











**International Conference on** 

# Water Management & Climate Change

**Technical Sessions** 

Event Portal: www.walmievents2023.in

Water Resources Department, Karnataka.
Water and Land Management Institute (WALMI), Dharwad, Karnataka, India



# WATER AND LAND MANAGEMENT INSTITUTE (WALMI), DHARWAD



**International Conference on Water Management & Climate Change-2023** 

#### **Chief Patron**



Sri. Basavaraj S. Bommai Hon'ble Chief Minister, Government of Karnataka

#### **Patron**



Sri. Govind M. Karjol Hon'ble Water Resources Minister, Government of Karnataka

## Steering Committee Chairman



Sri. Rakesh Singh IAS Additional Chief Secretary, Water Resources Department, Government of Karnataka & President WALMI, Dharwad

Steering Committee Co-Chairman



Sri. Krishnamurthy B. Kulkarni KES Secretary, Water Resources Department, Government of Karnataka

## Organizing Secretary



Dr. Rajendra Poddar
Director,
Water and Land Management Institute
(WALMI), Dharwad



## WATER AND LAND MANAGEMENT INSTITUTE (WALMI), DHARWAD



## **International Conference on Water Management** & Climate Change (ICWMCC 2023)

## **DAY - 1 (24-01-2023) PLENARY** SESSION - I (A)

Venue: Nisarga/Nature (Main function Hall) | Time: 12.15 PM to 1.30 PM

Chair Dr. D. P. Biradar

Former Vice Chancellor, UAS, Dharwad

Co-Chair - 1 Hon. Mrs. Karlene Maywald

> South Australian Water Ambassador & Former Minister for Water Security

Co-Chair - 2 Hon. Dr. Mohammed Abdel Aty

Water Expert, Former Minister

Ministry of Water Resources and Irrigation,

Arab Republic of Egypt

Dr. Sharachchandra Lele **Keynote Address 1** 

(20 Mins)

Ashoka Trust for Research in Ecology and

Environment, Bengaluru

**Keynote Address 2** Dr. Pradeep Majumdar

(20 Mins)

Scientist, IISc, Bengaluru

**Keynote Address 3** Dr. Ashok Dalwai, IAS

(20 Mins)

CEO, National Rainfed Area Authority, New Delhi

Dr. Yashaswini Sharma Rapporteur – 1

Asst. Professor, UAS Kumata Campus

Rapporteur – 2 Dr. Harish Deshpande

Assistant Professor, WALMI, Aurangabad

Convener Dr. B. Venkatesh

Scientist (G), National Institute of Hydrology

(RC- NIH), Belagavi

**Facilitator** Ms. Nagaratna Hosamani

Consultant, WALMI, Dharwad



# b Co E EV d

## Water Resources Department, Karnataka

# WATER AND LAND MANAGEMENT INSTITUTE (WALMI), DHARWAD



# International Conference on Water Management & Climate Change (ICWMCC 2023)

Day – 1 (24-01-2023) Panel Discussion Session 1: Water Management (B) Title: Supply-side Challenges

Venue: Jal / Water | Time: 2.15 PM to 3.30 PM

Chair (10 Mins) : Dr. B. K. Tulasimala

Vice Chancellor, KSAW University, Vijayapura

Co-Chair - 1 (5 Mins) : Er. Mallikarjun B. Gunge

Managing Director, KNNL, Bengaluru

Co-Chair - 2 (5 Mins) : Dr Edwin Kimutai Kanda

Irrigation Engineering Specialist, Kenya

Lead Speaker I (15 Mins) : Dr. K. Yellareddy

Vice President, ICID, AP

Lead Speaker II(15 Mins) : Er. Phanish Sinha

President, IndiaNPIM, New Delhi

Panelist I (10 Mins) : Dr. Rajsingh Rathore

Director, WALMI, Rajasthan

Panelist II (10 Mins) : Mr. Yezid Bin Mohd Yusoff

Water Works Engineer (Retired), State of Kedah

(PWD), Government of Malaysia

Panelist III (10 Mins) : Shri S. N. Sidramappa

Commissioner for Transport & Road Safety, Bengaluru

Rapporteur - 1 : Dr. Nagaraj Patil

Professor, VTU, Belagavi

Rapporteur - 2 : Er. (Smt) Lalitha

AEE, Geomatics, WRDO, Bengaluru

Convener : Dr. Ravikumar Hosamani

Assistant Professor, UAS Dharwad

Facilitator : Ms. Chethana

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## Water Resources Department, Karnataka

# WATER AND LAND MANAGEMENT INSTITUTE (WALMI), DHARWAD



# International Conference on Water Management & Climate Change (ICWMCC 2023)

Day – 1 (24-01-2023) Panel Discussion Session 1: Climate Change (C) <u>Title: Nature and Extent of Climate Change</u>

Venue: Nela / Land | Time: 2.15 PM to 3.30 PM

Chair (10 Mins) : Dr. Russ Speer

Water and Climate Expert, USA

Co-Chair - 1 (5 Mins) : Dr. Venkappayya Desai

Director, IIT, Dharwad

Co-Chair - 2 (5 Mins) : Er. S. F. Patil

Chief Engineer, PWD (North), Dharwad

Lead Speaker I (15 Mins) : Dr. S. Janakarajan

President, SaciWATERs Hyderabad

Lead Speaker II (15 Mins) : Dr. Gwyn Rees

Science Area Head, Water Resources, UK

Panelist I – (10 Mins) : Dr. R. Vasudeva

Dean, College of Forestry, Sirsi

Panelist II – (10 Mins) : Dr. D. K. Prabhuraj

Director, KSRSAC, Bengaluru

Rapporteur – 1 : Shri Sourav Bhattacharya

Young Professional, NERIWALMI, Assam

Rapporteur – 2 : Dr. K. G. Sumesh

Assistant Professor, UAS Dharwad

Convener : Dr. Basavaraj Bagewadi

Assistant Professor, UAS Dharwad

Facilitator : Shri Deviprasad



## WATER AND LAND MANAGEMENT INSTITUTE (WALMI), DHARWAD



## **International Conference on Water Management** & Climate Change (ICWMCC 2023)

## **Day – I (24-01-2023) Panel Discussion Session 2: Water Management (D) Title: Demand -side Challenges**

Venue: Jal / Water | Time: 3.30 PM to 4.45 PM

Shri Anuj Kanwal, Commissioner, (CAD), Chair (10 Mins)

Ministry of Jal Shakti, New Delhi

Co-Chair – 1 (5 Mins) Er. B. S. Shivakumar

Managing Director, KBJNL, Bengaluru

Co-Chair – 2 (5 Mins) Dr. M. Selva Balan

Joint Director, CWPRS, Pune

Lead Speaker I (15 Mins) Mr. Webster Gumindoga

Departmental Post-graduate Coordinator,

University of Zimbabwe, Zimbabwe

Lead Speaker II (15 Mins): Dr. (Ms) Ulrike Gayh

Professor, SRH University, Heidelberg, Germany

Panelist I – 1 (10 Mins) Mr. Shay Nevo, Project Manager,

Global Projects Unit, NETAFIM Ltd., Israel

Panelist II – 2 (10 Mins) Dr. Shankar Shreshta

Executive Director, NDRI, Nepal

Panelist III –3 (10 Mins) Dr. P. Soman

Global Head (Agronomy), Jain Irrigation System Ltd.,

Jalgaon, Maharashtra

Rapporteur Dr. G. N. Kulkarni

Professor, UAS, Dharwad

Dr. Anilkumar G. K. Convener

Assistant Professor, UAS Dharwad

**Facilitator** Ms. Nagaratna Hosamani

Consultant, WALMI, Dharwad



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## Water Resources Department, Karnataka

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# International Conference on Water Management & Climate Change (ICWMCC 2023)

## Day – I (24-01-2023) Panel Discussion Session 2: Climate Change (E) Title: Impact on Water Resources and Agriculture

Venue: Nela / Land | Time: 3.30 PM to 4.45 PM

Chair (10 Mins) : Shri Shivayogi Kalasad, IAS

Secretary, Department of Agriculture, GoK, Bengaluru

Co-Chair –1 (5 Mins) : Prof. U. C. Chaube

Professor, IIT, New Delhi

Co-Chair –2 (5 Mins) : Dr. Sangamesh Angadi

Professor, New Mexico State University, USA

Lead Speaker I (15 Mins) : Mr. Daniel Hofnung

Climate Expert, France

Lead Speaker II (15 Mins): Dr. Gizaw Desta

Research Management Coordinator, ICRISAT, Ethiopia

Panelist I – (10 Mins) : Er. Prabhat Chauhan

Deputy Director, CWC, New Delhi

Panelist II – (10 Mins) : Dr. Sanjay Singh

Water Expert, Jal Biradari, Jhansi, UP

Panelist III – (10 Mins) : Dr. Rajashekhar Laddimath

Associate Professor, KLE Tech, Hubli

Rapporteur – 1 : Er. Raghavendra Jalagar

Assistant Executive Engineer, KNNL, Navalgund

Rapporteur – 2 : Er. Teju Kumar

Assistant Engineer, ACIWRM, Bengaluru

Convener : Dr. S. B. Patil

Assistant Professor, UAS Dharwad

Facilitator : Shri Fakkiresh Angadi

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# International Conference on Water Management & Climate Change (ICWMCC 2023)

Day – I (24-01-2023) Panel Discussion Session 3: Water Management (F) Title: Scarcity and Conflicts

Venue: Jal / Water | Time: 5.00 PM to 6.15 PM

Chair (10 Mins) : Dr. M. L. Kansal

Professor, IIT, Roorkee

Co-Chair – 1 (5 Mins) : Mrs. Rutendo Ngara

Water Expert, South Africa

Co-Chair – 2 (5 Mins) : Er. Lakshmana Rao Peshve, KES

Managing Director, VJNL, Bengaluru

Lead Speaker I (15 Mins) : Dr. Carl Daamen, Assistant Director,

Murray-Darling Basin Authority, Australia

Lead Speaker II (15 Mins): Dr. Amaresh Chandra

Director, IGFRI, Jhansi, UP

Panelist I – (10 Mins) : Er. Avinash Chand Tyagi

Water and Climate Expert, Gurgram

Panelist II – (10 Mins) : Dr. Nagaratna B. Biradar

Principal Scientist & Head, IGFRI, Dharwad

Panelist III – (10 Mins) : Dr. Anand Shivapur

Professor, VTU Belagavi

Rapporteur – 1 : Dr. (Ms.) Yashaswini Sharma

Assistant Professor, UAS Dharwad

Rapporteur – 2 : Dr. M. N. Thimmegowda

Professor, UAS Bengaluru

Convener : Er. B. Girish

Executive Engineer, PMGSY, Hassan

Facilitator : Ms. Nagarathana

Consultant, WALMI, Dharwad

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## Water Resources Department, Karnataka

# WATER AND LAND MANAGEMENT INSTITUTE (WALMI), DHARWAD



# International Conference on Water Management & Climate Change (ICWMCC 2023)

Day – I (24-01-2023) Panel Discussion Session 3: Climate Change (G) Title: Climate Change With Respect to Water Management

Venue: Nela / Land | Time: 5.00 PM to 6.15 PM

Chair (10 Mins) : Dr. Vishnukant Chatapalli

Vice Chancellor, KSRDPRU, Gadag

Co-Chair –1 (5 Mins) : Dr. Ujjwal Kumar Chauhan

Joint Commissioner, Income Tax Dept. Mumbai

Co-Chair –2 (5 Mins) : Er. R. Cheluvaraju

Chief Engineer (Rtd), WRD, Karnataka

Lead Speaker (15 Mins) : Shri Sharath G. Joshi

Principal, KLE-2, Hubli

Panelist I – (10 Mins) : Dr. Parveen Kumar

Director, ICAR-CCARI, Goa

Panelist II – (10 Mins) : Dr. Akshay Kumar Das

EIC cum Special Secretary, WRD, Odisha

Panelist III – (10 Mins) : Dr. Sai Kumar B. C., Assistant Vice President,

Sambodhi Research and Communication Pvt. Ltd, Noida, UP

Rapporteur – 1 : Dr. (Mrs) Vinutha Muktamath

Assistant Professor, UAS, Dharwad

Rapporteur – 2 : Shri. Raghavendra Chourad

Assistant Professor, UAS, Raichur

Convener : Dr. Nagaraj Patil

Professor, VTU, Belagavi

Facilitator : Shri Devaprasad



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#### Water Resources Department, Karnataka

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# International Conference on Water Management & Climate Change (ICWMCC 2023)

## **DAY-II (25-01-2023) PLENARY SESSION — II (H)**

Venue: Nisarga / Nature | Time: 9.30 AM to 11.00 AM

Chair : Dr. P. L. Patil

Vice Chancellor, UAS, Dharwad

Co-Chair –1 (5 Mins) : Dr. Sreenath Dixit

Principal Scientist and Cluster Leader, ICRISAT, Hyderabad

Co-Chair –2 (5 Mins) : Dr. Sanjay Meena

Deputy Director, INCID, New Delhi

Keynote Address -1 (20 Mins): Dr. Jagmohan Sharma

Director General, EMPRI, GoK, Bengaluru

Keynote Address -2 (20 Mins) : Dr. Vinay Nangia

Research Team Leader, ICARDA, Rabat, Morocco

**Keynote Address -3 (20 Mins): Dr. Aravind Galagali** 

Former Advisor, WRD, GoK, Bengaluru

Keynote Address -4 (20 Mins) : Dr. Chandrashekhar Biradar

Country Director, India & Chief of Party – TOFI, New Delhi

Rapporteur – 1 : Dr. B. O. Patil

Research Associate, UAS, Dharwad

Rapporteur – 2 : Er. Manohar Rotte

Under Secretary, WRD, Bengaluru

Convener : Dr. Avinash Garudkar

Professor, WALMI, Aurangabad

Facilitator : Mr. Abhishekh



# WATER AND LAND MANAGEMENT INSTITUTE (WALMI), DHARWAD



# International Conference on Water Management & Climate Change (ICWMCC 2023)

Day-II (25-01-2023) Panel Discussion
Session 4: Water Management (I)
Title: Mitigation through Sustainable Agriculture Practices

Venue: Jal / Water | Time: 11.00AM to 12.15PM

Chair (10 Mins) : Dr. Muni Mehta

Chairman, GLS, Vadodara, Gujarat

Co-Chair –1 (5 Mins) : Dr. (Ms.) Domitille Vallee

Agriculture Specialist, FAO, Cairo, Egypt

Co-Chair –2 (5 Mins) : Dr. B. D. Biradar

Director of Research, UAS, Dharwad

Lead Speaker I (15 Mins) : Dr. Atef Swelam

Agricultural Research Officer, UN-FAO, Rome, Italy

Lead Speaker II (15 Mins): Dr. Jagadeesh Rane

Director, National Institute of Abiotic Stress, Baramati, Maharashtra

Panelist I – (10 Mins) : Dr. Charles Ndlovu

Professor, AGU, Malawi

Panelist II – (10 Mins) : Dr. M. S. Shirahatti

Chief Scientist, UAS, Dharwad

Panelist III – (10 Mins) : Dr. H. B. Babalad

Dean (Agri), UAS, Dharwad

Rapporteur – 1 : Er. Tejukumar

AE, ACIWRM, Bengaluru

Rapporteur – 2 : Dr. Shashi Kumar

Assistant Professor, UHS, Bagalkot

Convener : Dr. R. H. Patil

Head, Agricultural Meteorology, UAS, Dharwad

Facilitator : Mr. Abhishekh

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## Water Resources Department, Karnataka

# WATER AND LAND MANAGEMENT INSTITUTE (WALMI), DHARWAD



# International Conference on Water Management & Climate Change (ICWMCC 2023)

# Day-II (25-01-2023) Panel Discussion Session 4: Climate Change (J) Title: Mitigation through Sustainable Agriculture Practices

Venue: Nela / Land | Time: 11.00 AM to 12.15 PM

Chair (10 Mins) : Dr. Ashutosh Tiwari

Climate Neutral Tech Leader, Sweden

Co-Chair –1 (5 Mins) : Er. Shankaregowda

Managing Director, CNNL, Benagluru

Co-Chair –2 (5 Mins) : Dr. (Mrs.) Suzana Nory

Education Philosopher, Brazil

Lead Speaker I (15 Mins) : Dr. Shrinivas Reddy G. S.

Director, KSNDMC, Bengaluru

Lead Speaker II (15 Mins): Dr. A. B. Patil Officer on Special Duty & Technical Advisor

to Hon'ble Agriculture Minister, GoK, Bengaluru

Panelist I – (10 Mins) : Dr. Shrinivas Badiger

Professor, ATREE, Bengaluru

Panelist II - (10 Mins) : Dr. M. R. Ranganath

Former Administrator, CADA, WRD, Karnataka

Panelist III - (10 Mins) : Shri Rudresheppa

Joint Director of Agriculture, Koppal

Rapporteur – 1 : Dr. Basavaraj Jamakhandi

Assistant Professor, UAS, Dharwad

Rapporteur – 2 : Smt. Lalita

Assistant Executive Engineer (Geometric), Bengaluru

Convener : Dr. K. S. Rajashekharappa

Professor, UAS, Bengaluru

Facilitator : Shri Fakkiresh Angadi

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#### Water Resources Department, Karnataka

# WATER AND LAND MANAGEMENT INSTITUTE (WALMI), DHARWAD



# International Conference on Water Management & Climate Change (ICWMCC 2023)

Day-II (25-01-2023) Panel Discussion
Session 5: Water Management (K) Title: Mitigation through Policy

Venue: Jal / Water | Time: 12.30PM to 1.45PM

Chair (10 Mins) : Dr. K. M. Indiresh

Vice Chancellor, UHS, Bagalkot

Co-Chair -1 (5 Mins) : Dr. G. S. Dasog

Dean (Rtd), UAS, Dharwad

Co-Chair –2 (5 Mins) : Dr.(Mrs.) Shobha Vijender

Water Expert, New Delhi

Lead Speaker I (15 Mins) : Dr. Upali Amarasinghe

Senior Researcher, IWMI, Colombo, Sri Lanka

Lead Speaker II (15 Mins) : Dr. Binay Kumar

AOL, International Ashram, Kanakapura, Bengaluru

Panelist I – (10 Mins) : Dr. V. R. Kiresur

Director of Education, UAS, Dharwad

Panelist II – (10 Mins) : Er. B. A. Chivate

Director, ICID, New Delhi

Rapporteur – 1 : Dr. Basavaraj Yenagi

Associate Professor, UAS, Dharwad

Rapporteur – 2 : Ms. Prachi Sharma

ICID, New Delhi

Convener : Dr. P. S. Kanannavar

Professor, UAS Dharwad

Facilitator : Ms.Chetana



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#### Water Resources Department, Karnataka

# WATER AND LAND MANAGEMENT INSTITUTE (WALMI), DHARWAD



# International Conference on Water Management & Climate Change (ICWMCC 2023)

Day-II (25-01-2023) Panel Discussion
Session 5: Climate Change (L) Title: Mitigation through Policy

Venue: Nela / Land | Time: 12.30 PM to 1.45 PM

Chair (10 Mins) : Prof. Man Singh

Project Director, Water Technology Centre, IARI, New Delhi

Co-Chair –1 (5 Mins) : Shri Sudesh Verma

Media Expert, New Delhi

Co-Chair –2 (5 Mins) : Shri Narendra Chug

River Rejuvenation Expert, Maharastra

Lead Speaker I (15 Mins) : Dr. (Mrs.) Indira Khurana

President, Indian Himalayan River Basin Council, New Delhi

Lead Speaker II (15 Mins): Dr. (Mrs) Jayati Chourey

Executive Director, SaciWATERs, Hyderabad

Panelist I – (10 Mins) : Dr. Ashok Khurana

Director General (Rtd.), CPWD, New Delhi

Panelist II – (10 Mins) : Dr. B. G. Shivakumar

Principal Scientist, IGFRI, Dharwad

Rapporteur -1 : Er. (Mrs.) Aruna

Assistant Executive Engineer, Bengaluru

Rapporteur -2 : Dr. S. B. Patil

Assistant Professor, UAS, Dharwad

Convener : Dr. G. B. Ramesh

Consultant, WALMI, Dharwad

Facilitator : Ms. Chetana



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## Water Resources Department, Karnataka

# WATER AND LAND MANAGEMENT INSTITUTE (WALMI), DHARWAD



# International Conference on Water Management & Climate Change (ICWMCC 2023)

Day-II (25-01-2023) Panel Discussion
Session Synthesis & Way Forward (M) Title: Synthesis & Way Forward

Venue: Nisarga / Nature | Time: 2.30 PM to 3.45 PM

Chair (10 Mins) : Dr. Rajendra Singh

Chairman, Tarun Bharath Sangh, Rajasthan

Co-Chair –1 (5 Mins) : Er. Krishnamurthy Kulkarni

Secretary, Water Resources Department, GoK, Bengaluru

Co-Chair –2 (5 Mins) : Dr. D. P. Biradar

Former Vice Chancellor, UAS, Dharwad

Lead Speaker I (15 Mins): Dr. Michal Kravcik

Water Expert, Slovakia

Lead Speaker II (15 Mins): Mr. Maulik Sisodia

Executive Director, Tarun Bharath Sangh, Rajasthan

Panelist I – (10 Mins) : Shri Deepak Parvatiyar

Water Journalist, New Delhi

Panelist II - (10 Mins) : Mr. Vinod Bhodankar

Water Worker, Pune, Maharashtra

Panelist III - (10 Mins) : Dr. (Mrs.) Snehal Donde

Professor, Mumbai

Rapporteur-1 : Dr. B. G. Shivakumar

Principal Scientist, IGFRI, Dharwad

Rapporteur-2 : Dr. Narendra Kulkarni

Principal Scientist, IGFRI, Dharwad

Convener : Er. Mahadevgouda Huttangoudar

Assistant Engineer, WALMI, Dharwad

Facilitator : Shri Devaprasad

#### SPECIAL THANKS FOR FINANCIAL SUPPORT











#### Director **Water and Land Management Institute (WALMI)**

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