




INTERNATIONAL CONFERENCE
ON
DRYLAND AGRICULTURE
(A VIRTUAL CONFERENCE)

21-23 JULY 2020

ORGANISED BY

 <p>Great Zimbabwe University</p>	<p>GREAT ZIMBABWE UNIVERSITY (GZU) MASVINGO, ZIMBABWE</p>
 <p>NAM S&T CENTRE CENTRO DE CVT NOAL CENTRE S&T DU NAM</p>	<p>CENTRE FOR SCIENCE & TECHNOLOGY OF THE NON-ALIGNED AND OTHER DEVELOPING COUNTRIES (NAM S&T CENTRE), NEW DELHI</p>
	<p>MINISTRY OF HIGHER AND TERTIARY EDUCATION, INNOVATION, SCIENCE AND TECHNOLOGY DEVELOPMENT, ZIMBABWE</p>

INTRODUCTION

Climate change and agriculture are interrelated processes that take place at a global scale. Climate change related phenomena, such as changes in average temperatures, rainfall, and climate extremes (like heat waves), changes in atmospheric carbon dioxide and ground level ozone concentrations affects farming in several ways. Climate change is already affecting "Dryland Agriculture" with effects unevenly distributed across the globe. Higher temperatures eventually reduce the length of growing seasons, force large regions of marginal agriculture out of production, while encouraging weeds and pest proliferation. Also, heat waves cause lower yields of the crop and wilted growth in plants. In simple words, the overall impacts of climate change are expected to be negative as it threatens the global food security.

The impacts of climate change on agriculture in developing countries depends on the extent to which agricultural production in the semi-arid regions adapt to the influences of climate change. Therefore, in order to avoid the short and long term effects of climate change and to discuss the adaptation strategies that can minimize these effects; **the Centre for Science & Technology of the Non-Aligned and Other Developing Countries (NAM S&T Centre), New Delhi, India** - jointly with the **Great Zimbabwe University (GZU), Masvingo, Zimbabwe** and the **Ministry of Higher & Tertiary Education, Innovation, Science and Technology Development, Zimbabwe** announce the organisation of an International Conference on "***Climate Change Adaptations in Dryland Agriculture in Semi-Arid Areas***" during 21 - 23 July 2020. The event will be hosted by the *Great Zimbabwe University* and will be organized in Virtual Mode.

OBJECTIVES

The Conference aims at strengthening the global network of researchers, scientists and policy makers from the developing countries addressing climate change adaptations in dryland agriculture; sharing the approaches for achieving trans-disciplinary research integration for semi-arid dryland agriculture systems under changing climates; and identifying the elements of a collaborative research agenda that are needed to advance global food security, especially during an unavoidable crisis such as the Covid-19 Pandemic.

TOPICS TO BE COVERED

The following key topics would be discussed during the Virtual Conference:

- ✓ Global scenario of dryland agriculture
- ✓ Need for adaptation to changing climates
- ✓ Genetic improvement in plants to resist the harsh impact of climate change
- ✓ Conservation agriculture
- ✓ Improvements and innovations to address water scarcity
- ✓ Cropping systems with resilience to climate stress
- ✓ Minimizing the negative impacts of agriculture on climate (e.g. GHG emissions)
- ✓ Crop protection from pests, weeds and pathogens
- ✓ Improved land use and National Resource Management Policies
- ✓ Integrated farming and nutrient management

- ✓ Risk management - early warning systems and crop insurances

IMPORTANT DATES

CONFERENCE DATES	21 – 23 July 2020
Submission of Application Starts	16 May 2020
Last date for Submission of Application	15 June 2020
Confirmation of Selected Applicants	26 June 2020
Last Date for Submission of Full Paper	07 July 2020
Last Date for Submission of PPT and Video Clips for Presentation	14 July 2020

PROGRAMME

A tentative programme of the event is given below:

Date	Programme	
	09:00-12:00	13:00-16:00
	(Zimbabwe Time)	
21 July 2020	Inauguration	Technical Sessions– I
	Trial meet on the Virtual Platform, familiarizing participants with the virtual platform terms and functions	
	Introduction of Attendees	
22 July 2020	Technical Sessions – II	Technical Sessions – III
23 July 2020	Concluding Session – Feedback, Discussion and Adoption of Resolution with Recommendations	

A detailed Session-wise programme schedule with names of speakers and title of the papers will be made available before the event.

The Participants of the virtual conference will receive a copy of the Participation Certificate electronically.

ABOUT THE ORGANISERS

NAM S&T CENTRE

The *Centre for Science and Technology of the Non-Aligned and Other Developing Countries (NAM S&T Centre; www.namstct.org)* is an Inter-governmental Organisation with a membership of 47 countries spread over Asia, Africa, Middle East and Latin America. The Centre was set up in 1989 in New Delhi, India to undertake a variety of programmes, including organisation of workshops, symposiums and training courses and implementation of collaborative projects. It also offers short-term *Research Fellowships* to scientists from developing countries in association with the *Centres of Excellence* in various countries. The Centre also brings out technical books and other scientific publications in different subjects of interest to developing countries. The Centre's activities provide opportunity for scientist-to-scientist contact and interactions; familiarising participants on the latest developments and techniques in the subject areas; identification of the requirements of training and expert assistance; locating technologies for transfer between the members and other developing countries, and dissemination of S&T information etc. In addition, the Centre encourages Academic-R&D-Industry interactions in the developing countries through its *NAM S&T-Industry Network*.

GREAT ZIMBABWE UNIVERSITY

Great Zimbabwe University (www.gzu.ac.zw) is an institution of higher learning registered as such in terms of Masvingo State University Act (Chapter 22:24) and renamed Great Zimbabwe University in 2007 by the passing of *Masvingo State University Act Amendment (2007)*. The university is situated in the city of Masvingo, Zimbabwe. The University comprises eight schools including *the Gary Magadzire School of Agriculture and the School of Natural Sciences*. The Mission of the institution includes reclaiming and preserving African culture and heritage, Mainstreaming Arts, Culture And Heritage in teaching and research, Leading in the development of entrepreneurs and professionals in the creative industry, Providing stakeholders with an enabling environment for research and empower them with entrepreneurial skills, Producing versatile graduates equipped with skills and competencies relevant to the needs of society, Using ICT-based solutions in teaching, learning, research, administration and innovation, and Uplifting communities through our involvement in their development.

MINISTRY OF HIGHER AND TERTIARY EDUCATION, INNOVATION, SCIENCE AND TECHNOLOGY DEVELOPMENT, ZIMBABWE.

The Ministry of Higher & Tertiary Education, Innovation, Science and Technology Development, Zimbabwe is responsible for the formulation and implementation of policies related to skills training and development and the promotion of Science, Technology and Innovation. The Ministry comprises *six (6) technical departments* namely, Tertiary Education Programmes; Higher Education Programmes; Quality Assurance and Standards; Research, Development and Innovation; Projects and Technology Transfer; and the Zimbabwe National Commission for UNESCO. To implement its responsibilities, the Ministry oversees the promotion of science and technology, research and development, innovations; supervises and accredits

teacher education, technical and vocational education and training (TVET) and university education. It also facilitates cooperation in research and development, higher and tertiary education as well as in science and technology at local, regional and international levels.

PARTICIPANTS

Young researchers, scientists, government officials and policy makers who are engaged in climate change adaptation and mitigation strategies in dryland agriculture are expected to participate in this Virtual Conference. Persons with innovative ideas for developing more inclusive cropping system models are welcome to apply. The combination of participants from various developing countries will allow for exchange of knowledge, ideas and experiences as well as opportunities for global networking and collaboration.

RESOURCE PERSONS

Resource persons for the Virtual Conference will comprise eminent experts and professionals with expertise in the relevant field (agronomy, climatology, crop physiology, crop modeling, crop protection, breeding, and genetics) from Zimbabwe and various other countries.

KEYNOTE SPEAKERS

Prof. dr. Amon Murwira



Prof. dr. Amon Murwira is the Minister of Higher and Tertiary Education, Innovation, Science and Technology Development in Zimbabwe. Before his current position, Prof. dr. Murwira was Chairman in the Department of Geography and Environmental Science at the University of Zimbabwe (UZ). Prior to this, he was an ecologist in the then Department of Natural Resources at the Ministry of Environment and Tourism. Prof. dr. Murwira is a renowned expert in Geographic Information Systems (GIS), Remote Sensing (RS) and Global Positioning Systems (GPS). He has deep knowledge and experience in environmental monitoring and management including land, agriculture and forestry. He has wide experience in spatial information acquisition and management. Prof. dr. Murwira holds a PhD in Geoinformation Science (GIS, RS) for environmental systems analysis and monitoring from Wageningen University and International Institute for Geo-Information Science and Earth Observation (ITC) in the Netherlands.

Professor Sheunesu Mpeperek



Professor Mpeperek, the Professorial Chair, Department of Soil Science and Agricultural Engineering, is one of the leading African research scientists in legume biological nitrogen fixation, rhizobium inoculant technology and soil fertility management, recognized as an expert in soybean production, processing and marketing, recipient of several awards including the prestigious Impact Research and Science

in Africa (IMPRESSA) First Prize Award in recognition of his outstanding Soybean research and outreach, which has made significant contribution to food and income security in Zimbabwe. He has ably linked university research process to farmers, private sector, policy and other actors and used the research to train scientists for Zimbabwe, in the process publishing over 70 articles in refereed journals, books, extension manuals, newsletters, brochures and information sheets.

Dr. G. Ravindra Chary



Presently working as Director (Acting), CRIDA & Project Coordinator, All India Coordinated Research Project for Dryland Agriculture in Indian Council of Agriculture Research. He obtained B.Sc., (Agriculture) & M.Sc., (Agronomy) from APAU, Hyderabad and Ph.D. from UAS, Bengaluru. Initially he worked at Indian Institute of Pulses Research and National Bureau of Soil Survey & Land Use Planning. His significant contributions in rainfed agriculture research, development and policy include Climate resilient rainfed agriculture; Manual for Drought Management in India; Land use planning in watersheds; Carbon sequestration strategies in rainfed production systems; District agriculture contingency plans for 650 districts in India and real-time implementation, and assessment and up scaling of rainfed technologies/climate resilient practices. He is the member of many national and state level Task force/Expert/Academic committees. He published 108 research papers, 28 books, 24 book chapters and 38 bulletins. He is the recipient of Indian Society of Agronomy Gold Medal; ICAR-Vasant Rao Naik Award (twice), ICAR-Best AICRP Award; Ground Water Augmentation Award, MoWR, GoI; NUFFIC Fellow and Fellow of ISA and Fellow of ISPRD.

SUBMISSION OF APPLICATION

Experts, Scientists and Policy Makers desirous of participating in the Virtual Conference, except those from Zimbabwe, should submit their filled-in application form **electronically** directly to the NAM S&T Centre (E-Mail: namstcentre@gmail.com) as early as possible, but latest by **Monday, 15 June 2020**.

Applicants from Zimbabwe should however, submit their requests directly to the GZU, Masvingo (E-Mail: edahwa@gzu.ac.zw).

The following documents must be submitted as e-mail attachments:

- i. Filled in Application Form (Blank form **enclosed**)
- ii. An extended abstract (***in MS Word format, about 1 page***) of the paper that would be presented by the participant during the Conference and subsequently published by the NAM S&T Centre after the Conference.

- iii. A short CV (**maximum two pages; in MS-Word format**) [Format Enclosed]
- iv. Opinion (**a short para; in MS-Word format**) how you qualify to participate in the Conference.

The documents at (ii) and (iii) above must compulsorily be in MS-Word Format; PDF or image files will not be accepted. Hard copies of the Nomination Form and the above attachments are NOT REQUIRED to be submitted.

SELECTION OF APPLICANTS

Selection of applicants will be made based on their academic and professional background, and on the quality of the extended abstract of paper submitted along with the application. Only a limited number of participants will be selected from various countries in order to ensure organized deliberations and exchange of information and expertise among the participants.

Successful applicants will be electronically informed about their selection by 26 June 2020. The details about the virtual platform that will be used for the conference and *log-in details* for joining the conference will also be communicated to the selected applicants. Other details and terms and conditions for the participation of scientists from various countries will be given to the individual candidates on receipt of their applications.

FOLLOW UP PUBLICATION

As a follow-up to the International Conference, a book will be published by the NAM S&T Centre comprising of edited papers presented by the attendees at the Conference and also papers contributed by other experts. Therefore, the applicants must submit the full manuscript of their papers (**in MS Word**) as email attachment to the NAM S&T Centre by 7 July 2020 which will be edited by international experts in the field.

CONTACT DETAILS

NAM S&T CENTRE

Dr. Amitava Bandopadhyay

Director General

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