



International Conference on:

Food Security and Climate Change in Dry Areas

1-4 February 2010, Amman, Jordan



PROGRAM

Sunday: 31 January

18.00-20.00 Registration

Monday: 1 February

08.00 - 09.00 Registration, continued

09.00 – 10.15 **Opening session**

Guest of Honor: H.R.H. Prince El Hassan Bin Talal

Welcome by DG ICARDA, Dr Mahmoud Solh, on behalf of ICARDA and partners

Welcome by DG NCARE, Jordan, Dr Faisal Awawdeh

Statement by Chair of GFAR, Dr Adel El-Beltagy

Statement by H.E. Minister of Agriculture of Jordan, Eng Saeed Masri

Inaugural Address by H.E. Prime Minister of Jordan, Mr Samir Rifai

Guest of Honor Address: H.R.H. Prince El Hassan Bin Talal,
President, Higher Council of Science and Technology

10.15 - 11.00 Coffee break and group photo

11.00 - 12.30 **Plenary session 1**

Co-chairs: Adel El-Beltagy, Gareth Wyn Jones

Impact of climate change on agriculture in the dry areas

Mahendra Shah

Ensuring food security in a changing climate: how can science and technology help?

Mahmoud Solh

12.30-13.30 Lunch break

13.30-15.00 **Plenary session 2**

Co-chairs: Abera Deresa, Raj Paroda

India's preparedness for food security in view of climate change

Mangala Rai



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Impact of climate change on drought in dry areas

Donald A. Wilhite

15.00-15.30 *Coffee break*

15.30-17.30 **Concurrent sessions - A**

Theme 1-A: Current status of climate change in the dry areas: simulations and scenarios available

Co-chairs: Mahendra Shah, Abdolali Mohamad Ghaffari

- 1. Mapping drought extent, severity and trends using the Standardized Precipitation Index**
Eddy De Pauw
- 2. Generating a high-resolution climate raster dataset for climate change impact assessment in Central Asia and northwest China**
François Delobel, Eddy De Pauw & Wolfgang Goebel
- 3. Analysis of Jordan's vegetation cover dynamics using MODIS/NDVI from 2000-2009**
Muna Saba, Ghada Al-Naber & Yasser Mohawesh
- 4. Application of the IHACRES rainfall-runoff model in semi-arid areas of Jordan**
Eyad Abushandi & Broder Merkel

Theme 2-A: Impacts of climate change on natural resource availability (especially water), agricultural production systems and environmental degradation in dry areas

Co-chairs: J.S. Samra, Abd Shukar Abd Rahman

- 1. Climate change and water: challenges and technological solutions in dry areas**
M. Karrou & T. Oweis
- 2. A land suitability study under current and climate change scenarios in KRB, Iran**
A. Gaffari, E. De Pauw & S.A. Mirghasemi
- 3. Coping with precipitation variability and soil moisture stress for agricultural productivity in the rainfed foothill region of the northwest Himalayas**
S. Arora and M.S. Hadda
- 4. Desertification and its impacts on agriculture, biodiversity and water resources in drylands of Nigeria**
Andrew I. Ayeni

Theme 3-A: Impacts of climate change on food security, livelihoods and poverty

Co-chairs: Solomon Assefa, Hammou Laamrani

- 1. Adaptation to climate change in dryland agriculture: issues and implications**
Mohamed A.M. Ahmed
- 2. Food security in the occupied Palestinian territory**



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Jad Isaac & Nader Hrimat

3. Status of current food security in Palestine and future scenario under changing climates

Rezq Basheer-Salimia

4. Climate variability and rural livelihood: mitigating the impact of agriculture salinity in a changing climate in Sri Lanka

Janaka Gamage

Tuesday: 2 February

09.00-10.30

Plenary session 3

Co-chairs: Mahmoud Duwayri, Fahd Al Atiya

Applying a broadened genetic base in crop breeding

Calvin O. Qualset

Genetic resources, climate change and the future of food production

Luigi Guarino

Faba bean and its importance in food security in the developing countries

José Ignacio Cubero Salmerón, Carmen Avila & Ana M^a Torres

10.30-11.00

Coffee break

11.00-12.30

Plenary session 4

Co-chairs: Khalfan Al-Naabi, Mangala Rai

Adaptation to climate change in Africa – the experience of Ethiopia

Abera Deresa

Changes in extreme climatic events and their management in India

J.S. Samra

The Green Morocco Plan in relation to food security and climate change

Mohamed Badraoui

12.30-13.30

Lunch break

13.30-15.00

Plenary session 5

Co-chairs: Ayman Abu-Hadid, Donald Wilhite

Addressing concerns of climate change and food security in the Asia-Pacific region

Raj Paroda

Rethinking agricultural development of drylands: challenges of climatic changes

Awni Taimeh

Achieving ‘more crop per drop’ in a changing environment

Theib Oweis



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15.00-15.30 *Coffee break*

15.30-17.30 **Concurrent sessions – B**

Theme 1-B: Current status of climate change in the dry areas: simulations and scenarios available

Co-chairs: Walid Tawil, Rana Kawar

1. Trend analysis for rainfall and temperatures in three locations in Jordan

Yahya Shakhathreh

2. Fluctuations of maximum temperature in Sudan during 1951-2004

I.M. Fawzia, H.H. Mohamed, A.A. El-Tantawi & A.M. Mostafa

3. Monitoring the vegetation dynamics as a response to climatic changes in the eastern Mediterranean region using long-term AVHRR/NDVI and LANDSAT images

Z. Makhamreha

Theme 2-B: Impacts of climate change on natural resource availability (especially water), agricultural production systems and environmental degradation in dry areas

Co-chairs: Saleh Bader, Jad Isaac

1. Predicting unmet irrigation water demands due to climate change in the lower Jordan River Basin

M. Haering, Emad Al-Karablieh, A. Salman, H. Gaese & S. Al Quran

2. Strategic planning for water resources management and agricultural development for drought mitigation in Lebanon

Fadi Karam

3. Stream-flow response to climate variability in several sub-watersheds of the Sebou river basin, Morocco

Rachid Bouabid, Ali Chafai Elalaoui & Hakima Bahri

4. Impact of climate change on agricultural biodiversity and natural resource management in semi-arid regions of Nyeri and Likipia districts, Kenya

P.N. Macharia et al.

5. Climatic change and wheat rust epidemics: implications to food security in dry areas

Kumarse Nazari, Ram C. Sharma & Abdelhamid Ramdan

Theme 4-B: Mitigation, adaptation and ecosystem resilience strategies including natural resource management and crop improvement

Co-chairs: Calvin O. Qualset, Luigi Guarino

1. Plant genetic resources management and discovering genes for designing crops resilient to changing climate



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S.K. Sharma, I.S. Bisht & A. Sarker

2. Potential and relevance of dryland agrobiodiversity conservation to adapt to climate change adverse effects

Ahmed Amri et al.

3. Reviving beneficial genetic diversity in dryland agriculture: a key issue to mitigate climate change negative impact

Reza Hagparast et al.

4. Conservation and sustainable use of plant genetic resources as a strategy in support of agriculture to achieve food security and promote adaptation to climate change in the Near East and North Africa

Jozef Turok & El Tahir Ibrahim Mohamed

5. Plant breeding and climate change

Salvatore Ceccarelli et al.

6. Genotype x environment interaction for durum wheat yield in different climate and water regime conditions in Iran

R. Mohammadi et al.

19.30-21.30 *Conference dinner*

Wednesday: 3 February

09.00-10.30 Plenary session 6

Co-chairs: Ahmed A. Goueli, Mohamed Badraoui

Impacts of climate change on food security and livelihoods

Mark W. Rosegrant

Policy and institutional approaches for coping with the impact of climate change on food security in the dry areas of CWANA

Peter Hazell

10.30-11.00 *Coffee break*

11.00-12.30 Concurrent sessions-C

Theme 2-C: Impacts of climate change on natural resource availability (especially water), agricultural production systems and environmental degradation in dry areas

Co-chairs: Sherali Nermatov, Jose I. Cubero

1. Impact of climate change on diseases of food legumes in the dry areas

Seid Ahmed, Muhammad Imtiaz, Shiv Kumar & Rajinder Malhotra



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2. Implications of climate change on insects: case of cereal and legume crops in North Africa, West and Central Asia

Mustapha Al Bouhssini

3. Climate change impact on weeds

Barakat Abu Irmaileh

4. Is climate change driving the indigenous livestock to extinction? A simulation study of Jordan's indigenous cattle

Raed M. Al-Atiyat

Theme 3-C: Impacts of climate change on food security, livelihoods and poverty

Co-chairs: Hukmatullo Ahmadov, Barbara Rischkowsky

1. Gender, food insecurity and climate change amongst pastoral communities: case studies in Mandera and Turkana in northern Kenya

Nancy Omolo

2. Oil exploration, climate change and food security in Niger delta, Nigeria

Olutola O. Faloore

3. Climate change induced migration among farmers in dry land zones of Nigeria

Idowu O. Oladele

4. Effect of grazing on range plant community characteristics of landscape depressions in arid pastoral ecosystems

Mounir Louhaichi, F. Ghassali & A.K. Salkini

5. Potential of triticale to mitigate impact of climate change on food security in crop-livestock systems in non-tropical dry areas

N. Habib et al.

Theme 4-C: Mitigation, adaptation and ecosystem resilience strategies including natural resource management and crop improvement

Co-chairs: Ahmed Nasser Al-Bakri, Taghrid Monjed Lahham

1. Thermo-tolerance studies for barley varieties from arid and temperate regions

M. N. Shahwani & Peter Dominy

2. Potential of improving and stabilizing wheat yields in the context of climate change

M. Karrou & O. Abdulla

3. Breeding food legumes for enhanced drought and heat tolerance to cope with climate change

M. Imtiaz, S. Kumar, F. Maalouf & R. Malhotra

4. Community-based breeding programs to exploit genetic potential of adapted local sheep breeds in Ethiopia

A. Haile et al.



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5. New feeding strategies for Awassi sheep in drought affected areas and their effect on product quality

M. Hilali, L. Iniguez, H. Mayer, W. Knaus, S. Schreiner, M. Zaklouta & M. Wurzinger

12.30-13.30 *Lunch break*

13.30-15.00 **Concurrent sessions-D**

Theme 4-D: Mitigation, adaptation and ecosystem resilience strategies including natural resource management and crop improvement

Co-chairs: Abdulmalik K.H. Al Thawr, F.M. Muruzabal

1. Role of soil organic matter and balanced fertilization in combating land degradation and sustaining crop productivity

Anand Swarup

2. Soil carbon sequestration: can it take the heat of global warming?

Rolf Sommer & Eddy De Pauw

3. Community-based reuse of gray water in home farming

Abeer Al-Balawenah, Esmat Al-Karadsheh & Manzoor Qadir

4. Mycorrhizal fungi role in reducing the impact of environmental climate change in arid regions

Ghazi N. Al-Karaki

5. Farmers' perceptions and adaptation mechanisms to climate change in Amhara region of Ethiopia

Yihenuw G. Selassie

6. Afforestation as a vehicle for climate change mitigation, sustainable development and empowerment in Nigeria's drylands

Andrew I. Ayeni

Theme 5-D: Policy options and institutional setups to ensure enabling environments to cope with climate change impacts

Co-chairs: Peter Hazell, Turkey Abaidad

1. The impacts of wheat improvement research on poverty reduction in different agroecologies in dry areas

Aden Aw-Hassan, A. Mazid, M. Sayedissa, J. Alwang, S. Kaitibie & G. Norton

2. Food security through community food bank and employment generation: a case study in Kurigram district, Bangladesh

M. Nazrul Islam

3. Drought mitigation in Salamieh District: technological options for sustainable development

B. Lalani & M. Ali Al-Zein



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4. Climate change demands refocusing the research agenda for food security in Central Asia and Caucasus

Stefanie Christmann

15.00-15.30 *Coffee break*

15.30-16.30 **Panel discussion**

Moderator: Mahmoud Solh

Panelists: Adel El-Beltagy, Mahmoud Duwayri, Ahmed A. Goueli, Peter Hazell, Mangla Rai, Gareth Wyn Jones

16.30-17.30 **Concluding session & closing**

Co-chairs: Mahmoud Solh, Mohan Saxena

- Recommendations
- Amman Declaration
- Closing statements

Thursday: 4 February

09.00-17.00 Scientific field visit