



Distr.  
LIMITED  
E/ESCWA/SDPD/2019/WG.42/INF.1  
02 December 2019  
ORIGINAL: ENGLISH

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## Economic and Social Commission for Western Asia (ESCWA)

Building Capacity for Accessing Disruptive Technologies for Improved Water Resources Management  
under Climate Change  
Beirut, 14-15 January 2020

### INFORMATION NOTE

#### I. BACKGROUND

Disruptive technologies such as satellite imagery, remote sensing, in-situ sensors and regional climate modelling offer new sources of information for improving water resources management. Data generated from these disruptive technologies allow for more advanced analytics benefiting from artificial intelligence, cloud computing and machine learning. Awareness of and access to these innovative technologies can help governments both benefit from and cope with water resource challenges under dynamic climate conditions. Disruptive technologies can also facilitate more integrated approaches to water resources management that allow for work across sectors by “disrupting” or modifying traditional ways of management.

Disruptive technologies can enhance the science-policy interface by providing new tools and additional analysis to enrich decision-making processes in water resources management. This is facilitated by innovation during the data collation stage benefiting from big data of various scales from remote to in-situ, and through the analysis stage and the use of knowledge tools and products that benefit the end user in making more informed and timely decisions for the management of water resources under dynamic environments.

The Mashreq region face water stress and water quality concerns, which are further complicated by climate change and a large ratio of transboundary waters resources. More than half of current freshwater withdrawals exceed what is naturally available in some countries and total water productivity in the region is only about half the world’s average. With climate change, this is only expected to worsen; greater stress from extreme and unpredictable weather patterns will continue to affect water resources that will only in turn worsen water scarcity and challenge water security in the region. The region has the greatest expected economic losses from climate-related water scarcity, with flood and drought risks increasing and likely to harm the poor and vulnerable groups disproportionately.

The freshwater scarcity situation in some countries of the region is also aggravated by other factors, such as high dependency on transboundary water resources and conflicts that affect the ability of people to access water and sanitation services. Added to this is water pollution, non-revenue water losses in ageing water systems and service intermittency.

To overcome these regional challenges, opportunities exist to scale up the adoption of new technologies and accelerate positive innovations throughout the region. This will require a “new water consciousness” amongst governments and citizens which recognizes the responsibility of each stakeholder (farmer, business, public agency, individual, etc.) to move towards a more sustainable management of this precious resource, and in turn increased understanding of the benefits that innovation and innovative financing can present to overcome these regional challenges.

## **II. OBJECTIVES OF THE MEETING**

The meeting aims to identify challenges, opportunities, and innovative approaches for utilizing disruptive technologies and climate projections for improved water resources management in the Mashreq region, leveraging on current progress and successes.

At the technical level, professionals can exchange experiences and best practices to support peer-to-peer learning and improve capacity in a range of areas, including water resources management, climate change adaptation and water quality. In this context, disruptive technologies and economic data and analysis can provide useful ideas on new ways to address these issues and leverage existing opportunities to advance a more integrated water management approach in the region.

Regional climate modelling can also help to project climate change impacts on water resources and water-dependent sectors in the region. The meeting will thus explore available regional climate modeling, hydrological modeling and integrated vulnerability assessment tools and outputs that can inform hydrological and agricultural modelling applications in the region. This will include an overview of the regional climate projections and how to access available tools and datasets for conducting vulnerability assessments and sector-based analysis.

Finally, the meeting will also present examples of disruptive technologies from around the globe that have improved water resources management at national and in transboundary settings in view of identifying potential opportunities for drawing upon these innovative tools that could be beneficial for the Mashreq region.

## **III. PARTICIPANTS**

The meeting will gather senior officials and technical experts from ministries responsible for water resources management in the Mashreq region, namely nominated government representatives from Iraq, the Islamic Republic of Iran, Jordan, Lebanon, the Syrian Arab Republic and Turkey. Experts from the World Bank and United Nations organizations will also be invited to participate as resource persons.

## **IV. ORGANIZATION OF THE MEETING**

The meeting is organized by ESCWA with the support of the World Bank and will be held from 14 to 15 January 2020 at the United Nations House in Beirut, Lebanon. The meeting is expected to begin at 9:00 am and conclude by 5:00 pm each day. The registration desk will be open as of 8:30 am on Tuesday, 14 January 2020.

Participants are kindly asked to bring photographic identification on the first day of the meeting and to allow sufficient time to pass through security to collect their identification badge. Access to the United Nations House is provided through the Gibran Khalil Gibran Garden pedestrian entrance.

Nominated representatives will receive the final meeting agenda and draft list of participants prior to the meeting. All meeting documentation and presentations will be provided in the English language. Interpretation will be available during the meeting.

## **V. REGISTRATION AND SPONSORSHIP**

In order to allow sufficient time to make arrangements for travel and financial sponsorship, ministries are kindly asked to send to ESCWA the list of nominated participants and their contact information by Friday, 20 December 2019. Nominated participants will then be asked to complete a registration form and return it to ESCWA with a colour scanned copy of their passport identification page.

Financial sponsorship covers the cost of roundtrip travel, a daily subsistence allowance for up to three nights in Beirut, and a terminal allowance to cover airport transfers, as appropriate. Roundtrip airfare would be arranged by ESCWA in economy-class on the most direct, least cost itinerary. Financial support is provided in accordance with United Nations Financial Rules and Regulations.

## **VI. ENTRY VISA**

Participants are requested to secure their own visas for travel to Lebanon, as may be necessary. Passport holders from Iraq, the Islamic Republic of Iran, Jordan and Turkey can secure their visa upon arrival at the airport. Passport holders from the Syrian Arab Republic traveling by land do not need an entry visa for Lebanon.

## **VII. ACCOMMODATION AND TRANSPORTATION**

ESCWA can facilitate the reservation of hotel rooms at the Markazia Suites Hotel, if requested on the registration form. The hotel is located walking distance from the United Nations House (5 minutes). The preferential room rate at the Markazia Suites Hotel is US\$ 106 (single occupancy) or US\$ 128 (double occupancy), inclusive of breakfast, internet and all taxes and service charges.

Participants are encouraged to request airport transfer services from/to the Beirut-Rafic Hariri International Airport directly through their hotel. A one-way taxi from the airport to downtown Beirut costs approximately LBP 30,000-45,000 (US\$ 20-30). A one-way airport transfer to/from the Markazia Suites Hotel costs US\$ 26.

## **VIII. CORRESPONDENCE**

Inquiries and completed registration forms should be submitted to the following meeting focal points:

### **ESCWA**

Ms. Carol Chouchani Cherfane  
Chief  
Water Resources Section  
Sustainable Development and Policies Division  
ESCWA  
Beirut, Lebanon  
Tel: + 961 1 978 518  
Cell: + 961 3 769 466  
Fax: + 961 1 981 510  
E-mail: [chouchanicherfane@un.org](mailto:chouchanicherfane@un.org)

### **World Bank**

Mr. Anders Jagerskog  
Senior Water Resources Management Specialist  
MNA Unit  
Water Global Practice  
World Bank  
Washington D. C., USA  
Tel: + 1 202 473 0149  
Cell: + 1 202 560 0325  
E-mail: [ajagerskog@worldbank.org](mailto:ajagerskog@worldbank.org)

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