

**ECONOMIC AND SOCIAL  
COUNCIL**

Distr.  
LIMITED  
E/ESCWA/SDPD/2012/IC.1/INF.1  
25 June 2012  
ORIGINAL: ENGLISH

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

Intergovernmental Consultative Meeting on the Water and Energy Nexus in the ESCWA Region

**INFORMATION NOTE**

The Economic and Social Commission for Western Asia (ESCWA) is organizing an Intergovernmental Consultative Meeting, to be held jointly among the members of the ESCWA “Committee on Energy” and “Committee on Water Resources”, on the Water and Energy Nexus in the ESCWA Region, on the 27 and 28<sup>th</sup> of June 2012, at the UN House, Beirut.

*1. Background information*

Water and Energy requirements have rapidly increased in the region during the recent years to meet the population growth and economic development, and a new comprehensive and systematic approach is needed to address the interrelation of these resources in a sustainable way.

Indeed, water and energy issues are strongly interrelated: Energy is used to extract water from underground and to power desalination processes to produce fresh water, to run treatment and pumping plants to insure clean water transportation and distribution, and to collect wastewater and operate its treatment stations. Energy is therefore, embedded in water in all water-using services in the domestic, agricultural, industrial, and commercial sectors as well as wastewater collection and treatment processes. On the other hand, water is essential for fossil fuel production and processing, for energy production, mainly electricity, in thermal power plants using conventional or renewable sources, for operating hydropower plants, and for providing the heat transfer medium for cooling or heating many industrial processes as well as other applications.

Furthermore, the water and energy sectors are facing, together, the intersecting challenges of climate change, energy security and increasing water scarcity, as well as the issues associated with the population access to each of these two commodities.

This is the water-energy nexus and thus water and energy issues cannot be addressed separately if energy, water and environmental strategies are to be formulated to insure a sustainable development in the region. Therefore, understanding the dynamics of this water-energy nexus is essential to develop appropriate strategies for the interrelated use of these two resources in a comprehensive and sustainable manner throughout the region.

In the ESCWA region, the need to address the Water-Energy Nexus is becoming an urgent matter because of the rapidly growing population, economic growth and the increase in the living standards that are expected to result in increasing pressure on limited water and energy sources. This is clearly shown in the nearly 25 per cent increase in the total energy consumption in the ESCWA region that took place between 2006 and 2010 (*2011' OAPEC Annual Statistical Report*). Furthermore, declining water quality and availability in the region's watersheds would require more energy intensive treatment processes, and pumping from greater distances and depths, as well as further development of desalination plants, to maintain a reliable water supply while protecting public health and the environment.

The increase in demand of water will force the ESCWA countries to explore new alternatives of water resources. Consequently, each country will have to face the economical and environmental repercussions associated with the need for additional water resources, either from natural sources located inside or outside the country's borders, or by using energy to produce fresh water locally by industrial means.

As a result, development and management of water and wastewater systems, in the region, should be undertaken taking into account the associated energy aspects. And, similarly, development and management of the energy resources cannot be planned without including the aspects related to water resources and water quality.

The present meeting is held, based on a request formulated by the Water Intergovernmental committee to examine the water-energy nexus and its dynamics in the ESCWA region. This request is fully in line with the orientations backed by the Energy Expert Group meetings, and it falls within the mandate of SDPD to *“enhance technical, human and institutional capacities of member countries to develop and implement policies, strategies and action plans for the sustainable management of energy and water resources in line with Johannesburg Plan of Implementation”*.

## *2. Objectives and topics of the Meeting*

The objective of the meeting is to initiate the reflexion about issues related to this topic, to prioritize water-energy nexus issues. Also, participants will examine possible mechanisms and institutional arrangements to organize coordination and policy harmonization efforts between the Energy and Water Intergovernmental committees.

It is proposed that the meeting will focus on the following topics:

- (a) The existing dynamics of interrelationships between water and energy in the region;
- (b) Technical and policy options for considering a sustainable approach to water-energy nexus in:
  - (i) Developing and operating water and wastewater systems;
  - (ii) Addressing water end use consumption;
  - (iii) Promoting energy recovery from wastewater treatment;
  - (iv) Developing control and monitoring schemes to manage water and waste water facilities and networks;
  - (v) Addressing water requirements for electrical energy production (whether for thermal or hydro power plants), as well as fossil fuel extraction and processing.
- (c) Reinforcing the implementation of integrated approaches, of evaluation and decision making, in the feasibility analysis of the different alternatives for renewable energy projects and other water/energy resources projects.

The meeting will be coordinated by the Sustainable Development and Productivity Division (SDPD) at ESCWA. SDPD will provide background material on the issues to be covered in the meeting, and will help in identifying the priorities for the future work to be carried out on the topic.

ESCWA has prepared a questionnaire on Water and Energy Nexus in order to gather background information on the identified issues for discussion during the meeting, as well as the challenges characterizing countries of the Region. The questionnaire is composed of two parts: Part (A) addresses the institutional and organizational aspects and which we would appreciate filling and sending back before May

22th, 2012; Part (B) focuses on statistical data to be filled out and sent back to ESCWA before the start of the meeting.

### *3. Participants*

Participants to the meeting will include members, or their representatives, from the Intergovernmental Committees on both Water and Energy for each of the ESCWA member countries.

### *4. Date and Venue*

The meeting will be held at UN-ESCWA, on the 27<sup>th</sup> and 28<sup>th</sup>, of June 2012, Beirut-Lebanon.

### *5. Language of the Workshop*

Meeting background material will be presented in Arabic. Discussions can be conducted in either Arabic or English, and simultaneous translation from and to each of the two languages will be provided.

### *6. Accommodation and transportation*

ESCWA will bear the expenses of participation in the meeting for the two participants officially designated by their respective countries: One for the Energy committee, and one for the water committee. Participation expenses – for each one of these two participants- include the established Daily Subsistence Allowance in Beirut, Lebanon for a period of three days, the terminal expenses according to UN rules and regulations, airline reservations and an economy class two-way airline provided ticket.

Each participant shall undertake the following preparation related to his/her participation: Securing hotel reservation, visa, and any other requirements for travelling to Beirut. Participants should also take care of their transportation within Beirut, Lebanon.

### *7. Entry Visas*

Participants can obtain their entry visa into Lebanon from the Lebanese embassy to their respective countries and may obtain additional information by visiting: <http://www.general-security.gov.lb>.

In case needed, ESCWA may assist in obtaining the entry visa into Lebanon. For those interested, please send a clear scanned colour copy of the passport and basic personal data to the concerned at ESCWA.

### *8. Correspondence*

All correspondence related to the workshop is to be sent to either of the two addresses:

<b>Ms. Carol CHOUGHANI CHERFANE</b> Chief, Water Resources Section Sustainable Development and Productivity Division (SDPD) ESCWA United Nations House, Riad El-Solh Square, Beirut, Lebanon Tel.(Direct): + 961 1 978518 Mobile: +961 3 769466 Fax: + 961 1 981510/1/2 Email: <a href="mailto:chouchanicherfane@un.org">chouchanicherfane@un.org</a>	<b>Mr. Walid AL-DEGHAILI</b> Chief, Energy Section Sustainable Development and Productivity Division (SDPD) ESCWA United Nations House, Riad El-Solh Square, Beirut, Lebanon Tel.(Direct): + 961 1 978527 Mobile: +961 3 550446 Fax: + 961 1 981510/1/2 Email: <a href="mailto:degmaili@un.org">degmaili@un.org</a>
--	--