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

Workshop on Applying the Climate Change Vulnerability Assessment Methodology in the Arab Region Beirut, 11-13 May 2014

### **INFORMATION NOTE**

#### I. BACKGROUND

In response to resolutions adopted by the Arab Ministerial Water Council (AMWC), the Council of Arab Ministers Responsible for the Environment (CAMRE), the ESCWA 25<sup>th</sup> Ministerial Session, as well as interagency collaborative processes involving the specialized and regional organizations of the United Nations and the League of Arab States, a Regional Initiative for the Assessment of the Impact of Climate Change on Water Resources and Socio-Economic Vulnerability in the Arab Region (RICCAR) was launched. The initiative was formulated based on the outcomes of the Expert Group Meeting Towards Assessing the Vulnerability of Water Resources to Climate Change in the Arab Region (Beirut, October 2009), which was organized by the League of Arab States (LAS), the United Nations Economic and Social Commission for Western Asia (ESCWA) and the United Nations Environment Programme Regional Office for West Asia (UNEP/ROWA) with financial support from other organizations. These discussions led the initiative to be structured around four pillars of work comprising: (a) a baseline review; (b) an integrated assessment consisting of an impact assessment and vulnerability assessment; (c) awareness raising and information dissemination; and (d) capacity building and institutional strengthening.

The Regional Initiative was further elaborated by Arab member states as well as United Nations and LAS organizations at a second Expert Group Meeting on the Development of a Vulnerability Assessment for the Arab Region to Assess Climate Change Impacts on the Water Resources Sector, which was hosted by the LAS and ESCWA (Beirut, November 2010) and initiated efforts to coordinate an ensemble of regional climate modeling projections based on a common Arab Domain and a uniform set of protocols using the same representative concentration pathways. A third annual expert group meeting was subsequently organized by the LAS, ESCWA and UNEP to discuss the methodological framework for pursuing the integrated assessment component of the initiative (Beirut, July 2011). The fourth annual RICCAR expert group meeting was then convened by the LAS, ESCWA and UNEP (Beirut, July 2012) to discuss progress achieved and resulted in the establishment of two working groups to support the preparation of the vulnerability assessment and set-up of a regional knowledge hub. The fifth annual RICCAR expert group meeting discussed the preliminary findings of the regional climate modeling ensemble, the set up of the hydrological modeling component, the draft methodology for conducting an integrated vulnerability assessment based on the modeling outputs, as well as the objectives, content, functionality and criteria for the set-up of the regional knowledge hub.

RICCAR is implemented through a collaborative partnership involving 11 partner organizations, namely the LAS, ESCWA, UNEP, the Cairo Office of the United Nations Educational, Scientific and Cultural Organization (UNESCO), the United Nations University Institute for Water, Environment and Health (UNU-INWEH), the Regional Office for the Arab States of the United Nations Office for Disaster Risk Reduction (UNISDR), the Arab Center for the Studies of Arid Zones and Dry Lands (ACSAD), the Swedish Meteorological and Hydrological Institute (SMHI), Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), the World Meteorological Organization (WMO) and the Food and Agriculture

Organization (FAO). Three research institutes are also contributing to the regional climate modeling ensemble being coordinated by SMHI, namely the Climate Services Center (Germany), the Center of Excellence for Climate Change Research at King Abdulaziz University (KSA), and the King Abdulalah University of Science and Technology (KSA). In addition to resources and contributions provided by the partner agencies and institutes, the Swedish International Development Cooperation Agency (Sida) and the German Federal Ministry for Economic Cooperation and Development (BMZ) financially support the Regional Initiative. Additional information is available at <a href="https://www.escwa.un.org/RICCAR">www.escwa.un.org/RICCAR</a>

# II. SCOPE

RICCAR is implemented with the support of the GIZ-led project, Adaptation to Climate Change in the Water Sector in the MENA region (ACCWaM), which is funding the development of the vulnerability assessment methodology and integrated mapping component of the RICCAR integrated assessment. A RICCAR Vulnerability Assessment Working Group was established in January 2012 to support the preparation of the vulnerability assessment methodology, which has been developed by adelphi, a Germany research consultancy based in Berlin and contracted by GIZ to support this effort. The work of adelphi is informed by related activities it is conducting for GIZ on climate change vulnerability assessment at the global and national levels, as well as its experience supporting the development of regional knowledge hubs in Europe and other parts of the world. The Institute for Applied Remote Sensing European Academy of Bozen/Bolzano (EURAC) in Italy is technically supporting adelphi with the preparation of the methodology.

During the training, participants will be introduced to the different concepts of vulnerability and the approach adopted for pursing the vulnerability assessment under the regional initiative. They will then be guided through a step-by-step training manual on the methodology and implementation of the integrated vulnerability assessment using geographic information system (GIS) applications, and specifically ArcGIS (ArcInfo). Teams of experts from the participating institutions would thus work collaboratively to try and test the methodology throughout the training.

# III. OBJECTIVES

The Workshop on Applying the Climate Change Vulnerability Assessment Methodology in the Arab Region seeks to:

- (a) Provide training on the integrated vulnerability assessment methodology that will be applied to support the RICCAR integrated assessment at the Arab regional level, including review of data sets and data sources.
- (b) Explain how classes and thresholds were defined to support use of these data sets as applied using geographic information system applications.
- (c) Demonstrate the aggregation of different layers in ArcGIS to develop maps for the visualisation of vulnerability as well as its components.
- (d) Introduce ways in which the integrated vulnerability assessment methodology can be adapted to support vulnerability assessment at the sub-regional, national and local levels.
- (e) Share the conceptual framework for establishing a regional knowledge hub for disseminating the methodologies, inputs and outputs generated under the regional initiative to facilitate open access to information that can support further research and analysis on climate change challenges facing the Arab region.
- (f) Foster exchange with participating organizations interested in becoming part of the regional knowledge hub.

It is expected that the vulnerability assessment training provided at this workshop can thus help regional researchers better understand the concepts and conduct of vulnerability assessments related to climate change, as well as provide institutions with a regional methodology that can be adapted for

application at smaller and more local scales of analysis to support greater research and understanding of climate change vulnerabilities in the Arab region.

### V. PARTICIPANTS

The training targets senior experts from institutions based in the Arab region who are engaged in climate change impact assessment and vulnerability assessment research with in-house capacities in geographic information systems and experience working with climate change and water-related databases.

Invited institutions are requested to submit their expressions of interest to participate in this training workshop by providing an <u>expression of interest</u> (3-5 pages) that details the following:

- (a) Formal name of the institution, full address and contact information, place of register and date of establishment.
- (b) Name, title and contact information of the chief executor of the institution.
- (c) Summary of experience and research in the area of climate change impact assessment and/or vulnerability assessment related to water resources, land resources, meteorology and/or socioeconomic assessment as it relates to climate change in the Arab region.
- (d) Summary of experience and in-house capacity using ArcGIS for Desktop Versions 9.x to 10.x, and whether the institution's license is Basic or Advanced.
- (e) Preliminary expression of interest in contributing to the establishment of an Arab regional knowledge hub on climate change and water (technically and/or financially).
- (f) Names and professional profiles of the two experts from the institution who are nominated to participate in the workshop:
  - The first expert should have demonstrated experience in the area of climate change impact assessment and/or vulnerability assessment and climate change challenges facing Arab countries in preferably one or more of the following areas: hydrology, hydrogeology, soil sciences, agriculture, biodiversity, ecosystems or the social sciences;
  - The second expert should be proficient in the use of ArcGIS and have a conceptual understanding of the preparation of maps using ArcGIS (e.g., concept of layers, aggregation), understanding of raster/vector format and the processing of an attribute table, basic understanding of different coordinate systems, and basic statistical skills (e.g., statistical scales, classifications).

Both nominated experts may be proficient in both areas of work. However, at least one must have GIS expertise in order for the institution to benefit from the workshop.

- (g) Annex showing the organigram of the institution.
- (h) Completed registration forms for the two nominated experts (registration form attached).

Interested institutions are invited to submit their expression of interest by <u>Wednesday</u>, 23 April 2014 to Ms. Carol Chouchani Cherfane, RICCAR Coordinator at ESCWA by email (<u>chouchanicherfane@un.org</u>). Institutions selected for participation and sponsorship will be advised of this decision by Wednesday, 30 April 2014. Other institutions may be invited to participate, but at their own cost. Approximately twenty experts are expected to participate in the training workshop.

Sponsorship for those traveling from outside of Beirut is kindly provided by the GIZ/ACCWaM project and will be arranged by ESCWA on a request basis. Sponsorship is comprised of roundtrip economy class airfare to Beirut in accordance with United Nations Rules and Regulations; a daily subsistence allowance for up to four nights in Beirut to cover the cost of accommodations, meals and incidental expenses; as well as a ground transportation allowance.

# IV. ORGANIZATION OF THE MEETING

The meeting is organized under the RICCAR umbrella by ESCWA in partnership with the GIZ/ACCWaM project and the League of Arab States, which it supports. It is coordinated closely with ACSAD which supplied data sets and data sources for supporting the development of the methodology and draws upon regional climate modeling and hydrological modeling parameters and outputs provided by SMHI. The meeting will be held from 11 to 13 May 2014 at the United Nations House in Beirut, Lebanon.

The meeting agenda and a logistical information note will be sent to registered participants regarding accommodations in Beirut and other related matters. The meeting will be conducted in the English language. No interpretation will be provided.

Participants are strongly encouraged to bring a laptop computer with them as they will be applying the integrated vulnerability assessment methodology using vetted data sets and ArcGIS. Laptops should be equipped with the following specifications:

- ArcGIS for Desktop Versions 9.x to 10.x, License type: Advanced (ArcInfo)
- Windows XP or newer
- 2 GB of RAM
- 2.2 GHz processor
- 3 GB ROM

Experts from the same institution may choose to work as a team on a shared laptop during the workshop. For those who do not have ArcGIS installed on their laptop, please note that a 60-day free trial version of ArcGIS (Advanced) can be downloaded at: <a href="http://www.esri.com/software/arcgis/arcgis-for-desktop/free-trial">http://www.esri.com/software/arcgis/arcgis-for-desktop/free-trial</a> (registration needed). Please install the software on your laptop in advance to the workshop as it takes some time to download and test if it is running on your computer. At minimum, kindly ensure that you select the "Spatial Analyst" extension when installing the software.

#### VI. CORRESPONDENCE

Correspondence and inquiries concerning the workshop should be addressed to:

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For additional information, please visit: http://www.escwa.un.org/RICCAR