Food and Agriculture Organization
of the United Nations

PROGRAMME
& CONCEPT NOTE

2ND INTERNATIONAL SEMINAR
ON DROUGHT AND AGRICULTURE

COUNTING CROPS + DROPS:

LET'S GROW THE FUTURE TOGETHER

A CELEBRATION OF THE WORLD DAY TO COMBAT DESERTIFICATION AND DROUGHT

MONDAY 17 JUNE 2019 | 09:00 - 17:00
SHEIKH ZAYED CENTRE | FAO HEADQUARTERS, ROME, ITALY

WWW.FAO.ORG/LAND-WATER

#2019WDCD

INTRODUCTION

On the occasion of the World Day to Combat Desertification and Drought, the Food and Agriculture Organization of the United Nations (FAO), in collaboration with the Government of the Netherlands, is organizing the 2nd International Seminar on Drought and Agriculture "Counting crops and drops: let's grow the future together". This seminar aims at presenting and discussing novel tools, methodologies and policies for an improved agricultural resilience to drought, in order to reduce the vulnerability of rural communities and promote sustainable natural resource management.

The event follows the 1st edition of the International Seminar that was held in 2017 on the World Day to Combat Desertification and Drought, which highlighted the importance of integrated approaches to drought management and preparedness to achieve food security.

Climate change is affecting agriculture through higher temperatures and more variable precipitation. Water resources availability is altered by changes in rainfall patterns and increased rates of evaporation, causing more frequent and longer periods of drought. This is particularly precarious in areas where rainfed farming is practiced.

Growing scarcity and competition for water stand as a major threat to future advances in food security and poverty alleviation, especially in rural areas. In semi-arid regions, an increasing number of rural poor consider entitlement and access to water for food production, livestock and domestic purposes as critical as the access to primary health care and education.

Globally, agriculture is the major water user and irrigation services and scheme performances are still behind optimum. Appropriate management practices and technologies in irrigated and rainfed farming systems, not limited to water-related practices, have not been fully deployed to reach the maximum potential productivity of available water. Gaps between attainable and actual yields are often very significant in developing countries.

New developments in earth observation technology make it possible to monitor key data for sustainable agricultural production and natural resources management using satellite remote sensing. Such techniques can provide valuable insight into water availability and vegetation health during cropping seasons. This information supports the monitoring of the condition and production prospects of major food crops across the globe, and the early identification of agricultural areas affected by dry spells and drought.

Cover photos: (Left to right) European Space Agency, ©FAO/Telcinia dos Santos, Jim Morgan. Back Cover: ©FAO/Danfung Dennis

OBJECTIVES OF THE SEMINAR

The aim of the seminar is to present and discuss tools, methodologies and policies for improved agricultural resilience to drought, in order to reduce the vulnerability of rural communities and promote sustainable natural resources management towards water and food security.

The specific objectives are:

- Showcase and share knowledge on novel technologies and best practices to increase farmers' resilience to drought.
- Promote multi-stakeholder partnership and capacity building for integrated management practices for both drought preparedness and addressing land degradation in agriculture.
- Promote enabling environments to support accessibility of farmers to actionable information for improved resilience and sustainability.
- Demonstrate WaPOR, FAO's portal to monitor Water Productivity through Open-access of Remotely sensed derived data.

Photos: (Left to right) European Space Agency, ©FAO/Marco Longari, Jim Morgan

THEMES OF THE SEMINAR

Water resources assessments: counting the drops, making them count

Water availability is the key driver of drought. Therefore, stable and extensive water-monitoring operations and a commitment to water resources assessments are a prerequisite for drought resilience. Reliable and continuous water resources assessments require an effective and efficient system for monitoring water quantity and quality and a smooth data and information dissemination. The latest technological development has brought increasingly reliable data, both spatially and temporally, on water resources and biomass production.

Improved policies and practices for drought resilience

Ensuring appropriate and institutional capacity and governance across water, agriculture, food security, environment and other sectors are key for successful drought management. Due to the uncertainty of external factors, such as climate change, economic shocks and political situations, policies, planning and management systems need to allow flexibility with a strong adaptive capacity. Sound drought policies must combine early warning and prediction, vulnerability mapping, preparedness and mitigation, response and communication.

Strengthening farmers' resilience to drought: from the sky to the ground

In order to increase drought resilience and preparedness in agriculture, there is a need for monitoring and forecasting systems that provide reliable data. Innovative tools and systems transform those data into actionable information and bring them directly to our hands. This helps informed decision making at all levels, from government and international agencies to smallholder farmers. The development of technology-based and accessible drought early warning systems, capacity building and an enabling environment make the implementation of sustainable and drought resilient agriculture practices possible.

PROGRAMME

2nd International Seminar on Drought and Agriculture
Counting crops and drops: let's grow the future together

17 June, 2019, Sheikh Zayed Centre, FAO Headquarters

Time	Title
08:30 - 09:00	**PARTICIPANTS ARRIVAL** | Entrance A
09:00 - 10:10	**HIGH LEVEL OPENING CEREMONY** **Moderator**, H.E. Hans Hoogeveen, Ambassador, Permanent Representative of the Netherlands to FAO ▪ **Welcoming address**, José Graziano da Silva, Director-General, FAO ▪ **Remarks**, Sarquis José Buainain Sarquis, Vice President for Economic Research, Strategy, Partnerships and Chief Risk Officer, New Development Bank (via video-conference) ▪ **Video message**, Ibrahim Thiaw, Executive Secretary, United Nations Convention to Combat Desertification (UNCCD) ▪ **Opening address**, Bekhit Mohamed Bekhit, Assistant Minister for Transboundary Water Affairs, Studies, Research and Development, the Arab Republic of Egypt
10:10 - 10:30	**SETTING THE SCENE** **"WATER RESOURCES ASSESSMENT FOR DROUGHT PREPAREDNESS"** ▪ **Keynote Speaker**, Wim Bastiaanssen, Professor of Global Water Accounting, IHE-Delft Institute for Water Education
10:30 - 11:00	**COFFEE BREAK AND DEMONSTRATION OF WAPOR (FAO ATRIUM)**
11:00 - 12:00	**WATER RESOURCES ASSESSMENT:** **COUNTING THE DROPS, MAKING THEM COUNT** ▪ **Introductory remarks by Moderator** Jippe Hoogeveen, Senior Land and Water Officer, Land and Water Division, FAO ▪ **The present and future of Earth observation for agriculture** Benjamin Koetz, Exploitation Engineer, European Space Agency ▪ **Launch of the Water Productivity Open-access Portal version 2.0** Livia Peiser, Land and Water Officer, Land and Water Division, FAO ▪ **PlantVillage application and WaPOR** David Hughes, Associate Professor, Penn State University ▪ **Questions from the audience**
12:00 - 13:30	**LUNCH BREAK AND DEMONSTRATION OF WAPOR (FAO ATRIUM)**
13:30 - 13:45	**OUTCOMES OF THE NEAR EAST AND NORTH AFRICA** **LAND AND WATER DAYS 2019** ▪ Jean-Marc Faurès, Regional Programme Leader, Regional Office for Near East and North Africa, FAO

Photos: (Left to right) ©FAO/Noah Seelam, ©FAO/Simon Maina

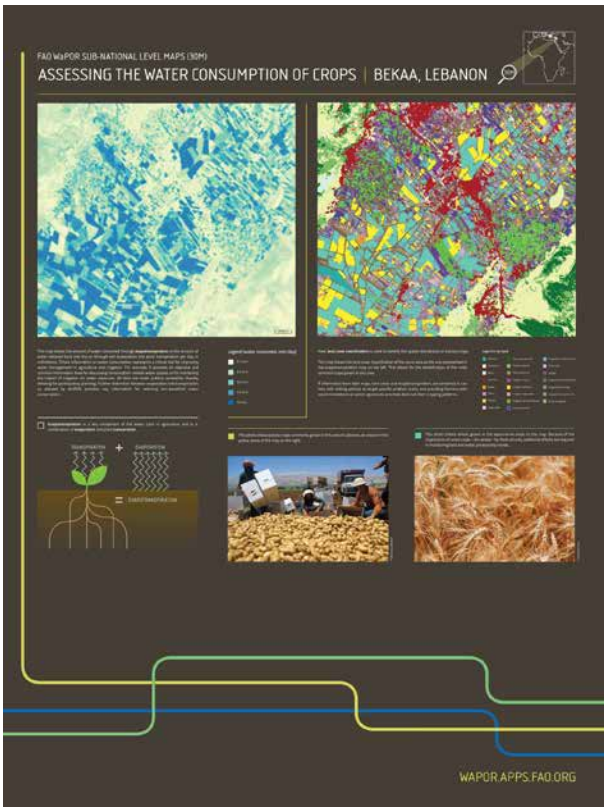
Time	Title
13:45 - 15:00	

THE WaPOR EXHIBITION – FAO ATRIUM

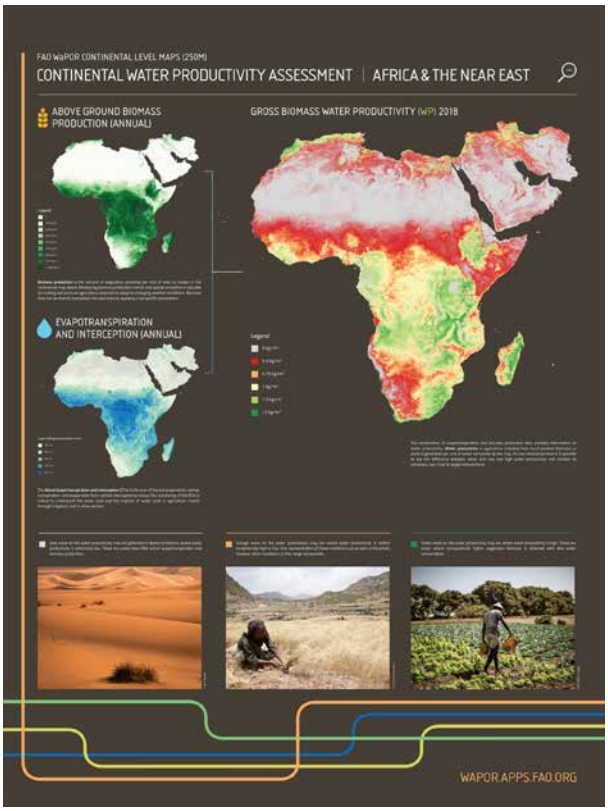
The exhibition on WaPOR, FAO's portal to monitor Water Productivity through Open-access of Remotely sensed derived data, was developed as an integral part of this event. It brings you on a journey to discover how the use of novel technologies can increase farmers' resilience to drought.

The series of posters uses case studies to show the close linkage between sustainable natural resource management and food security, displaying how we can "grow the future together". We delve into observing irrigation expansion in Egypt, and monitoring the impact of drought in Eastern Africa. Furthermore, we discuss understanding water consumption across different crops in Lebanon, and measuring water productivity in Sudan. Finally, we show how WaPOR data is used to provide advisory services to farmers in Kenya, and monitor change in agricultural productivity over time in Syria.

While exploring, you will learn about the concepts of evapotranspiration, biomass production and water productivity. These emphasize the importance of assessing and monitoring water resources in order to promote sustainable agricultural practices. Please enjoy this insight into FAO's ground-breaking technology and its stunning applications from the sky to the ground.



A close up view of water consumption in Bekaa, Labanon



The continental view of Water Productivity (WP)

The interconnected exhibition in its entirety

WITH THE SUPPORT OF

Government of the Netherlands

CA5113EN/1/06.19