

ADAPTATION
OF AFRICAN
AGRICULTURE

FROM
SCIENCE TO ACTION

MARRAKECH, 13 NOVEMBER 2016

BREAKOUT PARALLEL SESSIONS



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CO-HOSTED BY :



RESEARCH PROGRAM ON
Climate Change,
Agriculture and
Food Security



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1. Sustainable and Resilient Soil Management

Room: KARAM 1

Co-organizers

- National Institute for Agricultural Research (INRA) Morocco
 - International Center for Agricultural Research in the Dry Areas (ICARDA)
 - International Fertilizer Association (IFA)
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Session Background

Climate change represents a serious threat to global food and nutritional security, not least because of its effects on soils. Changes in temperature and rainfall patterns will have a significant impact on the cycling of organic matter and associated processes that are required to ensure healthy and productive soils.

In order to meet future food and nutrition demands, agriculture and land management practices will need to undergo transformations that will shift from exploitation to conservation and the provision of ecosystem services. In this respect improved agriculture and soil management practices that focus on restoring and maintain soil organic carbon and functional biology that contributes to the development of healthy soils will bring multiple benefits.

Conservative management approaches that included conservation agriculture, zero tillage systems, functional crop rotations will contribute to improving soil health and its ability to sequester carbon, reduce soil erosion and desertification. Further, these interventions will maintain critical ecosystem services that include nutrient cycling and hydrological flows thereby contributing to maintaining and increasing food production.

Agenda and Speakers

Co-chairs: *Mohamed Badraoui*, Director General, National Institute for Agricultural Research (INRA) Morocco; *Aly Abousabaa*, Director General, International Center for Agricultural Research in the Dry Areas (ICARDA)

- Introductory note on Soil Information System in Africa - *Tekalign Mamo*, Agricultural Transformation Agency (ATA), Ethiopia & Food and Agriculture Organization (FAO) Special Global Ambassador, 2015 International Year of Soils

- Experiences and challenges of sustainable management of African soils - **Martial Bernoux**, Natural Resources Officer (Climate Change Mitigation), Food and Agriculture Organization (FAO)
- State of the art knowledge on soil carbon management and sequestration with focus on Africa - **Rattan Lal**, Professor of Soil Science, School of Environment and Natural Resources, The Ohio State University
- Climate resilient agriculture in Africa - **Rachid Mrabet**, Research Director, National Institute for Agricultural Research (INRA) Morocco
- Climate Smart Agriculture – what role for fertilizers? - **Charlotte Hebebrand**, Director General, International Fertilizer Industry Association (IFA)

Rapporteur: **Andrew Noble**, Deputy Director General, International Center for Agricultural Research in the Dry Areas (ICARDA)

2. Improved Agricultural Water Management

Room: KARAM 2

Co-organizers

- Ministry of Agriculture and Fisheries, Morocco (MAPM)
 - Global Water Partnership (GWP)
 - International Water Management Institute (IWMI)
 - General Council of Food, Agriculture and Rural Areas (CGAEER), France
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Session Background

Achieving and sustaining water Security in Africa is likely to increase in complexity and priority not only as climate change intensifies, but also as the demands of economic growth increase.

There is high level political commitment to Africa's water security agenda, expressed in Africa's Shared Water Vision 2025, the Sirte Declaration on Agriculture and Water in Africa (2004), the Tunis Declaration on Accelerating Water Security for Africa's Socio-Economic Development (2008) and the Sharm El Sheikh Commitments for Accelerating Achievement of Water and Sanitation Goals in Africa (2008). What is needed is to deliver on these commitments through concerted action at local, national and trans-boundary levels.

Climate change is affecting all countries, but Africa will be particularly hit in terms of food security, water management and extreme weather phenomena such as droughts, floods and cyclones. Africa is characterized by a low adaptive capacity that is reflective of the current state of water management, with the result that the number of victims from disasters is relatively higher than in other regions. Both climate variability and climate change must be tackled alongside the other factors that make-up water insecurity on the continent.

Building water resilience is not just about creating the infrastructure platform for water services or addressing the absence of water; it is also about addressing its presence in ways that can be a threat to societies, economies and the environment. Floods, droughts, disease, pollution and landslides are all water-related threats that undermine well-being. Water security is therefore “the availability of an acceptable quantity and quality of water for health, livelihoods, ecosystems and production, coupled with an acceptable level of water-related risks to people, environments and economies. It is determined by many factors, including the hydrological environment, the institutional and governance environment, the socio-economic context, the geopolitical environment, and the future environment and uncertainties, *particularly of climate change*” [David Grey].

To build water resilience, data and information on quantity and quality of available freshwater are crucial for planning, efficient and sustainable development and management. The status of hydrological networks in many African countries is generally inadequate to satisfy the minimum needs for information. Responding effectively to rainfall variability needs short-term forecasting that is tied in institutionally to water management and disaster management. Climate change adaptation strategies for the future require hydrological data and information to enable assessment of the impacts of climate change on water resources at basin levels.

There is great diversity in the continent. South Africa and countries in North Africa have made great strides in developing their water infrastructure to support their growth and in building their resilience to negative impacts on water resources. Thus the challenges are different, and so will be the solutions. This calls for mechanisms for greater knowledge sharing, strengthened peer actions and accelerated inter-regional co-operation.

Agenda and Speakers

Chair: *Rudolph Cleveringa*, Executive Secretary, Global Water Partnership (GWP)

- Coping with water scarcity in agriculture - **Eduardo Mansur**, Director, Land and Water Division, Food and Agriculture Organization (FAO)

- The Global Water, Climate and Development Programme (WACDEP) – Lessons learnt in Africa - **Alex Simalabwi**, Global Coordinator, Water, Climate and Development Programme (WACDEP)
- Managing Water in a changing climate - **George Rothschild**, Emeritus Professor International Development, University of Greenwich; Member, International Water Management Institute (IWMI) Board of Trustees
- From water scarcity to water security: Morocco's example - **Mhamed Belghiti**, Assistant Director for Irrigation and Management of Agriculture Space Ministry of Agriculture and Marine Fisheries, Morocco
- Water-Food Security and Climate Change Nexus in the Mediterranean Region - **Guillaume Benoit**, Member of the General Council of Food, Agriculture and Rural Areas (CGAEER), France

Rapporteur: **Jerome Delli Priscoli**, Chair, Global Water Partnership (GWP) Technical Committee

3. Climate Risk Management

Room: KARAM 5

Co-organizers

- CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS) – International Research Institute for Climate and Society (IRI)
- Syngenta Foundation for Sustainable Agriculture and Agriculture and Climate Risk Enterprise (ACRE) Africa
- Crédit Agricole du Maroc

Session Background

Adapting to climate change requires developing resilience to the risks associated with climate variability. Extreme events erode livelihoods through loss of productive assets, while the uncertainty associated with climate variability is a disincentive to investing in agricultural innovation.

By supporting farmers to adopt climate-smart practices while protecting them from climatic extremes, climate services, insurance and other climate-related safety nets are part of an enabling environment for CSA. Of the 53 countries that submitted INDCs ahead of COP 21, 34% identified climate information and early warning services, and 21% included climate-linked financial mechanisms such as insurance. What role can these interventions play in

transforming agriculture in the face of a variable and changing climate? What challenges do countries face in implementing these measures in a manner that supports adaptation and builds resilience of their agricultural sectors, at scale? What scientific and technological innovations, expertise, partnerships and financial resources are available to address these challenges?

This session will focus on the role that climate information services, insurance and related safety nets can play in building resilience and enabling adoption of more climate-smart agricultural practice at scale. Panellists will address these questions, drawing on their experience with a few case studies.

Agenda and Speakers

Chair: Arame Tall, Global Framework for Climate Services (GFCS) Regional Coordinator for Africa

- Introductions by session Chair (5 min)
- Short presentations by panellists (10 min each)
 - **Olga Speckhardt**, Head of Global Insurance Solutions, Syngenta Foundation for Sustainable Agriculture
 - **Tariq Sijilmassi**, President, Credit Agricole du Maroc
 - **Jim Hansen**, Flagship Leader: Climate Risk Management, CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS)
 - **Ekhosuehi Iyehen**, **Director, Policy & Technical**, African Risk Capacity (ARC)
 - **Jon Hellin**, **Senior Scientist**, International Maize and Wheat Improvement Center (CIMMYT)
- Interviews with panellists around key questions (15 min)
- Questions from audience (15 min)
- Summary and closing by session Chair (5 min)

Rapporteur: Michael Hailu, Director, Technical Centre for Agricultural and Rural Cooperation (CTA)