (ACEWM) and the Ethiopia Climate Change Working Group (ECCWG), which were provided by Prof. Feleke Zewge, while IAHR and the African Division were introduced by Prof. Joseph Lee and Dr Moez Louati. These introductions were followed by a series of technical talks on the principal research and engineering problems and solutions for the Africa hydro-environment. Both the IAHR team and leading professors and researchers from AAU and other Ethiopian universities and government, as well as students were involved in the talks. The second day in Ethiopia consisted of two technical tours to the Main Ethiopian Rift Valley Lakes and the Kality Wastewater Treatment Plant in Addis Ababa city. The visit concluded with the signing of a Memorandum of Understanding (MoU) between IAHR and ACEWM and the launch of an IAHR-Ethiopia Chapter led by Prof. Feleke, the director of ACEWM.

Ethiopia: Visit to AAU and ACEWM. International Workshop on Climate Change and Technology Innovation in Hydro-environment Engineering





One day workshop organised by ACEWM at The Capital Hotel, Addis Ababa, Ethiopia. Top left and top right pictures show, respectively, Prof. Feleke and Prof. Lee providing their introduction speeches at the beginning of the workshop. 3 July 2023.



Technical visit to the main Ethiopian Rift Valley Lakes, Ziway city, Ethiopia. 4 July 2023.



Group photo at the ACEWM office. From Left to right: Prof. Essays, Prof. Tekola, Prof. Yuan, Prof. Feleke, Prof. Lee, Prof. Louati, Prof. Li, Prof. Ferras. 3 July 2023.



Group photo at Addis Ababa University main historical building. 5 July 2023.

Visit to Morocco: Université Mohammed VI Polytechnic (UM6P)

On 6 July, the IAHR team flew to Morocco via Egypt, following the Nile River from the source to the sea. After a workshop for academic exchange, the host (UM6P) organised a roundtable to discuss the research needs in Africa concerning hydro-environment. Key stakeholders from academia, government and industry from different parts of the country presented different issues related to water supply, river basin management, agriculture and energy. The roundtable discussion sparked an extremely productive brainstorming session around the themes for the 6th IAHR Africa Congress and was also very useful in identifying potential problem areas and targets. The Executive Director [Tom Soo](#) was also present to discuss his views on the role of IAHR in Africa and the need for linkage of cutting-edge research with policy (in French!).

The visit in Morocco was complemented by a technical tour to the Dam of Massira and the impressive UM6P labs and field scale facilities in renewable energy and smart agriculture. An afternoon session at UM6P was dedicated to Young

Professionals (YP) where Prof. Ghidaoui gave a talk on “How to write a good scientific paper” followed by an open discussion between PG students and the IAHR delegation. The YP session ended with an inspiring talk by Dr David Ferras who introduced the [IAHR Young Professional Networks \(YPN\)](#) and their activities - pointing out the benefits of being associated with IAHR and establishing a YP network.



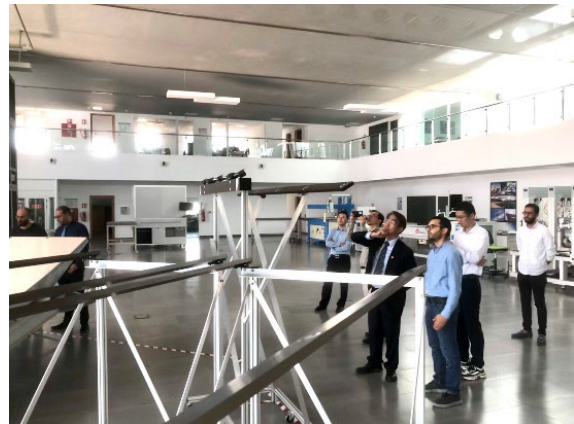
Prof. Joseph Lee presenting at the 1 Day workshop, UM6P. Ben Guerir, Morocco. 10 July 2023.



Roundtable discussion forum at UM6P including stakeholders from government and industry on water environment research needs relating to water supply, river basin management, agriculture, and energy sectors. Ben Guerir, Morocco. 10 July 2023.



Group photo at UM6P atrium. Ben Guerir, Morocco. 11 July 2023.



Technical visit to UM6P field research stations in solar thermal electric systems and smart agriculture. Ben Guerir, Morocco. 11 July 2023.



Dr David Ferras introducing IAHR Young Professional Networks, Ben Guerir, Morocco. 11 July 2023.



Prof. Ghidaoui giving a talk on how to write a good paper followed by a discussion and interaction with UM6P PG students. Ben Guerir, Morocco. 11 July 2023.



Group photo at the Dam of Massira. 8 July 2023.

Visit to Tunisia: University of Tunis El Manar and Tunisian Engineers Order

The last stop of the journey was Tunisia. The host university (UTM) organised a one-day workshop for scientific exchange between IAHR, the University of Tunis at El Manar (UTM) and other local water institutions. During the workshop the IAHR

delegation had the chance to meet with key leaders of Tunisia water policy including the former Minister of Agriculture, Water Resources and Fisheries, and visited the UTM hydraulic lab. The second day in Tunisia consisted of a field visit to the 2000-year-old Outhna-Uthina Roman City (in 45 degree C weather!) and the ancient water supply system of the city of Carthage which brought water from the city of Zaghouan to Carthage via the impressive 132km long aqueduct built with a slope of 0.25/100. The curiosity of the IAHR delegation to keep exploring the Carthaginian ruins was only stopped by the sunset. During the last day in Tunis, the IAHR delegation also met with the Tunisian Engineers Order (TEO) in Tunis where they signed an MoU and discussed potential collaboration in capacity building activities as well as collaborative research on the water-food-energy-nexus (WEFE).



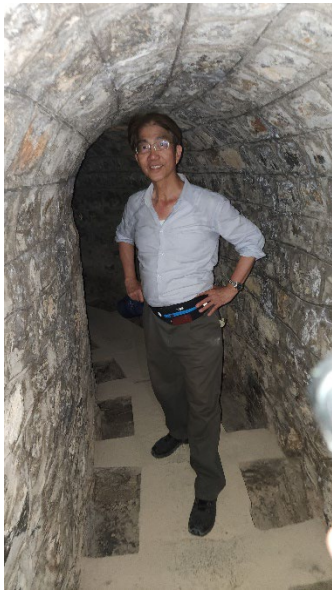
Prof. Lee (left) and Prof. Ghidaoui (right) presenting at the 1 Day workshop, National School of Engineering of Tunisia (ENIT), UTM, Tunisia. 13 July 2023.



Group photo at the main entrance of the National School of Engineering of Tunis. Tunis, Tunisia. 14 July 2023.



Group photo at Outhna Roman City. Left Roman amphitheatre; right: Outhna main building. 14 July 2023.



Prof. Lee inside the water collection tunnel of the Ancient Roman aqueduct (Zaghouan city, Tunisia). 14 July 2023.



Group photo at the Water temple: the water source of Roman aqueduct (Zaghouan city, Tunisia). 14 July 2023.



Group photo at midway of the Roman aqueduct supply structure. 14 July 2023.



Group photo at the site of a system of 15 ancient service reservoirs where water supply from the Roman aqueduct is collected and stored. Carthage city, Tunisia. 14 July 2023.



Meeting between IAHR delegation (on the right) and the Tunisian Engineers Order (TEO) (on the left) prior to the signing of an MoU between the two associations. Sitting in front of the laptop is Mr Kamal Sahnoun, president of TEO, and on his right is Prof. Slim Choura, Tunisia ex-minister of high education and research. 15 July 2023.



Prof. Joseph Lee receiving a souvenir gift from Prof. Moez Chafra (president of UTM). 15 July 2023.

Acknowledgements

The IAHR delegation is much indebted to the generosity and hospitality of the hosts that made this visit possible: [Prof. Feleke Zewge](#) (AAU-Ethiopia); **Prof. Abdelghani Chehbouni** and [Prof. Ali El Battay](#) (UM6P-Morocco), [Prof. Dalila Loudyi](#) (Hassan II University-Morocco); and **Prof. Moez Chafra**, **Prof. Ezzeddine Sediki**, [Prof. Hatem Kanfoudi](#), and [Prof. Mahdi Tekitek](#) (UTM-Tunis); and all their respective team members, who made this trip an exceptionally rewarding experience.

This journey is a historic implementation of the IAHR strategic goal of engagement with African water issues – which touch on global challenges of universal concern. Through this trip, the team obtained a better understanding of some of the key water security issues facing Africa. The delegation deeply felt the challenges brought about by urbanisation on water security, and the importance of climate change, water, and agriculture for Africa – areas where IAHR has inherent strengths to contribute positively. The trip also represented a first step towards the ambition to consolidate the African Regional Division and develop it to a level comparable with other Regional Divisions. As a prestigious global organisation with a proud history, IAHR is able and committed to play a major role in the achievement of the UN Sustainable Development Goals, especially with respect to African water problems. The **6th IAHR Africa Congress** will be the next milestone we are working for. We invite you all to join this endeavour and render your contribution for a better hydro-environment in Africa!