

## Training course

# Adapting to a changing climate:

## Exploring future climate conditions and crop and water management solutions



**Date:** 24-27 September 2017

**Venue:** Algiers, Algeria

### Background

In North Africa, rising temperatures associated with climate change are expected to decrease the land areas suitable for agriculture, shorten the length of growing seasons and reduce crop yields. The decrease in annual precipitation that is predicted for North Africa in the 21st century will exacerbate these effects, particularly in semi-arid and arid regions that rely on irrigation for crop growth.

Droughts and floods are the most common climatic events in North Africa and represent direct threats to lives and livelihoods. Also, the main economic and social activities in North Africa are concentrated along the coastal zones. The population share within 100 km of coast is 68.8 percent in Algeria, 65.1 percent in Morocco, and 84 percent in Tunisia, and they all suffer directly from climate change.

As one of the world's most water-scarce regions with high dependence on climate-sensitive agriculture, the economic and social conditions in North Africa are likely to deteriorate in the future. This is also particularly relevant to the region due to the high dependence of regional economies on agriculture. Crop production would be reduced across much of the region as optimal growing conditions are exceeded. The capacity of the region's communities to cope will be significantly challenged.

This course highlights the above factors of climate change and proposes management solutions to mitigate these factors.

### Agenda

#### Sunday, 24 September 2017

08:30-09:00 **Registration**

09:00-10:00 **Inauguration Session**

Opening and welcome remarks, Ministry of Agriculture, Rural Development and Fisheries, Algeria

Opening remarks and briefing about the course by ICBA

Introduction of participants

Group photo

10:00-10:30 **Tea/Coffee Break**

10:30-13:00 **Session 1:** Exploring future climate change

Climate change modeling and adaptation research at ICBA

Climate change indices – generating insight from raw data

Discussions

13:00-14:00 **Lunch Break**

14:00-16:00 **Session 2:** Generating national level climate change data –

The view of Algeria

### Organizer

Ministry of Agriculture, Rural Development and Fisheries (MARDF), Algeria

International Center for Biosaline Agriculture (ICBA), United Arab Emirates

### Funding Agency

Islamic Development Bank (IsDB)

### Partners

Participants from Algeria, Mauritania, Morocco and Tunisia

### Trainers

Dr. Makram Belhaj Fraj, Agronomy Scientist, ICBA

Mr. Rashyd Zaaboul, Modeler - Climate Change, ICBA

### Course Coordinators

Mr. Hamid Weld Yousef, MARDF

Mr. Ghazi Al-Jabri, ICBA

## Monday, 25 September 2017

- 08:30-10:00 **Session 3:** Exploring impacts of climate change on future yields using crop modeling  
Biosaline Agricultural Systems in MENA and CAC  
Climate change impact on wheat production
- 10:00-10:30 **Tea/Coffee Break**
- 10:30-13:00 **Session 4:** Application of Biosaline Agricultural Systems: North Africa countries  
- Algeria  
- Mauritania  
- Morocco  
- Tunisia  
Discussion
- 13:00-14:00 **Lunch Break**
- 14:00-16:00 **Session 5:** Climate-smart agriculture: applications for irrigation scheduling

## Tuesday, 26 September 2017

- 08:00-16:00 **Field trip to areas experiencing drought and climate change issues**

## Wednesday, 27 September 2017

- 08:30-10:00 **Session 6:** Climate change adaptation  
Regional drought monitoring for agricultural planning
- 10:00-10:30 **Tea/Coffee Break**
- 10:30-13:00 **Session 7:** Focused Groups Discussions  
Practical solutions for crop and water management  
Possibilities offered by salt- and drought-tolerant species as part of adaptation  
The role of saline and treated wastewater in future agriculture
- 13:00-14:00 **Lunch Break**
- 14:00-15:00 **Training wrap up and Course evaluation**
- 15:00-16:00 **Closing Session**  
Closing remarks by ICBA  
Closing remarks by Ministry of Agriculture, Rural Development and Fisheries, Algeria  
Remarks by participants  
Distribution of certificates  
Group photo