



Day 2 Thursday, 05 October 2023

Time	Program			
08:00-17:00	Registration			
Parallel Sessions				
09:00-10:45	Session 9	Session 10	Session 11	Session 12
	Auditorium	Hall 3	Hall 2	Hall 1
10:45-11:15	Coffee / Tea Break			
11:15-12:45	<p>High Level Panel Discussion (Venue: Terrace @ IITM) Policy, Governance and Finance for Water Security</p> <ul style="list-style-type: none"> Dr Katja Lasch, DAAD (Chair) Prof Sudhir Chella Rajan, IITM (Member Secretary) Prof. Andre Lindner, TU Dresden, Member Prof. Dinesh Mehta, CEPT University, Member Prof. Mukand Singh Babel, AIT Bangkok, Member 			
12:45-14:00	Lunch			
14:00-14:45	Keynote 4 - Prof. Shane Allen Synder, Director NEWRI			
14:45-15:30	Keynote 5 - Prof. Meera Mehta, Professor Emeritus, CRDF, CEPT University			
15:30-15:45	Coffee / Tea Break			
Parallel Sessions				
15:45-17:30	Session 13	Session 14	Session 15	Session 16
	Auditorium	Hall 3	Hall 2	Hall 1
17:30	Break			



Day 3 Friday, 06 October 2023

Time	Program								
08:00-12:30	Registration								
09:00-09:45	Keynote 6 - Mr. V. Thiruppugazh, IAS (Rtd)								
09:45-10:30	Keynote 7 - Dr. Kalanithy Vairavamoorthy, IWA Executive Director								
10:30-11:00	Coffee / Tea Break								
11:00-12:30	<p>High Level Panel Discussion: (Venue: Terrace @ IITM) Sustainable Technologies and Treatment system for climate resilient communities</p> <ul style="list-style-type: none"> • Thiru J Kumaragurubaran, IAS (Chair) • Prof Ligy Philip, IITM (Member Secretary) • Dr. Purnima Jalihal, NIOT, Member • Dr. Ahana Lakshmi, NCSCM, Member • Prof. V. R. Muraleedharan, IITM, Member • Mr. Subburaj, NABARD, Member 								
12:30-14:00	Lunch								
14:00-14:45	Keynote 8 - Prof. T. Pradeep, Institute Professor, IIT Madras								
14:45-16:30	Parallel Sessions								
	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">Session 17</td> <td style="text-align: center;">Session 18</td> <td style="text-align: center;">Session 19</td> <td style="text-align: center;">Session 20</td> </tr> <tr> <td style="text-align: center;">Hall 3</td> <td style="text-align: center;">Auditorium</td> <td style="text-align: center;">Hall 2</td> <td style="text-align: center;">Hall 1</td> </tr> </table>	Session 17	Session 18	Session 19	Session 20	Hall 3	Auditorium	Hall 2	Hall 1
Session 17	Session 18	Session 19	Session 20						
Hall 3	Auditorium	Hall 2	Hall 1						
16:30-17:00	Coffee / Tea Break								
17:30 – 19:00	Cultural Program								
19:00-22:00	Gala Dinner								



Day 4 Field visit

Date : 07-10-2023
Time : 9.00 am to 5.00 pm
Bus pickup: ICSR Hall

Technical tour 1



Nemelli Desalination Plant



Mahabalipuram

Technical tour 2



Nesapakkam STP



St. Thomas Mount



**Tholkappia Poonga
[Adyar Eco-Park]**

Note:

- **Food and refreshments will be provided**



Global Centres
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German Academic Exchange Service



WSCA
Water Security & Climate
Adaptation Conference
4th – 7th October 2023
IIT Madras, Chennai, Tamil Nadu, India



Session 9

Theme: Best Practices

Sub Theme: Risk Evaluation, Mapping and Building Resilience

Venue: Auditorium

Chair: Dr. Purnima Jalihal, NIOT

Moderator: Summit & Iqbal

TIME	NAME	TITLE
09:00-09:30	Dr R Krishnan Director, Indian Institute of Tropical Meteorology (IITM)	Water cycle changes in a globally warming climate

TIME	ABS NO	NAME	TITLE
09:30-09:45	ABS095	Pyae Mon Naing	Integrated Flood and Drought Hazards Risk Assessment for Thailand's Industrial Zone: Case Study of Samut Prakan
09:45-10:00	ABS035	Andreas Deckelmann	Combined Water Sustainability and Water Risk Assessment Tool for Private Companies
10:00-10:15	ABS160	Nivedita Sairam	Effectiveness of private precautionary measures in reducing flood losses to residential buildings: A case study of Ho Chi Minh City, Vietnam
10:15-10:30	ABS133	Ravi Raj	Development of Severity Classification for Soil Erosion in India
10:30-10:45	ABS032	Manoj S	Comparison Of Rainfall-Groundwater Level and Groundwater Potential Mapping for Erode District



Session 10

Theme: Best Practices

Sub Theme: Adaptive Planning, Design, and Implementation of Water Infrastructure.

Venue: Hall 3

Chair: Prof. Soumendra Nath Kuiry

Moderator: Ritik & Bhesh

TIME	NAME	TITLE
09:00-09:30	Prof Mukand Singh Babel , Water Engineering and Management, AIT Bangkok	Climate Risk Informed Decision Analysis (CRIDA) for Resilience: Concept and Application

TIME	ABS NO	NAME	TITLE
09:30-09:45	ABS130	Alejandra Gabriela Orozco Nande	Sponge ability assessment of urban areas using geospatial techniques for improved climate change resilience
09:45-10:00	ABS045	Wanie Clarkson Mvo	Planning lapses in potable water procurement and distribution in urban areas in Cameroon
10:00-10:15	ABS129	Bakkiyalakshmi Palanisamy	Recharge Based Low Impact Development Techniques in Coastal Urban Catchments: A Case Study of Chennai City, India
10:15-10:30	ABS151	K Uma	Million wells for Bengaluru, India
10:30-10:45	ABS087	K Nagarajan	Improved Water security through Community Participation



Session 11

Theme: Governance & Policy

Sub Theme: Governance and Policy-Others.

Venue: Hall 2

Chair: Dr. Fabian Falter, RWTH

Moderator: Yogita & Kunalan

TIME	ABS NO	NAME	TITLE
09:00-09:15	ABS061	Rasmirekha Biswal	Socio-Economic Factors in City Wide Inclusive Sanitation: Promoting Equitable and Inclusive Decision-Making
09:15-09:30	ABS091	Pooja Prasad	Mapping farm-level dry-spell vulnerability to target interventions: lessons from Maharashtra Project on Climate Resilient Agriculture
09:30-09:45	ABS093	Saiba Gupta	Mainstreaming the circular economy approach to wastewater management in India: market potential and policy recommendations
09:45-10:00	ABS145	Suparana Katyaini	Water use patterns in India's agriculture production and supply chains: What should be the key priorities for transition towards water security?
10:00-10:15	ABS028	Lotsmart Fonjong	The rains have failed us: Exploring female rice farmers™ perceptions of climate change and prospects against food insecurity in Northwest Cameroon
10:15-10:30	ABS084	Menuka Maharjan	Understanding Water Security in Peri-Urban Region of Nepal
10:30-10:45	ABS067	Shyamal Acharya	Assessment of hydrologic alteration for the Ganges River in Bangladesh: a pre and post Farakka Barrage and treaty scenario
10:45-11:00	ABS187	Firas Aljanabi	Water Security between Global South and Global North, Partnerships for Sustainable Solutions



Session 12

Theme: Novel Technologies for Climate Change Adaptation

Sub Theme: Wastewater Treatment.

Venue: Hall 1

Chair: Dr. Mohanakrishnan Logan, IITM

Moderator: Subhem & Pooja

TIME	ABS NO	NAME	TITLE
09:00-09:15	ABS111	Sugali Varti Chinna Swami Naik	Development of poly (vinyl alcohol) /Sodium alginate Hydrogel beads for municipal wastewater treatment
09:15-09:30	ABS042	Akula Vishnu Vardhan	Comparison of glycerol and raw wastewater as carbon sources for denitrification of nitrate rich effluent stream
09:30-09:45	ABS079	Dilip Yewalekar	Outlook: Use of TWW (Treated Waste Water) for Agriculture via Micro Irrigation System: A Case Study
09:45-10:00	ABS043	Ankit Kumar	Simultaneous removal of fluoride and perchlorate from groundwater
10:00-10:15	ABS055	Gero Frank Scheck	A meta-analysis of life cycle assessment studies comparing the environmental impact of water-based and source separating sanitary systems
10:15-10:30	ABS134	Saroj Kumar Chapagain	Advancing Water Pollution Control Measures for Water Security
10:30-10:45	ABS070	Jigisha Jaiswal	Recycle and Reuse of treated wastewater and sludge from Faecal Sludge Treatment Plants (FSTPs) in Maharashtra, India: Existing and potential practices



Session 13

Theme: Best Practices

Sub Theme: Nature based solutions for climate change adaptation.

Venue: Auditorium

Chair: Dr. Menuka Maharjan, Tribhuvan University

Moderator: Summit & Vishnu

TIME	ABS NO	NAME	TITLE
15:45-16:00	ABS069	Belete Berhanu Kidanewold	Large Water Storage Systems Crux to Adapting Climate Change: A case of Grand Ethiopian Renaissance Dam (GERD) in Nile Basin
16:00-16:15	ABS113	Daneal Fekersillassie	Reforestation: An Essential Approach for Climate Change Adaptation in Ethiopia
16:15-16:30	ABS140	Robert Voelker	Multivariate Analysis of Groundwater Quality in the AK Basin, southern India: Trends, Contaminants, and Check Dam Impacts
16:30-16:45	ABS148	Parimala Renganayaki S	River Bank Filtration for Water Security under Changing Climate in Semi-Urban Region on Tamil Nadu, India
16:45-17:00	ABS120	Dhananjay Goel	DetoXyFi: Novel Nature Based Technology providing Access to safe drinking water as a Human Right
17:00-17:15	ABS106	Pronmongkol Chidchob	Irrigation Water Management Under Climate Change
17:15-17:30	ABS124	Abdul Rahman Turay	The Impacts of Climate Change on Groundwater Quality: An Assessment of Physico-Chemical Water Quality Parameters in Vadodara City, Gujarat, India



Session 14

Theme: Novel Technologies for Climate Change Adaptation

Sub Theme: Wastewater & Water Treatment.

Venue: Hall 3

Chair: Dr. Mathava Kumar, IIT Madras

Moderator: Bhesh & Ritik

TIME	ABS NO	NAME	TITLE
15:45-16:00	ABS029	Mohamed Said Desouke Abubhashim	Natural Based Solution for Wastewater Treatments and Climate Changes using Constructed Wetland at Arid Regions
16:00-16:15	ABS165	Yogita	Simultaneous removal of antibiotics and nutrients using the microalgae based sustainable system
16:15-16:30	ABS044	Mohammed Iqbal T	Performance evaluation of microalgae bacteria consortia for pollutant removal from municipal wastewater
16:30-16:45	ABS142	Prince Prakash Jeba Kumar J	Subsurface filtration system for sustainable, eco-friendly, clean water production
16:45-17:00	ABS115	Jeevan Raj	Mitigating flooding impacts on community toilet retrofits: Ensuring access to safe and sustainable sanitation
17:00-17:15	ABS137	Sona Kumar	Current Status and Future Challenges of Hydrological modelling: A bibliometric analysis
17:15-17:30	ABS097	Yohananthan Sukumar	Climate-resilient containment solutions for on-site sanitation systems to enhance public health and environmental sustainability



Session 15

Theme: Best Practices

Sub Theme:

Venue: Hall 2

Chair: Dr. Fazlullah Akhtar, University of Bonn

Moderator: Pooja & Kunalan

TIME	ABS NO	NAME	TITLE
15:45-16:00	ABS168	Kristina Gumgowski	The impact of tank cascade irrigation systems on groundwater recharge: a case study in Madurai district, Tamil Nadu
16:00-16:15	ABS146	Ramya Khare	Navigating Water Woes in Delhi: A Study of Infrastructure and Entitlements in Kirari's Informal Settlement Typologies
16:15-16:30	ABS152	Samson Haile	Change in Land use land cover Patterns in Brahmaputra River watershed, Assam
16:30-16:45	ABS131	Nitesh Amberia	Maximizing Water Availability for Crops by Managing Crop Sowing dates with emphasis on Precipitation-Evapotranspiration Deficit: Present Scenario and Future Trends
16:45-17:00	ABS125	Sanjeeb Baral	Water storage and allocation as an adaption option to hydrological extremes: A case study of West- Rapti Watershed, Nepal
17:00-17:15	ABS155	Sharad Aryal	Attributing Impacts of Climate Change and Land Use Change on the Hydrological Components of Athabasca River Basin, Canada
17:15-17:30	ABS154	Dibesh Khadka	How significant are climate change and land use change impacts on future droughts? A Case Study in Northeast Thailand



Session 16

Theme: Others

Sub Theme: Coastal Flooding and Inundation

Venue: Hall 1

Chair: Dr. Anil Aryal, International Water Management Institute

Moderator: Subhem & Ankit

TIME	ABS NO	NAME	TITLE
15:45-16:00	ABS139	Thokala Divya	Hydrodynamic Simulation Near a Flood Inundated Spur Dike
16:00-16:15	ABS117	Nabakishor Garai	Assessing Extreme Hydro-Meteorological Events in the Indian Region Using Copula Analysis of SMAP and GRACE Data
16:15-16:30	ABS064	Vikram Pratap Singh	Analysis of Storm Surge and Coastal Inundation in the Bay of Bengal during the 2023 MOCHA Cyclone
16:30-16:45	ABS100	Josin Baby Mathew	Resilient planning for coastal urban region considering implications of sea level rise - case of Kochi city
16:45-17:00	ABS144	Sivakumar Ramalingam	Improving Shoreline change Analysis using AI based pixel enhancement
17:00-17:15	ABS138	Ali Hameed Albojassim	The use of fiberglass Textile Reinforced Mortar (TRM) to provide confinement in concrete columns in water installations
17:15-17:30	ABS143	Pulipati Yaswanth	Developing High resolution Non-stationary Intensity-Duration-Frequency Curves by Merging Gauge and Satellite Rainfall



Session 17

Theme: Best Practices

Sub Theme: Sustainable and Equitable Deficit Management.

Venue: Hall 3

Chair: TBC

Moderator: Vishnu & Iqbal

TIME	ABS NO	NAME	TITLE
14:45-15:00	ABS039	Aster Tesfaye Hordofa	Assessing the vulnerability and adaptation of winter wheat to climate change in Ziway Lake Basin
15:00-15:15	ABS083	Biswajit Nayak	Design of Rooftop Rainwater Harvesting Structure
15:15-15:30	ABS038	Jeevan Roy	Planning for Integrated Urban Water Management for a town in South India - The case of Chintamani
15:30-15:45	ABS103	Rinisha Kartheeshwari Mariappan	Improving water security by using abandoned quarries as water retention structures
15:45-16:00	ABS182	Reshma Shinde	Impacts of climate change on water availability and corresponding thermal electricity generation in water-stressed regions of India
16:00-16:15	ABS189	Bhadra Devdas	Flood Modelling of Bagjola Urban Drainage Canal And Its Catchment in Kolkata Using 1D and 2D Hec-Ras Model
16:15-16:30	ABS190	Raman Balireddy	Ring Main Water System for Chennai City to Improve Reliability and Resilience of the Existing Water Supply System



Session 18

Theme: Novel Technologies for Climate Change Adaptation

Sub Theme: Renewable energy for mitigating climate change.

Venue: Auditorium

Chair: Prof. Indumathi M. Nambi, IITM

Moderator: Ritik & Bhesh

TIME	NAME	TITLE
14:45-15:15	Prof Makarand Madhao Ghangrekar, Professor, Dept. of Civil Engg., IIT Kharagpur	TBC

TIME	ABS NO	NAME	TITLE
15:15-15:30	ABS105	Ali Mohammad Rahmani	Co-digestion of thermal-chemically pretreated wheat straw: Biogas yield and inhibitors formation
15:30-15:45	ABS051	Karan Ashok Patil	Reducing carbon emissions through use of renewable energy in WASH services in cities of Maharashtra, India
15:45-16:00	ABS101	Manikandan	Assessing the Impacts of Future Land Use Land Cover and Climate Change on the Water Balance Components and Sediment Yield of The Bhavani Watershed in India
16:00-16:15	ABS186	Arunya KG	Threatening Agriculture in View of Climate Change: A Risk Assessment Plan
16:15-16:30	ABS086	Sowmiya Narayanan K J	Smart Connected Waters with GeoAI for Climate Change Adaptation



Session 19

Theme: Other

Sub Theme: Other

Venue: Hall 2

Chair: Dr. Chandan Sarangi, IITM

Moderator: Yogita & Kunalan

TIME	ABS NO	NAME	TITLE
14:45-15:00	ABS171	E Manikandan	Initial Study on Applicability of Thermal Imaging for Microplastics Identification in Aquatic Medium
15:00-15:15	ABS141	Boddu Vinisha	Exploring waste as anolyte for electrochemical reduction of hexavalent chromium in a dual-chamber electrolytic cell
15:15-15:30	ABS123	Anuj Shukla	Detecting Floodplain Inundation in Tel River Basin Using Artificial Neural Network
15:30-15:45	ABS170	Shankar Ganesh Murugan	An Overview of Studies on Sustainable Shore Protection Using Chrysopogon Zizanioids (Vetiver)
15:45-16:00	ABS172	Elamvazhuthi	The Importance of Water Security Since Vedic period evidenced from Vedic Literatures
16:00-16:15	ABS107	Jay Sharma	Defluoridation of Groundwater by Zirconium Impregnated Hybrid Ion Exchanger Utilizing Low-cost Indian Made Ion Exchange Resin
16:15-16:30	ABS062	Santhosh Garakahalli S	Simplified Sewer Systems- Yet a Relevant Solution for Climate Change Adaptation



Session 20

Theme: Other

Sub theme: Other

Venue: Hall 1

Chair: Dr. Venkatraman Srinivasan, IITM

Moderator: Subhem & Sumit

TIME	ABS NO	NAME	TITLE
14:45-15:00	ABS059	Fazlullah Akhtar	Analysis of the streamflow under changing climate scenarios : A case of Kabul River Basin of Afghanistan
15:00-15:15	ABS150	Marcelo Leon	Use of water and analysis of micro-basins, the case of Tenguel - Ecuador
15:15-15:30	ABS076	Athira K	A Max-Stable Process Based Model for Extreme Rainfall in India
15:30-15:45	ABS157	Triambak Baghel	Customizing an Existing Framework to Assess the Impacts of Climate and Land Use Change on Future River Health
15:45-16:00	ABS153	Angel Jessie Leena A	Evaluation of microplastic removal efficiency of a conventional domestic wastewater treatment plant in Southern India
16:00-16:15	ABS126	Rajagopal Sadhasivam	Groundwater flux decline, not sea level rise, is the underlying mechanism impacting saltwater intrusion in coastal aquifers
16:15-16:30	ABS188	Firas Aljanabi	Temporal Rainfall Disaggregation and High-Resolution Data Generation: A Study in the Temperate Oceanic Climate Region