waterfuture
Sustainable Water Future Programme

DIVECHA CENTRE FOR CLIMATE CHANGE

Waterfuture Conference

Towards a Sustainable Water Future

24 - 27 September 2019

Bengaluru, India

Organized by:

Divecha Centre of Climate Change
&
Sustainable Water Future Programme

Hosted by

Indian Institue of Science

futurearth
Research. Innovation. Sustainability.

INDIAN INSTITUTE OF SCIENCE
भारतीय विज्ञान संस्थान

Foreword

Welcome to the conference “Towards a Sustainable Water Future”.

We have just a little over a decade left to meet Sustainable Development Goals (SDG), and the challenge before us is how to accelerate the implementation of the goals. Water is at the core of sustainable development and is strongly connected to the achievement of most SDGs. Studies suggest that if we can meet the SDG on water - “Ensure availability and sustainable management of water and sanitation for all” (SDG 6), then it is possible to accelerate the implementation of other goals particularly on health, food security, poverty, climate action and economic growth.

So far, the advancement of scientific knowledge in the realm of water has played an outstanding role in the understanding of the water system from global to local scales. However, these advancements are not enough to bring about a transformative change. We need a giant leap forward towards attaining SDGs. The recurrent urban water crisis or the frequent manifestations of extreme events, like floods and droughts, are wake up calls for the water science community which underlines the need for a new water science paradigm which may open up frontiers for innovative solutions.

This conference cannot be better timed as it brings together available information, identifies knowledge and action gaps, shares lessons on viable instruments and approaches, facilitates networks for moving towards an accelerated action on the SDGs in the next decade. This conference aims to create opportunities for co-production of knowledge, incubate ideas involving scientists and different stakeholders and partners in the SDG implementation process, and develop knowledge-to-concrete actions and innovative solutions while implementing and monitoring the achievement of the SDGs.

Before we close, we want to thank all our partners, collaborators and participants without their continuous support it would have been impossible to organize this conference.

We thank you all for attending and bringing your expertise to the conference, and wish you to have a truly memorable and rewarding stay in the Bengaluru.

With best regards,

András Szöllösi-Nagy, Chair, Sustainable Water Future Programme

SK Satheesh, Chairman, Divecha Centre for Climate Change, Indian Institute of Science

Anik Bhaduri, Director, Sustainable Water Future Programme

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About Us

Future Earth is a major international convenor that fosters a culture of an engaged research based on the co-design and co-production of knowledge and tools. The mission of Future Earth is to accelerate transformations to global sustainability through research and innovation. It works to incorporate the latest research findings into government, business and community decisions and policies. Future Earth experiments in generating new ideas, innovations, and collaborations and also foster networks of early career researchers, practitioners, and other innovators, encouraging new ways of thinking about how sustainability research and practice gets done.

The Sustainable Water Future Programme (Water Future) is a global platform facilitating international scientific collaboration to drive solutions to the world's water problems. Consistent with the broad objectives of the Sustainable Development Goal for Water, research conducted through Water Future seeks to ensure a balance between the needs of humankind and nature, and to offer real solutions, underpinned by interdisciplinary science, to deliver a sustainable 'water world'.

Indian Institute of Science (IISc) established in 1909, is India's leading institution of advanced education and research in the sciences and in engineering. From its beginnings, IISc has laid equal emphasis on fundamental investigations and the solution of practical problems in such a setting. IISc has a vibrant and diverse campus spread over 440 acres of greenery in the city of Bengaluru. Our faculty, numbering around 500, carries out research across 42 departments in most areas of the basic and applied sciences, publishing vigorously in premier journals.

The Divecha Centre for Climate Change was established at Indian Institute of Science in January 2009 with a generous financial contribution from Arjun and Diana Divecha and the Grantham Foundation for the Protection of the Environment.The primary goal of this centre is to understand climate variability and climate change and its impact on the environment.The centre has identified technologies to mitigate climate change in collaboration with entrepreneurs and different engineering department in the Indian Institute of Science.The centre is also working with Grantham Institute for Climate Change at Imperial College, London, on the impact of climate change on water.

Steering Commitee

András Szöllösi-Nagy
Co-Chair, Water Future Conference
Chair, Sustainable Water Future Program.

S. K. Satheesh
Co-Chair, Water Future Conference
Director, Future Earth South Asia & Chairman, Divecha Centre for Climate Change, Indian Institute of Science

Amy Luers
Executive Director, Future Earth

Josh Tewksbury
Director, Global Hub Colorado, Future Earth.

Stefan Uhlenbrook
Director, UNESCO-World Water Assessment Programme

Madhavan Nair Rajeevan
Secretary, Ministry of Earth Sciences, Government of India

Dietrich Borchardt
Chair Scientific Steering Committee, Water Future.

Anik Bhaduri
Director, Sustainable Water Future Programme.

Sharad Jain
Director, National Institute of Hydrology

J. Srinivasan
Distinguished Scientist, Divecha Centre for Climate Change

Hartwig Kremer
Senior Programme Officer, UNEP, Copenhagen

Johannes Cullmann
Director, Climate and Water Department, World Meteorological Organization

Organizing Committee

S. K. Satheesh
Director, Future Earth South Asia & Chairman, Divecha Centre for Climate Change, Indian Institute of Science

Anik Bhaduri
Director, Sustainable Water Future Programme, Future Earth

Aditya K. Kaushik
Project Scientist, Divecha Centre for Climate Change, Indian Institute of Science & Co-ordinator, Water Solutions Lab

Chandan Banerjee
Project Scientist, Divecha Centre for Climate Change, Indian Institute of Science & Co-ordinator, Water Solutions Lab

Smriti Basnett
Senior Researcher and Program Coordinator, Future Earth-South Asia Regional Office, Divecha Centre for Climate Change, Indian Institute of Science

Concept

The conference will focus on the current state of global water resource challenges, future pathways and scenarios, and different technological, institutional solutions to accelerate the implementation of water-related Sustainable Development Goals and the 2030 Agenda targets without leaving no one behind.

- Address the unfolding global water crisis, as evidenced by issues such as increased water scarcity, widespread water pollution, and rapid declines in freshwater biodiversity.
- Explore different innovative frameworks, approaches, methods to determine the potential of natural and human-made infrastructure investment, and their complementarities to achieve sustainable solutions enhancing water security and resilience of the socio-ecological system
- Explore how water targets at global and regional scale can be defined considering the inherent links between biophysical and socio ecological process in relation to W-E-F Security and their transgression prevented?
- Focus on the aesthetic, cultural and historical knowledge of water and its role in nature and society
- Address other connected issues related to water, for instance, poverty, nutrition, health, education, gender, equity and productivity
- Discuss resiliency and risks related to water resource arising from, for example, water quality, extreme precipitation and urban flooding
- Explore how can we leverage systematic knowledge and know-how, together with innovative, collective practices around water?
- Explore the notions of risk to be embedded within the SDG process and what are the requirements for integrated and adaptive risk governance to deal with interconnectedness during SDG implementation?
- Discuss design, implementation and evaluation of water governance settings at different levels
- Discuss existing global integrated modelling, role of artificial intelligence, big data as well as earth observations in monitoring and assessment of SDGs
- Address different ways to integrate gender and equity issues into policymaking and decision-making that will enable women to have an effective ”voice” and engage in meaningful participation

- Explore the notions of risk to be embedded within the SDG process and what are the requirements for integrated and adaptive risk governance to deal with interconnectedness during SDG implementation?
- Discuss design, implementation and evaluation of water governance settings at different levels
- Explore how long 'business as usual' scenarios can be continued for the global water system before we reach a tipping point where even drastic actions cannot reverse any of the negative trends ?

Key Facts

The conference will offer high-quality daily keynotes speeches and panel discussion from leaders in water science, industry leaders, and high level policy makers. The conference will feature high-level plenary panel discussion sessions, theme-based presentations of technical papers, case studies, and exhibits from businesses and water-related institutions and partners. There will be opportunities for side meetings, break-outs and networking and social events to summarize proceedings and to celebrate the conference.

- 700 Participants
- 6 Plenaries
- 45 Parallel sessions
- 20 Special sessions
- 5 High Level Round table policy dialogues
- 10 Themes with 6 cross cutting themes

Partners

Ministry of Earth Sciences
Government of India

विज्ञान एवं प्रौद्योगिकी विभाग
DEPARTMENT OF
SCIENCE & TECHNOLOGY

United Nations Educational, Scientific and Cultural Organization
World Water Assessment Programme

United Nations Educational, Scientific and Cultural Organization
International Hydrological Programme

Griffith UNIVERSITY
Australian Rivers Institute

INTEGRATED MOUNTAIN INITIATIVE

GWF
GLOBAL WATER FUTURES
SOLUTIONS TO WATER THREATS IN AN ERA OF GLOBAL CHANGE

IIASA

teri school of advanced studies

the water story.

Griffith UNIVERSITY
Queensland, Australia
School of Humanities, Languages and Social Science

UN environment

IHCAP Indian Himalayas Climate Adaptation Programme

Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Swiss Agency for Development and Cooperation SDC

Department of Science & Technology
Ministry of Science & Technology
Government of India
NMSHE NATIONAL MISSION FOR SUSTAINING THE HIMALAYAN ECOSYSTEM

IWA the international water association

6th IWW 2019

Agenda

Tuesday, 24 September

Time	*Event*	*Venue*	*Page*
07:30 - 08:30	Registration	JNT	
09:00 - 11:30	Inaugural Ceremony	JNT	
11:30 - 12:30	Transport to Hotel Sheraton		
12:30 - 13:15	Lunch	HS	
13:15 - 13:30	Launch of Future Earth Society by Josh Tewksbury and Anik Bhaduri	GBR	
13:30 - 15:30	P1 - Advanced Water System Assessment to Address Water Security Challenges of the 21st Century (Plenary)	GBR	15
15:30 - 16:00	Coffee Break		
16:00 - 19:30	SS1-A - Aerosols, Clouds, Precipitation and Hydrological Cycle (Special Session, SPL & DCCC)	JU	20
16:00 - 17:30	S1 - Assessing Sustainability in Water Space	GBR-2	21
16:00 - 19:00	SS2 - Future of Urban Waterbody Rejuvenation (Special Session, CDD)	GBR-1	22
16:00 - 17:30	S2 - Groundwater Assessment and Analytics	NE	22
16:00 - 17:30	S3 - Socio-cultural and Ecological Dimensions of Water Resources Management	PL	23
16:00 - 17:30	S4 - Water-Energy-Food Nexus Assessment and Governance	WTC-1	24
16:00 - 19:30	SS3 - Climate Impacts on Global Mountain Water Security and Water Solutions for the 21 st century in the Indian Himalayan Region (Special Session, IMI & GWF)	CE	24
19:00 - 21:00	Dinner	HS	

JNT - JN Tata Auditorium, IISc **HS** - Hotel Sheraton **GBR** - Grand Ballroom
JU - Jupiter **GBR-1** - Grand Ballroom 1 **PL** - Pluto
NE - Neptune **WTC-1** - World Trade Center Seminar Hall 1
WTC-2 - World Trade Center Seminar Hall 2 **CE** - Ceres

Wednesday, 25 September

Time	*Event*	*Venue*	*Page*
08:30 - 09:00	Registration	HS	
09:00 - 11:00	P2 - Water and climate change: Challenges (Plenary)	GBR	16
09:00 - 18:00	SS4 - Cryosphere and Water security (Special Session, DCCC)	CE	27
11:00 - 11:30	Coffee Break		
11:30 - 18:30	SS1-B - Aerosols, Clouds, Precipitation and Hydrological Cycle (Special Session, SPL & DCCC)	JU	31
11:30 - 13:00	S5 - Geogenic Pollutants in Groundwater	JNB	34
11:30 - 13:00	S6 - Groundwater Quality and Assessment I	JNA	35
11:30 - 13:00	SS5 - Innovations to Achieve Sustainable Groundwater Use in India (Special Session, GRIPP & IWMI)	GBR-1	36
11:30 - 13:00	S7 - Lake Quality Assessment and Case Studies	GBR-2	37
11:30 - 13:00	S8 - Leaving No One Behind: Digital Water, Big Data, Technology and Water Security	JNC	38
11:30 - 13:00	S9 - Water Assessment in River Basins: Perspectives	NE	38
11:30 - 13:00	S10 - Water and Climate Change Assessment I	WTC-1	39
11:30 - 13:00	S11 - Water and Climate Change Assessment II	WTC-2	40
13:00 - 14:00	Lunch		

JNA - JN Tata Seminar Hall A, IISc **JNB** - JN Tata Seminar Hall B, IISc
JNC - JN Tata Seminar Hall C, IISc **HS** - Hotel Sheraton **GBR** - Grand Ballroom
JU - Jupiter **GBR-1** - Grand Ballroom 1 **GBR-2** - Grand Ballroom 2
NE - Neptune **WTC-1** - World Trade Center Seminar Hall 1
WTC-2 - World Trade Center Seminar Hall 2 **CE** - Ceres

Wednesday, 25 September

Time	*Event*	*Venue*	*Page*
14:00 - 16:00	P3 - Role of Big Data, AI, Blockchain Technology in Water Diagnostics and Governance (Plenary)	GRB	17
16:00 - 16:30	Coffee Break		
16:30 - 18:00	S12 - Data Issues and Needs Related to Monitoring Sustainability in Water Space	NE	40
16:30 - 18:00	S13 - Freshwater Conservation and Development Planning: Novel Integrative Approaches and Big Data	JNB	41
16:30 - 18:00	S14 - Groundwater and Climate Change Adaptation	JNA	42
16:30 - 18:00	SS6 - Innovatively Addressing Water, Energy, and Food Security Challenges (Special Session, AUB)	WTC-1	43
16:30 - 18:00	S15 - Resilience in Urban Water Systems: Methods	JNC	43
16:30 - 18:00	SS7 - Sustaining Water Resources (Special Session, ICWaR & CEH)	GBR-1	44
16:30 - 18:00	S16 - Urban Flood Risk and Adaptation	GBR-2	45
16:30 - 18:00	S17 - Water and Climate Change Assessment: Himalayas	WTC-2	45
18:00 - 19:30	PS1 - Poster Session & Networking	WTC	46

JNA - JN Tata Seminar Hall A, IISc **JNB** - JN Tata Seminar Hall B, IISc
JNC - JN Tata Seminar Hall C, IISc **GBR** - Grand Ballroom
GBR-1 - Grand Ballroom 1 **GBR-2** - Grand Ballroom 2 **NE** - Neptune
WTC-1 - World Trade Center Seminar Hall 1
WTC-2 - World Trade Center Seminar Hall 2
WTC - World Trade Center Seminar Hall

Thursday, 26 September

Time	*Event*	*Venue*	*Page*
08:30 - 09:00	Registration	HS	
09:00 - 11:00	P4 - Global Water Governance: Challenges (Plenary)	GBR	18
11:00 - 11:30	Coffee Break		
11:30 - 13:00	SS8 - Ambient Water Quality for Development (Special Session, UNEP & CER-UFZ)	JU	48
11:30 - 13:00	SS9 - An Exploration of Capacity Building: Needs and Priorities for Advancing Water Security in the Global South (Special Session, START & University of Ghana)	CE	48
11:30 - 13:00	S18 - Governance: Knowledge Management and Innovation	WTC-2	49
11:30 - 13:00	S19 - Water-Energy-Food Nexus Governance	WTC-1	50
11:30 - 13:00	SS10 - Water-Energy-Food Nexus under Drought: Assessment and Quantification (Special Session, CNRD & ITT-TH Köln)	GBR-2	50
11:30 - 13:00	S20 - Water Issues, Assessing and Meeting Sustainable Development Goal 6	GBR-1	51
11:30 - 13:00	SS11 - Water Museum: Concepts and Collaborations (Special Session, IUPUI)	NE	52
13:00 - 14:00	Lunch		
14:00 - 16:00	P5 - India Water Security: Key Issues (Plenary)	GBR	19
16:00 - 16:30	Coffee Break		
16:30 - 18:30	S21 - Agriculture and Water	WTC-1	52

HS - Hotel Sheraton **JNB** - JN Tata Seminar Hall B, IISc
GBR - Grand Ballroom **JU** - Jupiter **GBR-1** - Grand Ballroom 1
GBR-2 - Grand Ballroom 2 **NE** - Neptune **CE** - Ceres
WTC-1 - World Trade Center Seminar Hall 1
WTC-2 - World Trade Center Seminar Hall 2 **PL** - Pluto

Thursday, 26 September

Time	*Event*	*Venue*	*Page*
16:30 - 18:00	S22 - Analysis of Groundwater Contamination	JNB	53
16:30 - 18:00	S23 - Case Studies of Water-Energy-Food Nexus Solutions and Implementations	WTC-2	54
16:30 - 18:00	S24 - Groundwater Quality and Assessment II	JNC	55
16:30 - 18:00	SS12 - Managing Lake Water Quality (Special Session, ATREE)	GBR-1	55
16:30 - 18:00	S25 - River Basin Governance	JNA	56
16:30 - 18:30	SS13 - Role of Science Diplomacy in Addressing Global Water Challenges (Special Session, DST-CPR)	GBR-2	56
16:30 - 18:00	SS14 - Understanding Water Security Paradigms (Special Session, EF & IISc)	JU	57
16:30 - 18:00	S26 - Water Security in Agriculture and Adaptation to Climate Change	CE	57
16:30 - 18:00	S27 - Water Security, Informal Water Use and Water Access	NE	58
18:00 - 19:30	PS2 - Poster Session & Networking	WTC	59

JNA - JN Tata Seminar Hall A, IISc **JNB** - JN Tata Seminar Hall B, IISc
JNC - JN Tata Seminar Hall C, IISc **GBR-1** - Grand Ballroom 1
GBR-2 - Grand Ballroom 2 **NE** - Neptune
WTC-1 - World Trade Center Seminar Hall 1
WTC-2 - World Trade Center Seminar Hall 2
WTC - World Trade Center Seminar Hall

Friday, 27 September

Time	*Event*	*Venue*	*Page*
08:30 - 09:00	Registration	HS	
09:00 - 10:30	S28 - An Integrated Global Vision for Water Security: Approaches and Methods	WTC-2	61
09:00 - 10:30	SS15 - Climate Change and Water Management (Special Session) (TERI)	JNA	61
09:00 - 10:30	SS16 - Ecohydrology: Engineering Harmony for a Sustainable World (Special Session, INC-IHP, NIH)	GBR-2	62
09:00 - 10:30	S29 - Groundwater Governance	NE	62
09:00 - 10:30	S30 - Interlinkages in Urban Water Systems	WTC-2	63
09:00 - 10:30	SS17 - Rethinking Urban Water Supply Management (Special Session, CEEW)	GBR-1	64
09:00 - 10:30	S31 - Solutions in Water Quality Management	JU	64
09:00 - 10:30	S32 - Water Ethics: Concepts and Approaches	CE	65
09:00 - 10:30	S33 - Water Quality Assessment: Case Studies	WTC-1	66
10:30 - 11:00	Coffee Break		
11:00 - 12:30	S34 - Groundwater Assessment and Agriculture	NE	67
11:00 - 12:30	S35 - Solutions to Promote Sustainability in Water Space	WTC-2	67
11:00 - 12:30	S36 - Technology-based Solutions in Addressing Water Quality	JU	68

HS - Hotel Sheraton **JNA** - JN Tata Seminar Hall A, IISc
JNB - JN Tata Seminar Hall B, IISc **GBR** - Grand Ballroom **JU** - Jupiter
GBR-1 - Grand Ballroom 1 **GBR-2** - Grand Ballroom 2 **NE** - Neptune
CE - Ceres **WTC-1** - World Trade Center Seminar Hall 1
WTC-2 - World Trade Center Seminar Hall 2

Friday, 27 September

Time	*Event*	*Venue*	*Page*
11:00 - 12:30	SS18 - Transboundary Water Governance (Special Session, Water Future)	WTC-1	69
11:00 - 12:30	S37 - Urban Flood Risk	JNA	70
11:00 - 12:30	S38 - Urban Water Resilience and Innovation	JNB	70
11:00 - 12:30	SS19 - Water Challenges in the MENA Region (Special Session, Future Earth MENA Regional Center, CyI)	GBR-1	71
11:00 - 12:30	S39 - Water Ethics: Practical Applications	CE	71
11:00 - 12:30	S40 - Water Quantity and Quality Considerations in River Basin Planning and Management	GBR-2	72
12:30 - 13:30	Lunch		
13:30 - 15:00	Closing Plenary	GBR	

JNA - JN Tata Seminar Hall A, IISc **GBR** - Grand Ballroom
JNB - JN Tata Seminar Hall B, IISc **GBR-1** - Grand Ballroom 1
GBR-2 - Grand Ballroom 2 **CE** - Ceres
WTC-1 - World Trade Center Seminar Hall 1

Plenary Session - Tuesday, 24 September

P1: Advanced Water System Assessment to Address Water Security Challenges of the 21st Century

Time: 13:30 - 15:30 Venue: Grand Ballroom, Hotel Sheraton

Moderator

András Szöllösi-Nagy
Chair, Water Future.

Speakers

Alan Jenkins
Deputy Director, Center for Ecology and Hydrology.

Charles Vörösmarty
Chair, COMPASS Initiative, Water Future.

Hartwig Kremer
Senior Programme Officer, UNEP, Copenhagen.

Pradeep Mujumdar
Chairman of Interdisciplinary Centre for Water Research, IISc.

Stuart Bunn
Director, Australian Rivers Institute at Grifth University Brisbane, Australia.

Veena Srinivasan
Programme Leader, Water, Land and Society, ATREE.

Plenary Session - Wednesday, 25 September

P2: Water and Climate Change: Challenges

Time: 09:00 - 11:00 Venue: Grand Ballroom, Hotel Sheraton

Moderator

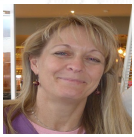
Shailesh Nayak
Director, National Institute of Advanced Studies.

Speakers

Alexandros Makarigakis
Programme Specialist and IHP Deputy Secretary, UNESCO.

Dietrich Borchardt
Chair Scientific Steering Committee, Water Future.

John Pomeroy
Director, Global Water Futures.



Karen G. Villholth
Principal Researcher, IWMI Southern Africa Office.

Olcay Ünver
Vice Chair, UN-Water.

Sharad Jain
Director, National Institute of Hydrology.

Plenary Session - Wednesday, 25 September

P3: Role of Big Data, AI, Blockchain Technology in Water Diagnostics and Governance

Time: 14:00 - 16:00 Venue: Grand Ballroom, Hotel Sheraton

Moderator

Amy Luers
Executive Director, Future Earth.

Speakers

Katrina Donaghy
Co-Founder & Co-CEO , Civic Ledger.

Nagaraja Rao Harshadeep
Global Lead, Watersheds/Disruptive Technology, World Bank.

Venki Ramachandran
Director, Smart Infrastructure and Program Management, Xylem India.

Yadati Narahari
Chairman, Division of Electrical, Electronics and Computer Sciences, IISc.

Plenary Session - Thursday, 26 September

P4: Global Water Governance: Challenges

Time: 09:00 - 11:00 Venue: Grand Ballroom, Hotel Sheraton

Moderator

Ravi Narayanan
Chair, Governing Council, Asia Pacic Water Forum.

Speakers

Anthony Slatyer
Consultant on Water Policy and Governance, Water Policy Group

Claudia Pahl-Wostl
Director, Institute for Environmental Systems Research, University of Osnabrück, Germany

Hakan Tropp
Head, Water Governance Programme, OECD.

Robert G Varady
Deputy Director, Udall Center and Professor at University of Arizona.

Sharachchandra Lele
Distinguished Fellow in Environmental Policy & Governance, Centre for Environment & Development at ATREE, Bangalore.

William Young
Lead Water, Resource Management Specialist, World Bank.

Plenary Session - Thursday, 26 September

P5: India Water Security: Key Issues

Time: 14:00 - 16:00 Venue: Grand Ballroom, Hotel Sheraton

Moderator

Anik Bhaduri
Director, Water Future

Speakers

Aditi Mukherji
Principal Researcher, IWMI.

Anil V. Kulkarni
Distinguished Visiting Scientist, Divecha Centre for Climate Change, IISc.

M S Mohan Kumar
Professor, Department of Civil Engineering, IISc.

Muthukumara Mani
Lead Economist, South Asia Region, World Bank.

Paramesh H
Pediatric pulmonologist & Environmentalist

Shaminder Puri
Managing Director, Water and Land Resources.

U P Singh
Secretary, Department of Water Resource, Ministry of Jal Shakti, GOI.

Programme

Tuesday, 24 September

SS1-A: Aerosols, Clouds, Precipitation and Hydrological Cycle (Special Session)
Time: 16:00 - 19:30 Venue: Hotel Sheraton, Jupiter
Organized by: Divecha Centre for Climate Change & Space Physics Laboratory

	Time	Title	Presenter
1	16:00-16:30	Greenhouse Gases, Aerosols, Climate Change, and Water Cycle	Prof. V Ramaswamy
2	16:30-16:45	Evidences and Consequences of Expanding Hadley Cell: A Hydrological Perspective	Dr. K Kishore Kumar
3	16:45-17:00	Diurnal variability of precipitation over the Western Ghats in India	Prof. P K Bhuyan
4	17:00-17:15	Spatial Coherence of Water Vapor and Rainfall over Indian Subcontinent during Different Monsoon Seasons	Dr. Radhakrishna B
5	17:15-17:30	Spatial and temporal variation of DSD over southern Indian Ocean during ICARB-2018	Dr. NVP Kiran Kumar
6	17:30-17:45	Study on microphysical properties of monsoon clouds over a high-altitude site in Western Ghats, India, using in-situ ground observations	Dr.Leena P P
7	17:45-18:00	Variability of vertical structure of precipitation with sea surface temperature over the Arabian Sea and the Bay of Bengal as inferred by TRMM PR measurements	Dr.Sai Kranthi
8	18:15-18:30	Aerosols Properties Over the Central Himalayan Region	Dr. Manish Naja
9	18:30-18:45	Black carbon observations over a central Himalayan Glacier (Satopnath): Pathways and Impacts	Dr. Abhilash S. Panicker

Tuesday, 24 September

	Time	Title	Presenter
10	18:45-19:00	Regional synthesis of Black Carbon Aerosols over the Himalayas: Impact of synoptic source processes and long term trends	Arun B S
11	19:00-19:15	Characterization of mineral dust aerosols over the Himalayas using space-borne observations	Lakshmi N B
12	19:15-19:30	Modelling of aerosols induced snow albedo feedbacks over Himalayas and its implications on regional climate	Usha K H

S1: Assessing Sustainability in Water Space
Time: 16:00 - 17:30 Venue: Hotel Sheraton, Grand Ball Room 2
Chair: Richard Lawford
Theme Coordinator: Yoginder Negi Rapporteurs: Abu Bakar Siddique

	Time	Title	Presenter
1	16:00-16:15	Strengthening climate services - special reference to water resources	Rajeev Mehajan, SERB, DST, India
2	16:15-16:30	Assessment of surface water storage trends for increasing groundwater areas in India	Chandan Banerjee, Water Solutions Lab,India
3	16:30-16:45	Future dynamics of development, climate impacts and water resources adaptation	Peter Conway, University of Leeds,United Kingdom
4	16:45-17:00	Agriculture and safe operating space: A global analysis	Ajishnu Roy, Presidency University, India
5	17:00-17:15	Assessment of Multiple Modeling Approaches to Address the Quest for Physically Realistic Hydrologic Models	Ashlin Alexander, Indian Institute of Science, India
6	17:15-17:30	Multi-site and multi-variable hydrological model calibration for spatially heterogeneous catchments	Saumya Srivastava, Indian Institute of Science, India

Tuesday, 24 September

SS2: Future of Urban Waterbody Rejuvenation (Special Session)
Time: 16:00 - 19:00 Venue: Hotel Sheraton, Grand Ball Room 1
Organized by: Consortium of DEWATS Dissemination Society
Co-ordinator: Girija R

	Time	Title	Presenter
1	16:00-16:30	Welcome note- Introduction to the session - Objectives of the session	Mr Andrews Jacob, CDD Society
2	16:30-17:30	Panel discussion (10 minutes by Moderator+30 minutes for panel discussion+20 minutes for Q & A)	Mr S Vishwanath, Biome Environmental Solutions Dr Suresh Rohilla, Academic Director, Centre for Science & Environment Dr Veena Srinivasan, ATREE Ms Sonal Pareek, CDD Society
3	17:30-18:30	Expert talk-Sharing of experiences and case studies (15 mins presentation by experts followed by 5 mins Q&A)	TBD
4	18:30-18:45	Waterbody Rejuvenation: CDDs Perspective-(15 mins presentation + 5 mins Q&A)	Mr Andrews Jacob, CDD Society
5	18:45-19:00	Concluding remarks	TBD

S2: Groundwater Assessment and Analytics
Time: 16:00 - 17:30 Venue: Hotel Sheraton, Neptune
Chairs: Shekar Maddu
Theme Co-ordinator: Deepak Salim Rapporteurs: Karthik Ganeshan

	Time	Title	Presenter
1	16:00-16:15	Spatial-temporal groundwater trend analysis: Case study of India	Bankaru Swamy Soundharajan, Amrita Vishwa Vidyapeetham, India

Tuesday, 24 September

	Time	Title	Presenter
2	16:15-16:30	Groundwater assessment at local scales: BIG DATA and policy implications	Prasanna Sampath, Indian Institute of Technology, Tirupati, India
3	16:30-16:45	Groundwater in the hydrological cycle: The known-knowns, the known-unknowns, and the unknown-unknowns	Shaminder Puri, Managing Director, Water and Land Resources, UK
4	16:45-17:00	The flow system approach for coping with changing groundwater scenarios	Javier Castro Larragoitia, Autonomous University of San Luis Potos, Mexico
	17:00-17:30	Open Dialogue	

S3: Socio-Cultural and Ecological Dimensions of Water Resources Management
Time: 16:00 - 17:30 Venue: Hotel Sheraton, Pluto
Chairs: Rebecca Tharme
Theme Co-ordinator: Himanshu Bhagat Rapporteurs: Himanshu Bhagat

	Time	Title	Presenter
1	16:00-16:15	Hydro-technology in India: stories of disconnections with culture and ecology	Paulina Lopez, Centre de Sciences Humaines, India
2	16:15-16:30	The Importance of sand in rivers: the socio-economic and cultural impacts of river degradation	AR Vishnuprasad, Vayali Folklore Group, India
3	16:30-16:45	Threat assessment in Middle Karnali watershed: sustainable utilization and conservation.	Binita Pandey, Resources Himalaya Foundation, Nepal
	16:45-17:30	Open Dialogue	

Tuesday, 24 September

S4: Water-Energy-Food Nexus Assessment and Governance
Time: 16:00 - 17:30 Venue: Hotel Sheraton, WTC Building, Seminar Hall 1
Chairs: Rabi Mohtar
Theme Co-ordinator: Anasusya Gangopadhyay Rapporteurs: Harsh Kamath

	Time	Title	Presenter
1	16:00-16:15	Water quality as an indicator to explore interlinkages between the WEF resources	Martina Floerke, Ruhr-University Bochum, Germany
2	16:15-16:30	Hydrological impact pathways of drought-related electricity outages in Southern Africa	Declan Conway, Grantham Research Institute, London School of Economics, UK
3	16:30-16:45	The food and water nexus - sustainable irrigation in Africa?	Jamie Pittock, The Australian National University, Australia
4	16:45-17:00	Toward a data and information service to support the implementation of the Water-Energy-Food Nexus	Richard G. Lawford, The James Hutton Institute, UK
	17:00-17:30	Open Dialogue	

SS3: Climate Impacts on Global Mountain Water Security
&
Water Solutions for the 21st Century in the Indian Himalayan Region (IHR)
(Joint Special Session)

Organized by: Global Water Future (GWF) and Integrated Mountain Initiative (IMI)

Time: 16:00 - 19:30 Venue: Hotel Sheraton, Ceres
Moderator: Smriti Basnett Rapporteurs: Prerana and Sangeeta

SS3-A: Climate Impacts on Global Mountain Water Security, Global Water Future
Convenors: Dr. John Pomeroy and Dr. Chris DeBeer

	Time	Speaker
1	16:00-16:15	John Pomeroy, Director, Global Water Futures, University of Saskatchewan, Saskatoon, Canada

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	Time	Speaker
2	16:15-16:30	Chris DeBeer, Global Water Futures, University of Saskatchewan, Saskatoon, Canada
3	16:30-16:45	Dhiraj Pradhananga, Dept. of Meteorology and Hydrology, Tribhuvan University, Kathmandu, Nepal
4	16:45-17:00	Ignacio Lopez Moreno, Institute for Pyrenean Ecology (IPE), Spanish National Research Council (CSIC), Zaragoza, Spain
5	17:00-17:15	Dr. Corinne Schuster-Wallace, Water-health researcher for Global Water Futures
6	17:15-17:30	Robert Sandford, Institute for Water, Environment and Health (INWEH), United Nations University, Hamilton, Canada
7	17:30-17:45	Discussion

SS3-B: Solutions for the 21st Century in the Indian Himalayan Region (IHR), Integrated Mountain Initiative
Chair: Ramesh Negi, IAS (Retd.), Vice President, Integrated Mountain Initiative (IMI)

	Time	Title	Presenter
	17:45-17:55	Context Setting	Shri Sushil Ramola, President, IMI
	17:55-18:05	Keynote Address	Dr Himanshu Kulkarni, ACWADAM
		Presentations	
1	18:05-18:15	Vulnerable Smaller Water Resources: evidence of diminishing discharge of spring-flow, declining trends of monsoon rainfall and recent land use changes in Mid-Himalayan Mountain, India.	Soukhin Tarafdara and Subhashis Duttab [a]G.B.Pant National Institute of Himalayan Environment & Sustainable Development [b]Department of Civil Engineering, IIT Guwahati, Guwahati Assam

Tuesday, 24 September

	Time	Title	Presenter
2	18:15-18:25	Decentralized Water Governance Model in the Central Himalayan Region of India	Vinod Kothari, S.T.S Lepcha and Sunesh Sharma
3	18:25-18:35	A need for Integrated Urban Water Security in the hill towns of Darjeeling Himalayas, India	Dr Lakpa Tamang, University of Calcutta
4	18:35-18:45	Seasonal water quality variations of palustrine wetland of Barrack-Chindwin basin	Chongpi Tuboi, Michelle Irengbam, Ruchi Badola, Syed Ainul Hussain (WII, Dehra Dun)
5	18:45-18:55	Conservation planning in human dominated riverscapes: case study of Ganga.	Michelle Irengbam, Shivani Barthwal, Niladri Dasgupta, Ruchi Badola & Syed Ainul Hussain, Wildlife Institute of India, Dehra Dun
6	18:55-19:05	Climate change vulnerabilities of rapidly growing cities in the Himalaya and policy interventions for mitigation with special reference to Gangtok and the Teesta river basin	P. D. Rai and Rajendra P. Gurung, ECOSS, Gangtok
	19:05-19:15	Presentation on Meghalayas Integrated Water Policy	Mr Cyril V Darlong Diengdoh, IAS, Executive Director, Meghalaya Basin Development Authority (MBDA)
	19:15-19:30	Q & A	
	19:30-21:00	Discussions over Dinner	

Wednesday, 25 September

SS4: Cryosphere and Water Security (Special Session)
Time: 09:00 - 17:00 Venue: Hotel Sheraton, Ceres
Organized by: Divecha Centre for Climate Change
Session Chair: Dr. Anil Kulkarni

	Time	Title	Presenter
	Technical session I - Science of Cryosphere		
1	09.00-09.15	Inauguration	Prof. S. K. Satheesh and Dr. Akhilesh Gupta
2	09.15-09.30	Mapping glacier velocity on Samudra Tapu using Sentinel-1 D-InSAR data	Geetha Priya, CIIRC-Jyothy Institute of Technology, Bangalore
3	09.30-09.45	Early 21st century surface mass balance estimates for glaciers in Chandra basin, Western Himalayas between 2000 and 2018	Anita Chandrasekharan, Indian Institute of Technology Bombay
4	09.45-10.00	Snow water equivalent and snow depth estimation in the Himalayas	Akshay Patil, Indian Institute of Technology Bombay
5	10.00-10.15	Mass Budget and Surface Velocity variations of Glaciers in Western Himalaya	Tajdarul Syed, Indian Institute of Technology (ISM),Dhanbad
7	10.15-10.30	Snow and Ice melt contributions in a highly glacierized catchment of Chhota Shigri Glacier (India) over the last five decades	Mohd Farooq Azam, Indian Institute of Technology, Indore
8	10.30-10.45	Glacier mass balance estimation of Naradu Glacier, Western Himalaya	Rajesh Kumar, Sharda University, Noida
9	10.45-11.00	Crucial role of Spring shed management for springs Revival in Indian Himalayas	R C Jain
	11.00-11.30	Tea Break	
	11.30-12.30	**Technical session II - Panel discussion on "How to reorganize glaciological research in India?"**	

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	Title	Presenter
	Poster Session [Time: 12.30-13.00]	
1	Monitoring the hazardous prone glacial lakes in Himachal Pradesh using Remote Sensing and Artificial Neutral Network Applications	Aishwarya Ray, Dhankula Institute of Engineering & Technology
2	Annual mass budget and climate sensitivity modelling of Siachen glacier	Anant Kumar, Snow and Avalanche Study Establishment, Chandigarh
3	Estimation of velocity for benchmark glaciers in North-Eastern Himalayas	Bala Nela, Indian Institute of Technology Bombay
4	Reconciling high glacier surface melting in summer with air temperature in the semi-arid zone of Western Himalaya	Bhanu Pratap, ESSO - National Centre for Polar and Oceanic Research, Goa
5	Towards the extraction of glacier characteristics using coarse-resolution optical data	Bisma Yousuf, Wadia Institute of Himalayan Geology, Dehradun
6	Cryoconite holes and their role in glacier health and biogeochemical cycling	Gautami Samui, National Centre for Polar and Oceanic Research, Goa
7	Decadal Changes in Glacier Mass Balance Using Geodetic Method in Western Himalaya	Mansi Joshi, Divecha Centre for Climate Change, IISc
8	Mass balance estimation for Mulkila glacier using glacier melt Model	Nagajothi Venkatesan, Jyothy Institute of Technology, Bangalore
9	Comparison of mass loss estimates by Geodetic and IAAR method in Western Himalaya	Pratibha S, Divecha Centre for Climate Change, IISc

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	Title	Presenter
10	Comparative Assessment of Volume Change in Western Himalayas, Using Empirical Techniques	Pradeep Vashisht, The Energy Resources Institute, Delhi
11	Estimation of Ice-Thickness for Chhota Shigri glacier	Shubha V, Jyothy Institute of Technology, Bangalore
12	A Comprehensive Glacier Inventory for Spiti Basin, Western Himalaya	Tejal Shirsat, Divecha Centre for Climate Change, IISc
13	Historical area and mass changes in Zemu glacier and formation of potential glacial lake as assessed from earth observation data (1930-2018) and glacier modelling	Ulfat Majeed, University of Kashmir
14	Relationship between glacier ice melt/loss and Glacier lake area in NE Himalayas	Vishakha Pandey, Indian Institute of Technology Bombay
15	Present and future glacier mass balance in Himalaya	Arya A. R, Divecha Centre for Climate Change, IISc
16	Impact of climate change on glacier water availability in Indus basin	Ashutosh Kulkarni, Divecha Centre for Climate Change, IISc
17	Quantifying proglacial lake dynamics in Kashmir, India for GLOF assessment	Irfan Rashid, University of Kashmir
18	Impact of Climate Change on Water Resources of Afghanistan	Mohammad Najim Nasimi, Kabul Polytechnic University, Kabul, Afghanistan
19	Volume estimation of existing and potential glacier lakes, Sikkim Himalaya, India	Remya S N, Divecha Centre for Climate Change, IISc

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	Title	Presenter
20	Response of glaciers to the future climate in western Himalaya	Sayli Tawde, Divecha Centre for Climate Change, IISc
21	Contribution of snow and ice melt to a perennial river basin of Himalayas	Sonia Grover, The Energy Resources Institute, Delhi

	13.00-14.30	Lunch Break	
	Technical Session III- Water security and policy		
	Time	Title	Presenter
1	14.30-14.45	Himalayan Cryosphere Sustenance: Issues, Challenges and Opportunities	Ashwagosha Ganju, Snow and Avalanche Study Establishment, Chandigarh
2	14.45-15.00	Inventory of Glacial Lakes and its Evolution in Uttarakhand Himalaya Using Time Series Satellite Data	Babu Govindh Raj K, Indian Space Research Organization, Bangalore
2	15.00-15.15	Reconstruction of glaciers mass balance for a long-term climatic period in Chandra basin, western Himalaya	Vinay Gaddam, Indian Space Research Organization, Bangalore
3	15.15-15.30	HIGTHIM - An automated tool for modelling potential glacier lakes	Pradeep S, Divecha Centre for Climate Change, IISc
4	15.30-15.45	Simulation of an Outburst Flood Using ANUGA Model in Sikkim	Rupal Budhbhatti, Divecha Centre for Climate Change, IISc
5	15.45-16.00	Climate Change impacts on Himalayan Glaciers and implications on energy security of the country	Shresth Tayal, The Energy Resources Institute, Delhi
6	16.00-16.15	Development of Cryospheric Services for Management of Hydropower Utilities in the Himalayan region	Nilendu Singh, Centre for Glaciology, Wadia Institute of Himalayan Geology, Dehradun

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	Time	Title	Presenter
7	6.15-16.30	Recent changes in glaciers and climate of Shyok basin, East-Karakoram	Harendra Singh Negi, Snow and Avalanche Study Establishment, Chandigarh
	16.30-17.00	Tea Break	
8	17.00-17.15	Future glacier water availability in Satluj and Beas basins for twenty-first century	Veena Prasad, Divecha Centre for Climate Change, IISc
9	17:15-17:30	Spatial and Temporal variations in snow parameters for Dibang basin	Aditi Bhadra, North Eastern Regional Institute of Science and Technology, Ittanagar
	17.30-18.00	Concluding Session	
	19.00-21.30	Dinner at IISc main guest house	

SS1-B: Aerosols, Clouds, Precipitation and Hydrological Cycle (Special Session)
Time: 16:00 - 19:30 Venue: Hotel Sheraton, Jupiter
Organized by: Divecha Centre for Climate Change & Space Physics Laboratory

	Time	Title	Presenter
1	11:30-11:45	Influence of Black Carbon Aerosol on the Atmospheric Instability	Dr.Venkata Ratnam M
2	11:45-12:00	Importance of biogenic emissions over South Asia as modulators of atmospheric composition and their potential impacts on the aerosolcloud-water cycle	Dr.Vinayak Sinha
3	12:00-12:15	The Relationship Dust loading over the Arabian Sea and the Indian Summer Monsoon Rainfall: Role of Large Scale Oscillations	Dr.Vinoj V

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	Time	Title	Presenter
4	12:15-12:30	Aerosol effects on Clouds, Surface Radiation & Evaporation over the Indian sub-continent: Implications on regional Hydrological Cycle	Dr.Padmakumari
5	12:30-12:45	Aerosol-induced Changes in Cloud and Rainfall over Indian Summer Monsoon Region	Dr.Vijay P Kanawade
6	13:30-13:45	Winter Fog Experiment (WiFEX) at Delhi International Airport, India: Results from 2015-2019 winter campaign	Dr.Sachin D Ghude
7	13:45-14:00	Balloon borne Aerosol Cloud Interactions Studies (BACIS): A balloon borne field campaing for understanding the role of aerosol on cloud	Dr.V. Ravi Kiran
8	14:00-14:15	Aerosol Cloud Interactions on marine warm clouds over one of the South Asian outflow regions	Dr. Subin Jose
9	14:15-14:30	Role of humidity in relationship between atmospheric lightning and aerosols: Observations from North India	Prof. Manoj K Srivastava
10	14:30-14:45	Variability of aerosol optical depth and its implications in the cloud formation over the Indian Ocean sector of Southern Ocean	Prof.Harilal B Menon
11	14:45-15:00	Vertical distribution of aerosols and clouds over northeastern South Asia: aerosol-cloud interactions	Binita Pathak
12	15:30-15:45	Microphysical properties and mixing state of refractory black carbon aerosol in the Indo Gangetic Plain (IGP) outflow	Sobhan Kumar K

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	Time	Title	Presenter
13	15:45-16:00	Size resolved Cloud condensation nuclei (CCN) measurements in polluted megacity of continental India	Subha S Raj
14	16:00-16:15	Investigating the ice nucleating ability of Pantoea ananatis: Importance in cloud formation	Sarayu Kishnamoorthy
15	16:15-16:30	Hygroscopicity of atmospheric aerosols in sub-saturated region: A novel mass based approach over size based technique for improved characterization	Christi Jose
16	16:30-16:45	Assessment of radiative impacts of carbonaceous aerosols using a regional climate model	Ajay Parottil
17	16:45-17:00	Global Dust Forecast of NCMRWF	Dr. Sumit Kumar
18	17:00-17:15	Role of sulfate aerosols on the weakening of orographic rainfall over the Western Ghats region: Study using regional climate model RegCM-4.5	Arun K
19	17:15-17:30	Aerosol radiative forcing from the simultaneous measurement of aerosols properties and radiation over India	Mukunda Gogoi
20	17:15-17:30	Monsoon and non monsoon rain: chemistry of precipitation and chemistry aerosol	Pratima Gupta
21	17:30-17:45	Atmospheric concentration of black carbon during monsoon and non-monsoon season	Pratima Gupta
22	17:45-18:00	Chemical characteristics of non refractory PM1 from a marine urban location: Implication of thrash burning and detailed source apportionment	Snehitha K

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	Time	Title	Presenter
23	18:00-18:15	Studies on Black Carbon aerosols in relation to atmospheric boundary layer height during the wet removal processes	Ashok Williams
24	18:15-18:30	Investigating the potential role of carbonaceous aerosols on the environment of central Indo-Gangetic Plain	Prayag Raj Singh
25	18:30-18:45	Retrieval of aerosol fine-mode fraction over land using Deep Learning technique to MODIS data	Prasanth S
26	18:45-19:00	Assessment of Groundwater quality of Jaunpur District, Uttar Pradesh	Dr.Kirpa Ram

S5: Geogenic Pollutants in Groundwater
Time: 11:30 - 13:00 Venue: Indian Institute of Science, JN Tata Room B
Chair: SA Pandit
Theme Coordinator: Kavitha Ramkumar and Rajesh Kumar
Rapporteurs: BL Radhakrishna

	Time	Title	Presenter
1	11:30-11:42	Water resources and social structure in Arsenic contaminated village in Patna district	Asrarul Jeelani, Centre of Social Medicine and Community Health, Jawaharlal Nehru University, India
2	11:42-11:54	Governance of Arsenic and Fluoride Contaminated Groundwater for Safe Drinking Water Supply in West Bengal, India	Abhijeet Ray, Centre for Groundwater Studies, Kolkata, India
3	11:54-12:06	Arsenic in shallow Bengal aquifer: Large scale human-water interaction and suffering	Debashis Chatterjee, University of Kalyani, India
4	12:06-12:18	Community-based fluorosis mitigation in Dhar district, Madhya Pradesh	Debashish Sen, Peoples Science Institute, India

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	Time	Title	Presenter
5	12:18-12:30	Uranium rich groundwater in some parts of India: Geological context	Deepak Salim, Divecha Centre for Climate Change, IISc, India
6	12:30-12:42	Fluoride rich groundwater zones of Karnataka, India	Kavitha Devi Ramkumar, Divecha Centre for Climate Change, IISc, India
7	12:42-12:54	Drinking water quality and the CKDu occurrence in Wilgamuwa, Sri Lanka	Pasan Hewavitharana, Nephrology and Kidney Transplant Unit, Teaching Hospital, Kandy, Sri Lanka
	12:54-13:00	Open Dialogue	

S6: Groundwater Quality and Assessment I
Time: 11:30 13:00 Venue: Indian Institute of Science, JN Tata Room A
Chair: R. Srinivasan
Theme Coordinator: Deepak Salim Rapporteurs: Sitara Krishnakumar

	Time	Title	Presenter
1	11:30-12:00	Groundwater resources assessment in Jordan	Mohammad Alhyari, Ministry of Water and Irrigation, Jordan
2	11:45-12:00	Fractal analysis of water quality time series data by Hurst Exponent and confirmation of its instability by estimating Largest Lyapunov Exponent	Sangeeta Mishra, Thakur College of Engineering and Technology, Mumbai, India
3	12:00-12:15	A multi-layered aquifers groundwater model for leakage assessment of arsenic contamination threat in a part of Ganga basin	Virendra Tiwari, CSIR - National Geophyscial Research Institute, India
4	12:15-12:30	Assessment of water quality at fluoride affected village Dikharomukh of Hojai District of Assam	Dharani Saikia, INREM Foundation, India

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	Time	Title	Presenter
5	12:30-12:45	A covalently integrated electro-adsorbent ion exchange resin for efficient capacitive deionization (CDI)	Md Islam, Indian Institute of Technology, Madras, India
6	12:45-13:00	Machine learning approach to compute water quality index with uncertainty	Debabrata Datta, Bhabha Atomic Research Centre, India

SS5: Innovations to achieve sustainable groundwater use in India (Special Session)
Time: 11:30 - 13:00 Venue: Hotel Sheraton, Grand Ball Room 1
Organized by: GRIPP (Groundwater Solutions Initiative for Policy and Practice), IWMI (International Water Management Institute), IAH (International Association of Hydrogeologists)

	Time	Title	Presenter
1	11:30-11:40	Welcome	Alok Sikka, Principal Researcher, Country Representative - India, IWMI
2	11:40-12:00	GRIPP A Platform for Groundwater Innovations	Karen Villholth, Principal Researcher, GRIPP Coordinator, IWMI
3	12:00-12:20	ITC Limited Initiatives on Groundwater - Importance for Businesses in India	Giresh Mohan, Regional Manager - South, Corporate Social Investments, ITC Limited, India
4	12:20-12:40	Story of an Acutely Depleting Aquifer from an Arid Region of India- Is it possible to Revive?	Dipankar Saha, Former Member of Central Ground Water Board, Govt. of India. Presently Expert, Ground Water, Govt. of Gujarat
5	12:40-13:00	Solar Irrigation in India Innovative Business Models to Enhance Sustainability	Tushaar Shah, Senior Fellow, IWMI and Shilp Verma, International Researcher, IWMI

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	Time	Title	Presenter
6	13:00-13:20	Business Approach for Sustainable Water Solutions	Mr Ranganath Nuggehalli Krisha, Area Managing Director, Grundfos India, Chennai, India
7	12:20-13:30	Discussion	Shammy Puri, IAH

S7: Lake Quality Assessment and Case Studies
Time: 11:30 - 13:00 Venue: Hotel Sheraton, Grand Ball Room 2
Chair: Sharad Lele
Theme Coordinator: Kavitha Ramkumar and Rajesh Kumar Rapporteurs: Arun Menon

	Time	Title	Presenter
1	11:30-11:42	Managing dissolved oxygen levels in human dominated ecosystems: a case study of Jakkur Lake, Bengaluru	Priyanka Jamwal, ATREE, India
2	11:42-11:54	Conserving lake in Bengaluru through environmental placemaking : inclusive approaches in urban ecology	Amrita Sen, Azim Premji University, India
3	11:54-12:06	Understanding the impact of mining on urban lakes	Shashank Palur, ATREE, India
4	12:06-12:18	Effect of lake encroachment and depletion on urban floods in Bangalore	Aisha Sharma, Indian Institute of Science, India
5	12:18-12:30	Tropical freshwater lakes of Kerala state, India: Hydrogeochemistry and drinking water potential in Anthropocene perspectives	Aditya K, ESSO-NCESS, India
6	12:30-12:42	Water quality status and trends of the worlds largest lakes	Laurence Carvalho, Centre for Ecology and Hydrology, UK
7	12:42-12:54	Identification of limiting nutrient for controlling algal blooms, Jakkur lake	Sumita Bhattacharyya, ATREE, India
	12:54-13:00	Open Dialogue	

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S8: Leaving No One Behind: Digital Water, Big Data, Technology and Water Security
Time: 11:30 - 13:00 Venue: Indian Institute of Science, JN Tata Room C
Chair: Richard Lawford
Theme Lead: Saroj Nayak Rapporteurs: BL Radhakrishna

	Time	Title	Presenter
1	11:30-11:45	Smart water solutions: A risk communication tool for sustainable water future in West Bengal, Indian	Bhaswati, Sivanath Sastri College, University of Calcutta, India
2	11:45-12:00	Understanding decadal LULC patterns in Cauvery river basin using Google Earth Engine	Ganesh,ATREE, Bangalore, India
3	12:00-12:15	Developing regional water security indicators to support sustainable water futures	Sophie, University of Dundee, UK
4	12:15-12:30	Linkages in water quality variation and hazards among artisanal aquaculture along the Indian coast	Rosewine, Presidency University, India
	12:30-13:00	Open Dialogue	

S9: Water Assessment in River Basins: Perspectives
Time: 11:30 - 13:00 Venue: Hotel Sheraton, Neptune
Chair: Stuart Bunn
Theme Co-ordinator: Anu S Patil Rapporteurs: Anu S Patil

	Time	Title	Presenter
1	11:30-11:45	Assessing hydrological scenarios through basin futures	Kangkanika Neog, Council on Energy, Environment and Water, New Delhi, India
2	11:45-12:00	Imputation of missing rainfall data by artificial neural network with different activation functions for Dabhoi	Sanskriti Mujumdar, The Mahraja Sayajirao Univerisity of Baroda, India
3	12:00-12:15	Dam break modeling using HEC-GeoRAS and HEC- RAS : A case study on Aji-1 Dam, Gujarat	Apurba Nath, NIT Silchar, India

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	Time	Title	Presenter
4	12:15-12:30	Effect of community buy-in and availability of funds on the long-term legacy of sanitation projects	M. Nazli Koseoglu, The James Hutton Institute, UK
5	12:30-12:45	Socio-hydrology model of inter-basin water transfers with stakeholder elicitation	Sai Veena Sunkara, Indian Institute of Technology, Bombay, India
6	12:45-13:00	Insights from studying patterns of co-evolution of agriculture-water at watershed scale in Cauvery Basin	Neha Khandekar, ATREE, Bangalore, India

S10: Water and Climate Change Assessment I
Time: 11:30 13:00 Venue: Hotel Sheraton, WTC Building, Seminar Hall 1
Chair: Dietrich Borchard
Theme Co-ordinator: Kapil Dev Sindhu Rapporteurs: Abu Bakar Siddique

	Time	Title	Presenter
1	11:30-11:45	Hydrological controls of methane emissions in contrasting inland water bodies	Carole Helfter, Centre for Ecology and Hydrology, UK
2	11:45-12:00	Probabilistic assessment of agricultural economic impacts of regulatory drought management	Ian Holman, Cranfield University, UK
3	12:00-12:15	Impact of climate change on water resources of the Rushikulya basin	Damodar Panda, Utkal University, India
4	12:15-12:30	Climate change impact and uncertainty analysis of IDF curves in the Bhubaneswar city, Odisha	Meenu Ramadas, Indian Institute of Technology, Bhubaneshwar, India
5	12:30-12:45	Adaptive EEMD-ANN hybrid model for forecasting south west monsoon of Kerala	Kavya Johny, Amrita School of Arts and Sciences, Kochi, India
6	12:45-13:00	Investigation of extreme precipitation event over Kerala from the perspective of climate change and cloud microphysics parameterization	Leena Khadke, Indian Institute of Technology, Bhubaneshwar, India

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S11: Climate Change Assessment II
Time: 11:30 - 13:00 Venue: Hotel Sheraton, WTC Building, Seminar Hall 2
Chair: Subimal Ghosh
Theme Co-ordinator: Kapil Dev Sindhu Rapporteurs: Harsh Kamath

	Time	Title	Presenter
1	11:3011:45	The impact of climate change and climate variability on the hydroclimatology of a major river basin of India before and after 1980	Sonali Pattanayak, Divecha Centre for Climate Change, IISc, India
2	11:45-12:00	Increasing drought severities due to changing cropping patterns in Marathwada	Sneha Kulkarni, Indian Institute of Technology, Bombay, India
3	12:00-12:15	Detection of acceleration in hydrological cycle: evidences from the river basins draining Southern Western Ghats, India	Merin Mathew, National Centre for Earth Science Studies, India
4	12:15-12:30	Can a calibration-free dynamic rainfall? Runoff model predict FDCs in data-scarce situations	Basudev Biswal, Department of Civil Engineering, IIT Bombay, India
5	12:30-12:45	Copula-based bias correction scheme for zero-inflated RCM precipitation fields	Rajib Maity, Indian Institute of Technology, Kharagpur, India
	12:45-13:00	Open Dialogue	

S12: Data Issues and Needs Related to Monitoring Sustainability in Water Space
Time: 16:30 - 18:00 Venue: Hotel Sheraton, Neptune
Chair: Nagesh Kumar
Theme Co-ordinator: Yoginder Negi Rapporteurs: Sambrita Ghatak

	Time	Title	Presenter
1	16:30-16:45	Improving the spatio-temporal representation of precipitation in data-scarce regions.	Oscar Baez Villanueva, TH Kln, Germany

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	Time	Title	Presenter
2	16:45-17:00	Spatial downscaling of satellite remotely-sensed soil moisture and rainfall over Karnataka	Subash Yeggina, Indian Institute of Science, India
3	17:00-17:15	Calculating satellite derived bathymetry (SDB) of Mettur reservoir over time to show the decrease in the capacity of the river due to accumulated sediments.	Choppakatla Pranutihoppakatla, ATREE, Bangalore, India
4	17:15-17:30	Morphometric analysis of river Sabarmati basin, Udaipur, Rajasthan India, using remote sensing and GIS techniques.	Pooja Kumari, Central University of Gujarat, India
	17:30-18:00	Open Dialogue	

S13: Freshwater Conservation and Development Planning: Novel Integrative Approaches and Big Data
Time: 16:30 - 18:00 Venue: Indian Institute of Science, JN Tata Room B
Chair: Stuart Bunn
Theme Co-ordinator: Himanshu Bhagat Rapporteurs: Himanshu Bhagat

	Time	Title	Presenter
1	16:30-16:45	Global Dam Watch: curated global dam data for all	Penny Beames, McGill University, Canada
2	16:45-17:00	Freshwater biodiversity research from local to global scales.	Ian Harrison, Conservation International, USA
3	17:00-17:15	Post 2020 targets for freshwater biodiversity	Ian Harrison, Conservation International, USA
4	17:15-17:30	Managing future flow regimes for biological and cultural diversity.	Rebecca Tharme, River Futures
5	17:30-17:45	Mapping and sustaining the world's remaining free-flowing rivers.	Bernhard Lehner, McGill University, Canada

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	Time	Title	Presenter
6	17:45-18:00	Emergency Recovery Plan for freshwater biodiversity.	Stuart Bunn, Director, Australian Rivers Institute at Griffith University Brisbane, Australia

S14: Groundwater and Climate Change Adaptation
Time: 16:30 - 18:00 Venue: Indian Institute of Science, JN Tata Room A
Chair: Shammy Puri
Theme Co-ordinator: Deepak Salim Rapporteurs: Anu Patil

	Time	Title	Presenter
1	16:30-16:45	Safeguarding groundwater future by mapping aquifers through geophysical acumen: successful case studies from India	Shakeel Ahmed, Jamia Millia Islamia, India
2	16:45-17:00	Holistic groundwater and surface water management for sustaining water resources in rapidly urbanizing cities: A case study in Madurai, India	Aman Srivastava, Indian Institute of Technology, Bombay, India
3	17:00-17:15	Feasibility of water storage in saline aquifers for drought resilience	Andrew McKenzie, British Geological Survey, UK
4	17:15-17:30	Groundwater sustainability in the face of climate change in India	Ratan Jain, Central Ground Water Board, India
5	17:30-17:45	Bhadar catchment: response of groundwater storage and river flow to anthropogenic and climate drivers	Mohammad Faiz, International Water Management Institute (IWMI), India
	17:45-18:00	Open Dialogue	

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SS6: Innovatively Addressing Water, Energy, and Food Security Challenges (Special Session)
Time: 16:30 - 18:00 Venue: Hotel Sheraton, WTC Building, Seminar Hall 1
Organized by: American University of Beirut
Chair: Rabi Mohtar

	Time	Title	Presenter
1	16:30-16:45	Introduction- State of the art and current challenges:WEF Nexus and SDG application	Rabi Mohtar & Bassel Daher
2	16:45-17:00	Tools and modelling/ Big data potential/Role of analytics	Hong Yang
3	17:00-17:15	Interdisciplinary research approaches/ case studies	Richard Lawford
4	17:15-17:30	Convergence between evolving research agenda and stakeholders	Nadim Farajalla
5	17:30-17:45	Water -Energy-Food Governance	Aditi Mukherjee
6	17:45-18:00	Q&A	

S15: Resilience in Urban Water Systems: Methods
Time: 16:30 - 18:00 Venue: Indian Institute of Science, JN Tata Room C
Chair: Mohan Kumar
Theme coordinator: Karthik Madhyastha Rapporteurs: Anupama Nair

	Time	Title	Presenter
1	16:30-16:45	Understanding the neglect of urbanization on water resources in Cauvery basin	Rashmi Kulranjan, ATREE, India
2	16:45-17:00	Demystifying household water scarcity in Coimbatore using continuous sensor data	Apoorva R, ATREE, India
3	17:00-17:15	Applied mineralogy for sustainable water future	Gopalakrishna Parthasarthy, National Institute of Advanced Studies, India

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	Time	Title	Presenter
4	17:15-17:30	Feasibility study of a new approach in modeling municipal residential water consumption estimation using climate variables.	Surendra J, Development Alternatives, India
	17:30-18:00	Open Dialogue	

SS7: Sustaining Water Resources (Special Session)
Time: 16:30 - 18:00 Venue: Hotel Sheraton, Grand Ball Room 1
Organized by: Interdisciplinary Centre for Water Research, IISc and Centre for Ecology & Hydrology, UK
Chairs: Professor Pradeep Mujumdar (IISc) and Dr Gwyn Rees (CEH, UK)

	Time	Title
1	16:30-16:35	Welcome and Introduction
2	16:35-16:45	Invited speaker keynote(s)
		Sustaining Water Resources (SWR) programme findings:
3	16:45-17:00	Sustaining Himalayan Water Resources in a Changing Climate
4	17:00-17:15	Coupled Human and Natural Systems Environment for Water Management under Uncertainty in the Indo-Gangetic Plain
5	17:15-17:30	Upscaling Catchment Processes for Sustainable Water Management in Peninsular India
6	17:30-17:50	Panel discussion
7	17:50-17:55	Poster prize awards
8	17:55-18:00	Closing remarks

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S16: Urban Flood Risk and Adaptation
Time: 16:30 - 18:00 Venue: Hotel Sheraton, Grand Ball Room 2
Chair: Subimal Ghosh
Theme Coordinator: Karthik Madhyastha Rapporteurs: Aditi Gurung

	Time	Title	Presenter
1	16:30-16:45	Flood risk awareness and communication	Hrushikesh Sandhe, Walter P Moore, India
2	16:45-17:00	Assessing the effect of model structure uncertainty on the simulation of urban floods	Claris Thomas, Indian Institute of Science, India
3	17:00-17:15	Legislative framework for urban flooding and water conservation for Bangalore	Reshmi Manikoth Kollarath, BMS College of Architecture, India
4	17:15-17:30	Pluvial flood modeling for Bangalore city	Ramesh K Banagar, Xceedance Consulting India Private Limited, India
5	17:30-17:45	Design of road crossing for prevention of floods	Gowri Shankar, Department of Chemical Engineering, Ramaiah Institute of Technology, Bangalore, India
	17:45-18:00	Open Dialogue	

S17: Water and Climate Change Assessment: Himalayas
Time: 16:30 - 18:00 Venue: Hotel Sheraton, WTC Building, Seminar Hall 2
Chair: Sushil Ramola
Theme Coordinator: Kapil Dev Sindhu Rapporteurs: Sijal Pokrel

	Time	Title	Presenter
1	16:30-16:45	Hydro-meteorological drought and wet patterns under changing climate in Uttarakhand hills	Anil Kumar, G.B. Pant University of Agriculture & Technology, India

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	Time	Title	Presenter
2	16:45-17:00	Variability in snow cover area (SCA) in relation with meteorological parameters of Dokriani Glacier catchment, Central Himalaya	Jairam Yadav, Kurukshetra University, India
3	17:00-17:15	Estimation of recent snow series over Mount Lebanon from gap filled MODIS snow cover products assimilated in an ensemble of dynamically downscaled ERA5 reanalyses.	Esteban Alonso Gonzalez, Pyrenean Institute of Ecology, Spanish Research Council, Spain
4	17:15-17:30	Community based springshed development for Himalayan region for drinking water security	Debashish Sen, Peoples Science Institute, India
5	17:30-17:45	Role of snow/glacier melt runoff in Pindar River, Central Himalaya	Ningombam Prikash Meetei, Wadia Institute of Himalyan Geology, India
	17:45-18:00	Open Dialogue	

PS1: Poster Session
Time: 16:30 18:00 Venue: Hotel Sheraton, WTC Building, Seminar Hall

Water Quality

	Title	Presenter
1	Evaluating aquifers of NCT Delhi for their vulnerability to contamination	Aditya Sarkar
2	Water Quality Analysis of Musi River	Pareekshit Reddy Gaddam
3	Water quality of Oussudu lake in puducherry - influence of high turbid run-off	Anjali Deshmukh
4	Developing the empirical remote sensing algorithms in the Hooghly river with in situ reflectance data and satellite based remote sensing data	Prem Kumar

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	Title	Presenter
5	Identification of limiting nutrient for controlling algal blooms, Jakkur lake	Malkan Syed
6	Eutrophication of waster bodies and its prevention along with prayagraj case study	Chandraprakash Tiwari
7	Removal of nitrate from groundwater by natural sorbents and nanocomposites	Bhagyeshwari Chalageri
8	Effect of colour and material used for Solar Disinfection	Supriya Savalkar
9	An affordable and eco-friendly methodology to towards the clean water	Uthradevi Kannan
10	Application of Artificial Neural Networks for Modelling of Process Parameters for Biological Denitrification of Groundwater Using Immobilized Pseudomonas Fluorescens	Vashisht Ravishankar
11	Detection, Identification and Elimination of Pseudomonas aeruginosa in Bottled Water	Achala Herath
12	Informatics for Management of River Water Quality	T R Swamy
13	Spatio-temporal assessment of Doyang river, Nagaland, India	Akumtoshi Lkr
14	Mesoporous ZnO@rGO composite for the adsorptive removal of chlorpyrifos pesticide	Archa Gulati
15	Design and development of water purification system with no power	Supriya Jadhav

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SS8: Ambient Water Quality for Development (Special Session)
Time: 11:30 - 13:00 Venue: Hotel Sheraton, Jupiter
Organized by: United Nations Environment Programme Chairs: Mr. Hartwig Kremer, United Nations Environment Programme and Ms. Ilona Baerlund, Environmental Research Institute (UFZ, Germany)

This session will focus on the dimensions of disturbed ambient water quality for global sustainability and its implications for human health, societal welfare and ecosystems. The session will bring in leading experts to discuss the key findings of the water quality report of the World Bank, guidelines for monitoring and assessment of plastic litter in freshwaters and present a case study on the World Water Quality Alliance: The Cape Town Aquifer Systems Use.

SS9: An Exploration of Capacity Building: Needs and Priorities for Advancing Water Security in the Global South (Special Session)
Organized by: START and University of Ghana Time: 11:30 - 13:00 Venue: Hotel Sheraton, Ceres

Highly interactive session revolving around key questions on water using a world cafe format or a similar approach.

Speakers:

1. Jon Padegam, Director of partnership, START
2. Chris Gordon, Professor, University of Ghana
3. Nidhi Nagabhatla, Programme Officer, UNU
4. Smriti Basnett, Senior Researcher/Coordinator, Future Earth South Asia
5. Sudeh Dehnavi, Senior Researcher/ Coordinator, TH Köln
6. Mahsa Motlagh, Post Doc, Bonn Alliance for Sustainability Research Innovation Campus Bonn (ICB)
7. Archana Sarkar, Scientist, National Institute of Hydrology, Roorkee

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S18: Governance: Knowledge Management and Innovation
Time: 11:30 - 13:00 Venue: Hotel Sheraton, WTC Building, Seminar Hall 2
Chair: Claudia Pahl Wostl
Theme Coordinator: Karthik Madhyastha Rapporteurs: Anupama Nair

	Time	Title	Presenter
1	11:30-11:42	Water security and integrates urban water management	Peter Scales, The University of Melbourne, Australia
2	11:42-11:54	A practitioner guide to circular economy pathways for municipal wastewater management	Ishita Jalan, Council on Energy, Environment and Water, India
3	11:54-12:06	CityRehydrate : comprehensive toolkit for sustainable city water projects	Aishani Goswami,TERI School Of Advanced Studies, India
4	12:06-12:18	Effect of STEM education and subjects like local issues and its solutions.	Padaraj Umakanta Nayak, Government High School, Alpingal, Jagatsinghpur, Odisha, India
5	12:18-12:30	Integrated urban water management scenario modeling for sustainable water governance	Chitresh Saraswat, Australian National University, Australia
6	12:30-12:42	Water management and Sustainable Development 2030 Agenda - Global governance and local action	Nidhi Nagabhatla, United Nations University- Institute for Water,Environment and Health, Canada
7	12:42-12:54	Can resource efficient technologies resolve India groundwater crisis? Reflections from Gujarat	Chandra Bahinipati, Indian Institute of Technology, Tirupati, India
	12:54-13:00	Open Dialogue	

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S19: Water-Energy-Food Nexus Governance
Time:11:30 - 13:00 Venue:Hotel Sheraton, WTC Building, Seminar Hall 1
Chair: Vinay Nangia
Theme Coordinator: Anasusya Gangopadhyay Rapporteurs: Harsh Kamath

	Time	Title	Presenter
1	11:30-11:45	A case for sustainable integrated water resources management using system thinking approach	Sridharan Ashwin Ram, Madras School of Economics, India
2	11:45-12:00	Managing energy - irrigation conflicts through grievance redressal mechanisms (case study)	Aprajita Singh, Peoples Science Institute, India
3	12:00-12:15	Power tariffs for groundwater irrigation in India: A comparative analysis of the environmental, equity, and economic tradeoffs	Balsher Singh Sidhu, IRES, University of British Columbia, Canada
	12:15-13:00	Open Dialogue	

SS10: Water-Energy-Food-Security-Nexus under Drought; Assessment and Quantification (Special Session)
Time: 11:30 - 13:00 Venue: Hotel Sheraton, Ceres
Convenor: CNRD Coordinated by: ITT-TH Köln, Cologne, Germany

	Time	Speaker	Affliation
1	11:30-11:42	Prof. Dr. Lars Ribbe	Director, ITT-Integrated Land and Water Resources Management in the Tropics and Subtropics
2	11:42-11:54	Prof. Justin Sheffield	Professor of Hydrology and Remote Sensing within Geography and Environmental Science at the University of Southampton
3	11:54-12:06	Dr. Alexandra Nauditt	Lecturer, Institute for Technology and Resources Management in the Tropics and Subtropics

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	Time	Speaker	Affliation
4	12:06-12:18	Prof. Mauricio Zambrano Bigiarini	Associate Professor, Dept. of Civil Engineering, Faculty of Engineering and Sciences, Universidad de La Frontera, Chile
5	12:18-12:30	Muhammad Khalifa	PhD Student, Institute for Technology and Resources Management in the Tropics and Subtropics
6	12:30-12:42	Dr. Christian Birkel	University of Costa Rica
7	12:42-12:54	Dr. Oscar Manuel Baez Villanueva	Lecturer, Institute for Technology and Resources Management in the Tropics and Subtropics
	12:54-13:00	Open Dialogue	

S20: Water Issues, Assessing and Meeting Sustainable Development Goal 6
Time:11:30 - 13:00 Venue:Hotel Sheraton, Grand Ball Room 1
Chair: Alexandros Makarigakis
Theme Coordinator: Saroj Nayak Rapporteurs: Pratibha S

	Time	Title	Presenter
1	11:30-11:45	A children's geography of wastewater and sanitation in rural India	Rowan, James Hutton Institute, UK
2	11:45-12:00	SDG and water governance	Claudia Pal Wohst, University of Osnabrck, Germany
3	12:00-12:15	Water security assessment and SDGs	Sudeh Dehnavi, TH Kln - University of Applied Sciences, Germany
4	12:15-12:30	Role of data in SDG monitoring	Rick Lawford, Morgan state university, United States
	12:30-13:00	Open Dialogue	

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SS11: Water Museums: Concepts and Collaborations (Special Session)
Time: 11:30 - 13:00 Venue: Hotel Sheraton, Jupiter
Organized by: IUPUI
Chair: Jason M. Kelly

This special session will focus on the conceptualization and implementation of water museums across the globe. Presenters will focus on the water museum from its theoretical conceptualization through its implementation. A special focus will be placed on multi-local and international networks and collaborations in both creating and sustaining water museums.

Panelists:

1. Jason M. Kelly, Museum of the Anthropocene
2. Sara Ahmed, Living Water Museum
3. Eriberto Eulisse, Water Museums Global Network
4. Farah Kabir, ActionAid Water Museum in Bangladesh

S21: Agriculture and Water
Time:16:30 - 18:30 Venue:Hotel Sheraton, WTC Building, Seminar Hall 1
Chair: Vinay Nangia Co- Chair: Rohini Matto
Theme Coordinator: Anasusya Gangopadhyay Rapporteurs: Aditi Gurung

	Time	Title	Presenter
1	16:30-16:45	Water and Nutrient management strategies for improving the crop productivity under changing climate	U Surendran, Centre for Water Resources Development and Management, India
2	16:45-17:00	Demonstration of novel framework for surface water management at agricultural catchment level- sustainable & technological approaches for pollution control	Shivaraju Puttaiah, JSS Academy of Higher Education & Research, India
3	17:00-17:15	3-D crop architecture modeling: A new tool to achieve food security	Anurupa Das, Indian Institute of Technology, Madras, India

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	Time	Title	Presenter
4	17:15-17:30	Increasing the resilience of Indian agriculture to monsoon variability through optimized irrigation strategies	Balsher Sidhu, IRES, University of British Columbia, Canada
5	17:30-17:45	A machine learning approach for agricultural water management to balance the effect of climate changes	Pradeep H K, JSS Academy of Technical Education, Visvevaraya Technological University, India
6	17:45-18:00	Data assimilation into land surface models: implications for terrestrial feedback	Indu Jayaluxmi, Indian Institute of Technology, Bombay, India
7	18:00-18:15	Development of high resolution multi-layer soil moisture information	Karthikeyan Lanka, Indian Institute of Technology, Bombay, India
8	18:15-18:30	Evaluation of satellite based ET0 models for all sky conditions	Shwetha Rangaswamy, Indian Institute of Science, India

S22: Analysis of Groundwater Contamination
Time:16:30 - 18:00 Venue:Indian Institute of Science, JN Tata, Room B
Chair: R Srinivasan
Theme Coordinator: Kavitha Ramkumar and Rajesh Kumar Rapporteur: Arun Menon

	Time	Title	Presenter
1	16:30-16:45	Arsenic in shallow Bengal aquifer: Large scale human-water interaction and suffering	Debashis Chatterjee, University of Kalyani, India
2	16:45-17:00	Geochemical characteristics of groundwater in Wilgamuwa Region, Sri Lanka	Hashini Amaratunga, PGIS - University Of Peradeniya, Sri Lanka
3	17:00-17:15	Analysis of bacteriological quality of domestic water sources in Kabale Municipality, Western Uganda	Alex Saturday Kabale University, Uganda

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	Time	Title	Presenter
4	17:15-17:30	The challenges of water quality survey in Northeastern part of India	Dhiraj Dutta, Defence Research and Development Organization, India
5	17:30-17:45	Determination of ppb level of Arsenic in environmental samples by nanosensor Boron doped carbon dots	Fahmida Khan, National Institute of Technology, Raipur, India
	17:45-18:00	Open Dialogue	

S23: Case Studies of Water-Energy-Food Nexus Solutions and Implementations
Time:16:30 - 18:00 Venue:Hotel Sheraton, WTC Building, Seminar Hall 2
Chair: TS Gopi Rethinaraj
Theme Coordinator: Anasusya Gangopadhyay Rapporteurs: Harsh Kamath

	Time	Title	Presenter
1	16:30-16:45	The energy-water nexus in dryland agriculture: a case study of southern India	Pawan Wable, ICRISAT, India
2	16:45-17:00	WEIFF: Water and energy integrated farm factory	Bhargavi Tadipatri, Vijaya College, RV Road, Bangalore, India
3	17:00-17:15	Sustaining food production and conserving hydropower potential in China	Hong Yang, Swiss Federal Institute of Aquatic Science and Technology, Switzerland
4	17:15-17:30	Hydropower in the Mekong: the food, energy and water nexus	Jamie Pittock, The Australian National University, Australia
5	17:30-17:45	Nexus and transboundary: Case study Brazil	Anik Bhaduri, Griffith University, Australia
6	17:45-18:00	Nexus modelling to inform robust water management climate change adaptation	Andrea Momblanch, Cranfield University,UK

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S24: Groundwater Quality and Assessment II
Time:16:30 - 18:00 Venue:Indian Institute of Science, JN Tata, Room C
Chair: S. A Pandit
Theme Coordinator: Deepak Salim Rapporteurs: BL Radhakrishna

	Time	Title	Presenter
1	16:30-16:45	Village level hydrogeological, remote sensing and lineament mapping for sustainable groundwater development - Case study in a severely water stressed area in hardrock terrains of Southern India	Dr. S Srinivasa Vittala, Central Ground Water Board, Ministry of Jal-shakti, India
2	16:45-17:00	Impact of mission Kakatiya on groundwater regime and socio-economic status - A case study from Pedda Cheruvu, Chepur village, Armoor mandal, Nizamabad district, Telangana State	Samineni Indumathi and Bavandla Lavanya, Telangana State Ground Water Department, India
3	17:00-17:15	Groundwater irrigated cropland monitoring using multi-source remote sensing data.	Amit Sharma ,University of Rennes, France
4	17:15-17:30	Mapping of fractures and groundwater pathways in hardrock by heliborne geophysics	Subash Chandra, CSIR-National Geophysical Research Institute, India
5	17:30-17:45	Groundwater management in semi-arid area: A case study from Tumkur, Karnataka, India	Abhilash Paswan, CSIR-NGRI, India
	17:45-18:00	Open Dialogue	

SS12: Managing Lake Water Quality (Special Session)
Time:16:30 - 18:00 Venue: Hotel Sheraton, Grand Ballroom 1
Organized by: ATREE, Bengaluru
Chairs: Dr. Priyanka Jamwal (ATREE, Bengaluru) and Dr. Sharachchandra Lele (ATREE, Bengaluru)

In this session, we will discuss the themes related to lake water quality management in such scenarios: current challenges faced by stakeholders, proposed approaches and the possible use of technology to address these concerns.

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S25: River Basin Governance
Time:16:30 - 18:00 Venue:Indian Institute of Science, JN Tata, Room A
Chair: Robert Vardy
Theme Coordinator: Karthik Madhyastha Rapporteurs: Linitha Mathew

	Time	Title	Presenter
1	16:30-16:45	Exploring an alternative approach to inter-state basin governance: The case of Mahanadi Basin, India	K J Joy, Society fro Promoting Participative Ecosystem Management (SOPPECOM), India
2	16:45-17:00	Exploring surplus and deficit criteria for Ken-Betwa river interlinking project.	Ritambhra Thakur, Tata Institute of Social Sciences, India
3	17:00-17:15	Water Conflict Vulnerability and Stakeholder Engagement in Water Resources Planning	Kangkanika Neog, Council on Energy, Environment and Water, New Delhi, India
4	17:15-17:30	Development for transboundary water governance: Application of serious games in multi-stakeholder dialogue	Mahsa Motlagh, Institute for Technology and Resources Management in the Tropics and Subtropics (ITT) at Cologne University of Applied Sciences, Germany
	17:30-18:00	Open Dialogue	

SS13: Role of Science Diplomacy in Addressing Global Water Challenges (Special Session)
Time: 16:30 - 19:30 Venue:Hotel Sheraton, Grand Ballroom 2
Organized by: DST-Centre for Policy Research at IISc Bengaluru in association with the Consulate General of the Kingdom of the Netherlands in Bengaluru and Water Future

The session

- gathers experts and practitioners working at the crossroads of “international S&T engagement” and “addressing water challenges” at different levels government/diplomatic, industry, academia and civil society.

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- aims to deliberate on the role(s) played by various stakeholder, and
- facilitate a discussion towards building a holistic, sector-specific science diplomacy framework by creating strong inter-linkages among the stakeholders in different tracks.

SS14: Understanding Water Security Paradigms (Special Session)
Time:16:30 - 18:00 Venue:Hotel Sheraton, Grand Ballroom 1
Chair: Dr Sudhirendar Sharma, Author, Researcher, Consultant, New Delhi

The moderator will set the context, and invite each of the panelists to wade through the issues raised. The discussion will be peppered through cross examining the feedback from panelists in raising fresh cache of queries. Audience feedback/comments will be appropriately sought.

Panelists:

1. Prof. Sekhar Muddu, Indian Institute of Science
2. Dr. Laurent RUIZ, INRA - Institut National de la Recherche Agronomique
3. Dr. Veena Srinivasan, Ashoka Trust for Research in Ecology and the Environment

S26: Water Security in Agriculture and Adaptation to Climate Change
Time: 16:30 - 18:30 Venue:Hotel Sheraton, Ceres
Chair: J Srinivasan
Theme Coordinator: Saroj Nayak Rapporteurs: Golan S Naulik

	Time	Title	Presenter
1	16:30-16:45	Water pricing system in Kerala: Sustainable or not?	Anitha, Department of Economics, University of Kerala, Thiruvananthapuram, India
2	16:45-17:00	Satellite based evidences of shifting in irrigation practices over Punjab and Haryana	Dharmendra, Haryana Space Applications Centre, India
3	17:00-17:15	Irrigation adaptation due to water scarcity	Nandeesh R V, Bangalore University, India

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	Time	Title	Presenter
4	17:15-17:30	Trading water: quantifying inter-state trade of cereals in India	Francesca, London School of Hygiene & Tropical Medicine, UK
5	17:30-17:45	Bridging water supply-demand gap in dryland agricultural production systems to maximize economic water productivity	Vinay, International Center for Agricultural Research in the Dry Areas (ICARDA), Morocco
6	17:45-18:00	A Critical sectoral assessment of the effectiveness of economic instruments in improving water use efficiency	Sridharan Ashwin Ram, Madras School of Economics, India
	18:00-18:30	Open Dialogue	

S27: Water Security, Informal Water Use and Water Access
Time: 16:30 - 18:00 Venue: Hotel Sheraton, Neptune
Chair: Elena Lopez Gunn
Theme Coordinator: Saroj Nayak Rapporteurs: Pratibha S

	Time	Title	Presenter
1	16:30-16:45	Mapping water scarcity in India using Water Poverty Index	Ashish, Indian Institute of Science, India
2	16:45-17:00	Impact of neoliberalisation of urban water supply on the urban poor in the slums of Rasoolpura, Hyderabad	Shreya, Foundation for Ecological Security, India
3	17:00-17:15	Living in a city built by private firms: Water and vulnerability in the millenium city of Gurugram	Suparna, Young Bhartiya Foundation, India
4	17:15-17:30	Integrated exploration, analysis and improvements to water based institutional mechanisms in informal settlements of India	Priyanjali, Megh Pyne Abhiyaan, India
5	17:30-17:45	Fetching Water and Gender Dynamics in Indian Households	Manisha, International Institute for Population Sciences, Mumbai, India

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	Time	Title	Presenter
6	17:45-18:00	Water In the World We Want: Canadas Journey	Corinne Schuster Wallace & Robert Sandford, University of Saskatchewan, Canada

PS2: Poster Session
Time: 18:00 - 19:30 Venue: Hotel Sheraton, WTC Building, Seminar Hall

Groundwater in the service of mankind to retain resilience under change

	Title	Presenter
1	Rainwater: A Sustainable Source of Fluoride Safe Potable Water in fluorosis endemic habitations of Bihar and elsewhere	Arvind Kumar Nag
2	On sediment concentration water discharge relationship	Laxmipriya Mohanty
3	Mitigation of geogenic and anthropogenic groundwater pollution by permeable reactive barrier	Malini Rajendran
4	Biomass-Based Porous Carbon for defluoridation studies	Parimal Bhomick
5	Spatio-temporal analysis of groundwater levels for distributed recharge and projection of future trend in Tawi Basin, Jammu	Sagarika Roy
6	A simple, efficient and rapid water quality monitor using nanomaterials	Sritama Mukherjee

Climate Change and Water

	Title	Presenter
1	Analysis of annual and extreme rainfall of Vadodara region	Chirayu Pandit

Water Governance

	Title	Presenter
1	Modern Day Water Governance - A Pathway to the Future	Rahila Iftekar / Vaishnavi Naik

Water security development-leaving no one behind

	Title	Presenter
1	A study on water foot print of Agalpur Gram Panchayat	Dillip
2	Integrated perspectives to build rural resilience : A case study of Sawai Madhopur, Rajasthan	Akash Sondhi
3	Implementing self- help water supply engineering in morewadi, Kolhapur	Akash Ghaste
4	Drinking Water Scarcity in Jordan and the Dead-Red Canal	Nikhil Ravindra

SDG Implementation

	Title	Presenter
1	Prioritization of development targets for efficient implementation of Agenda 2030	Arpita Agarwal
2	Water management for Sustainable Development ; SDG Implementation in Indian context.	Smita Mahanta

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S28: An Integrated Global Vision for Water Security: Approaches and Methods
Time: 09:00 - 10:30 Venue: Indian Institute of Science, JN Tata, Room C
Chair: John Pomoroy
Theme Coordinator: Saroj Nayak Rapporteurs: Anupama Nair

	Time	Title	Presenter
1	09:00-09:15	Experiences and definitions of water security by mountain communities	Shrinivas Badiger, ATREE, India
2	09:15-09:30	Knowledge to action in Canada's Global Water Futures project	Lawrence, University of Saskatchewan, Canada
3	09:30-09:45	Rethinking training for water: Towards the African water vision and the SDGs	Christopher Gordon, University of Ghana, Ghana
4	09:45-10:00	Prospects for future water availability in Peninsular India	Gwyn Rees, Centre for Ecology & Hydrology, UK
	10:00-10:30	Open Dialogue	

SS15: Climate change and water management (Special Session)
Time: 09:00 - 10:30 Venue: Indian Institute of Science, JN Tata, Room A
Organized by: TERI School of Advanced Studies Conveners : Ms. Ranjana Ray Chaudhuri, Lecturer, TERI School of Advanced Studies and Dr. Kamna Sachdeva, Associate Professor, TERI School of Advanced Studies

	Time	Event
1	09:00-09:10	Introduction
2	09:10-09:25	Short film and experiencial learning activity
3	09:25-09:55	Panel
4	09:55-10:25	Roundtable discussion
5	10:25-10:30	Session Takeaway

Friday, 27 September

SS16: Ecohydrology: Engineering Harmony for a Sustainable World (Special Session)
Time: 09:00 - 10:30 Venue: Hotel Sheraton, Grand Ball Room 2
Organized by: National Institute of Hydrology, Roorkee Chairs : Dr. Sharad Jain, Director, NIH, Roorkee and Dr. V. C. Goyal, Scientist G, NIH, Roorkee

	Time	Title	Presenter
1	09:00-09:18	Sharing water between humans and nature for Indias ecological security	Dr. Jagdish Krishnaswamy, Senior Fellow, ATREE Foundation, Bengaluru
2	09:18-09:36	Measurement and modelling of hydrologic responses under different land covers in Sahayadri mountains, India	Dr. B. Venkatesh, Scientist-F, Hard Rock Regional Centre, Belagavi, Karnataka
3	09:36-09:54	Focal Area 5.4: Urban Ecohydrology-storm water purification and retention in the city landscape, potential for improvement of health and quality of life	Dr. Harry Virahsawmy, Urban Water Specialist, Alluvium Consulting, Australia
4	09:54-10:12	Identifying priority catchments for water resource protection as a contribution to sustainable development and freshwater biodiversity conservation: a national approach for Zambia	Bernhard Lehner, Associate Professor Department of Geography, McGill University, Canada
5	10:12-10:30	Role of biomimicry in ecologically sustainable water management	Mr. Prashant Dhawan, Co Founder Bio Mimicry, India

S29: Groundwater Governance
Time: 09:00 - 10:30 Venue: Hotel Sheraton, Neptune
Chair: Karen Villoth
Theme Coordinator: Deepak Salim Rapporteurs: Sitara Krishnakumar

	Time	Title	Presenter
1	09:00-09:15	Societal awareness and water learning as adaptive water management strategy in water stressed areas	Aju CD, Karyavattom Campus, University of Kerala, India

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	Time	Title	Presenter
2	09:15-09:30	Human Arsenic exposure risk via crop consumption and global food trade	Karen Villholth, IWMI, International Water Management Institute, South Africa
3	09:30-09:45	GIS-Based spatial distribution of groundwater quality and regional suitability evaluation for drinking water	Archana Sarkar, National Institute of Hydrology, Roorkee, India
4	09:45-10:00	The costs and benefits of managed aquifer recharge	Andrew Ross, Australian National University, Australia
	10:00-10:30	Open Dialogue	

S30: Interlinkages in Urban Water Systems
Time:09:00 10:30 Venue:Hotel Sheraton, WTC Building, Seminar Hall 2
Chair: Veena Srinivasan
Theme Coordinator: Karthik Madhyastha Rapporteurs: Karthik Ganeshan

	Time	Title	Presenter
1	09:00-09:15	Old wisdom for new resilient smart cities : an introspect for SDG 6	Akash Sondhi, TERI School of Advanced Studies, India
2	09:15-09:30	Sanitation in future cities: Groundwater and sanitation interlinkages in peri-urban Bangalore	Durba Biswas, ATREE, India
3	09:30-09:45	Observation of the impact of urbanization on precipitation trends in India	Hiteshri Shashtri, Charotar University of Science and Technology, Gujarat, India
4	09:45-10:00	Integrated urban water and energy balance for urban planning	Mayank Gupta, Indian Institute of Technology, Bombay,India
	10:10-10:30	Open Dialogue	

Friday, 27 September

SS17: Rethinking Urban Water Supply and Management (Special Session)
Time: 09:00 10:30 Venue: Hotel Sheraton,Grand Ball Room 1
Conveners: Kangkanika Neog, Programme Associate, CEEW and Ishita Jalan, Research Analyst, CEEW

	Time	Title	Presenter
1	09:00-09:15	Introductory Remarks & Presentation	-
			Dr Veena Srinivasan, Fellow, ATREE
			Prof M S Mohan Kumar, Professor, IISc
2	09:15-10:30	Panel Discussion	Jaladhi Vavaliya, Senior Programme Lead, CEPT University
			Vishwanath S, Biome Environmental Services
			Kangkanika Neog, Programme Associate, CEEW

S31: Solutions in Water Quality Management
Time: 09:00 10:30 Venue: Hotel Sheraton, Jupiter
Chair: Hartwig Kremer
Theme Coordinator: Kavitha Ramkumar and Rajesh Kumar
Rapporteurs: Linitha Mathew

	Time	Title	Presenter
1	09:00-09:15	Water resources management for inclusive development of the society	Pramod Kumar, SM Government Girls High School, Puri, Odisha, India
2	09:15-09:30	Examination and remedial action on water quality of Rajgangpur, Odisha	Sarojini Sahu, Gopabandhu Government High School, Rajgangpur, Odisha, India

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	Time	Title	Presenter
3	09:30-09:45	An Integrated approach to manage overexploited aquifers of Semi -arid region, NCR, India	Rina Kumari, Central University of Gujarat, Gandhinagar, India
4	09:45-10:00	Remedies for bacterial contamination of Jiya Bharali River by using modified river sand	Swagata Goswami, Defence Research and Development Organization, India
5	10:00-10:15	Removal of Cadmium and Lead from aqueous solution by Hydroxyapatite/Chitosan hybrid fibrous sorbent	Debabrata Bhadra, Bhairab Ganguly College, Belgharia, Kolkata, India
6	10:15-10:30	An overview on recycle and reuse of treated wastewater in industries	Shanmugasundaram O.L., K.S. Rangasamy College of Technology, India

S32: Water Ethics: Concepts and Approaches
Time: 09:00 - 10:30 Venue: Hotel Sheraton, Ceres
Chair: David Grondenfeldt
Theme Coordinator: Saroj Nayak Rapporteurs: Saroj Nayak

	Time	Title	Presenter
1	09:00-09:15	Transforming water: Towards a life-affirming ethical approach to water management	Susan Smith, Willamette University, USA
2	09:15-09:30	Exploring the water crisis in Uttar Pradesh	Pawan Kumar, Central University of Gujarat, Gandhinagar, India
3	09:30-09:45	Using ethics to clarify water values and create “the world we want”	David Groenfeldt, Water-Culture Institute, USA

Friday, 27 September

	Time	Title	Presenter
4	09:45-10:00	"... Before, the floodwater used to come in gracefully and recede faster": Political ecology of the Brahmaputra Valley hazardscape and rethinking the postcolonial state	Mitul Baruah, Ashoka University,India
5	10:00-10:15	Raising public awareness of water through "place-making"	Jason Kelly, IUPUI Arts & Humanities Institute, USA
	10:15-10:30	Open Dialogue	

S33: Water Quality Assessment: Case Studies
Time: 09:00 - 10:30 Venue: Hotel Sheraton, WTC Building, Seminar Hall 1
Chair: Shekar Maddu
Theme Coordinator: Kavitha Ramkumar and Rajesh Kumar Rapporteurs: Arun

	Time	Title	Presenter
1	09:00-09:15	Analyzing microplastics in water systems: A case study of Negombo Basin Estuary, Sri Lanka	Ananya Shah, TERI School of Advanced Studies, India
2	09:15-09:30	Application of multivariate statistical methods to evaluate and adjust water quality monitoring network in Freiberger Mulde river basin, Germany	Thuy Nguyenr, United Nations University (UNU-FLORES) / TU Dresden, Germany
3	09:30-09:45	Discovering linkages between catchment characteristics and water quality using catchment classification	Ankit Deshmukh, Indian Institute of Technology, Hyderabad, India
4	09:45-10:00	Water quality at scale; Three demonstration cases on water quality and services in Africa	Kilian Christ, United Nations Environment Programme,Kenya
5	10:00-10:15	Investigating nitrate dynamics in a subtropical water reservoir using D17O method	Ritika Kaushal, Institute of Earth Sciences, Academia Sinica, Taipei, Taiwan
	10:15-10:30	Open Dialogue	

Friday, 27 September

S34: Groundwater Assessment and Agriculture
Time: 11:00 - 12:30 Venue: Hotel Sheraton, Neptune
Chair: Shammy Puri
Theme Coordinator: Deepak Salim Rapporteurs: Sitara Krishnakumar

	Time	Title	Presenter
1	11:30-11:15	Deciphering the recharge of groundwater by Narmada canal irrigation, Gujarat	Raicy Mc, Physical Research Laboratory, India
2	11:15-11:30	Assessing the processes governing solute concentration in groundwater: Insights from an irrigated semi-arid catchment	Buvaneshwari Sriramulu, Indian Institute of Science, India
3	11:30-11:45	Irrigation draft estimation at village scale: A step towards microlevel groundwater management	Tajdarul Syed, Indian Institute of Technology (ISM), Dhanbad, India
4	11:45-12:00	Sustainable groundwater management strategies for a wastewater irrigated agriculture system	Mahesh Jampani, United Nations University and Technical University of Dresden, Germany
	12:00-12:30	Open Dialogue	

S35: Solutions to Promote Sustainability in Water Space
Time: 11:00 - 12:30 Venue: Hotel Sheraton, WTC Building, Seminar Hall 2
Chair: Richard Lawford
Theme Coordinator: Yoginder Negi Rapporteurs: Abu Bakar Siddiqui

	Time	Title	Presenter
1	11:00-11:12	Desalination by RO and multi stage flash distillation as a solution to water crises and comparing both of them	Ujan Sengupta, Techno International New Town, India
2	11:12-11:24	Viable innovative methods for sustainable water future	Susmita Mohapatra, Government High School, Sector 16, Rourkela, Odisha, India

Friday, 27 September

	Time	Title	Presenter
3	11:24-11:36	Microbial electrochemical remediation system for removal of bioactive compounds from wastewater	Monika Sogani, Manipal University, Jaipur, India
4	11:36-11:48	Integrated methodology for sustainable solutions to water related issues	Musarrat Parween, National Institute of Advanced Studies, India
5	11:48-12:00	Experimental study on domestic solar still desalination with cotton gauze	Baskaran V, Pondicherry Engineering College, Puducherry, India
6	12:00-12:12	Economic valuation of ecosystem services: A case of Veli wetland system in Kerala.	Resmi Panicker, Government College, Trivandrum, India
7	12:12-12:24	Influence of aridity on basin characteristics in the Budyko Framework	Anamitra Saha, Indian Institute of Technology, Bombay, India
	12:24-12:30	Open Dialogue	

S36: Technology-based Solutions in Addressing Water Quality
Time: 11:00 - 12:30 Venue: Hotel Sheraton, Jupiter
Chair: R Srinivasan
Theme Coordinator: Kavitha Ramkumar and Rajesh Kumar Rapporteurs: Arun

	Time	Title	Presenter
1	11:00-11:15	A low cost real time nitrate sensing system using mobile Apps	Darsana S, Institute of Human Resources Development, Kerala, India
2	11:15-11:30	Elimination of emerging contaminants in a multi-barrier water treatment system	Hongjiao Pang, University of Melbourne, Australia

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	Time	Title	Presenter
3	11:30-11:45	Assessment of water contamination by Lead ions by rapid optical nanoparticles-based bioreceptor techniques	Anna Berlina, A.N. Bach Institute of Biochemistry, Research Center of Biotechnology of the Russian Academy of Sciences, Russia
4	11:45-12:00	Rainwater harvesting and primary treatment for non-potable use	Samia Richards, The James Hutton Institute, UK
	12:00-12:30	Open Dialogue	

SS18: Transboundary Water Governance (Special Session)
Time: 11:00 - 12:30 Venue: Hotel Sheraton, WTC Building, Seminar Hall 1
Organized by: Water Future Chair: András Szöllösi-Nagy

The session will address some of the political-economic issues surrounding transboundary water governance and cooperation over shared management. Using simple political-economic models, the case studies will demonstrate underlying incentives and disincentives and altruistic motives for countries to cooperate. The session will also explore how water market can play a role in resolving transboundary water conflict.

Speakers:

1. Robert G. Varady : The exigencies of transboundary water security: Insights on community resilience
2. Anik Bhaduri: Role of Water Market in Transboundary Water Sharing
3. Masha Motlagh: Altruism and Transboundary water sharing

S37: Urban Flood Risk
Time: 11:00 - 12:30 Venue: Indian Institute of Science, JN Tata Room A
Chair: PP Mujumdar
Theme Coordinator: Karthik Madhyastha Rapporteurs: Anu Patil

	Time	Title	Presenter
1	11:00-11:15	Reliability assessment of Bangalore storm water drain network considering LU/LC change and lake condition	Gouri Laxmeshwar, Indian Institute of Science, India
2	11:15-11:30	Flood impact assessment in real time: A case study of Chennai	Bharath R, Aon Consulting Pvt. Ltd., India
3	11:30-11:45	Coastal flooding in Vietnam and effect of sea level rise along its deltas.	Naveen Ragu Ramalingam, Aon Consulting Pvt. Ltd., India
4	11:45-12:00	Probabilistic flood model for quantification of risk for insurance perspective	Santhosh Dronamraju, Aon Consulting Pvt. Ltd., India
	12:00-12:30	Open Dialogue	

S38: Urban Water Resilience and Innovation
Time: 11:00 - 12:30 Venue: Indian Institute of Science, JN Tata Room B
Chair: Sharad Lele
Theme Coordinator: Karthik Madhyastha Rapporteurs: Karthik Ganeshan

	Time	Title	Presenter
1	11:00-11:15	Creative, Ingenious and sustainable water strategies for urban water resilience	Akash Sondhi, TERI School of Advanced Studies, India
2	11:15-11:30	A water sensitive approach for cities in India	Harry Virahasawmy, Alluvium Consulting Australia, India
3	11:30-11:45	AquaGen - A sustainable water management system	Ganesh Shankar, Alluvium Consulting Australia, India

Friday, 27 September

	Time	Title	Presenter
4	11:45-12:00	Innovation capabilities in Water Governance for accelerating sustainability transitions	Chitresh Saraswat, Australian National University, Australia
	12:00-12:30	Open Dialogue	

SS19: Challenges and opportunities of water availability and water management in the MENA Region
Time: 11:00 - 12:30 Venue: Hotel Sheraton, Grand Ball Room 1
Organized by: Future Earth, MENA
Chair: Prof. Dr. Manfred Lange, Director, Future Earth MENA Regional Center, The Cyprus Institute

The roundtable discussions will address some of the causes of the above mentioned challenges and will explore possibly strategies to provide mitigation and adaptation measures. We will discuss, how such measures can be negotiated and implemented in light of an equitable water-sharing between main stakeholders and by taking into account the constraints of water-, energy and food security in the MENA Region.

S39: Water Ethics: Practical Applications
Time: 11:00 - 12:30 Venue: Hotel Sheraton, Ceres
Chair: K J Joy
Theme Coordinator: Saroj Nayak Rapporteurs: Saroj Nayak

	Time	Title	Presenter
1	11:00-11:15	Reshaping Rivers through Public Art	Ravi Agarwal, Toxics Link, India
2	11:15-11:30	Nibi (water) Declaration: Anishinaabe water governance in the Treaty 3 area in Northwestern Ontario (Part I: Governance and Indigenous normative values)	Aimee Craft, University of Ottawa, Canada
3	11:30-11:45	Nibi (water) Declaration: Anishinaabe water governance in the Treaty 3 area in Northwestern Ontario (Part 2 Governance and water management)	Lucas King, Grand Council Treaty #3, Canada

Friday, 27 September

	Time	Title	Presenter
4	11:45-12:00	Migrating out of environmentally stressed areas: A case of Belaspur village in mid-stream of Gandaki river basin	Sijal Pokhrel, International Centre for Integrated Mountain Development, Nepal
	12:00-12:30	Open Dialogue	

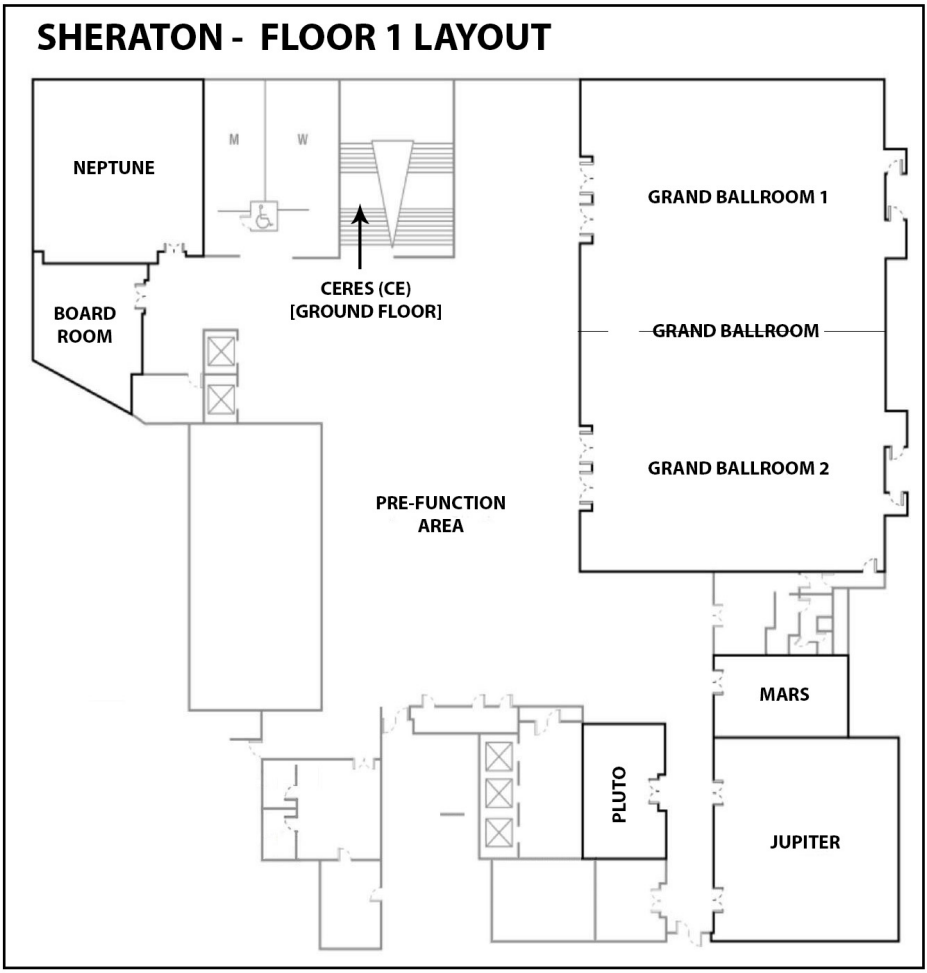
S40: Water Quantity and Quality Considerations in River Basin Planning and Management
Time: 11:00 - 12:30 Venue: Hotel Sheraton, Grand Ball Room 2
Chair: Rebecca Tharme
Theme Co-ordinator: Himanshu Bhagat Rapporteurs: Aditi Gurung

	Time	Title	Presenter
1	11:00-11:15	India and Australia: A comparative assessment of water and river basin planning.	David Winfield, Alluvium Consulting Australia, Australia
2	11:15-11:30	Modernization effects on sustainable water allocation - Yoda Ela, Sri Lanka	H.A.H. Jayasena, University of Peradeniya, Sri Lanka
3	11:30-11:45	Water infrastructure carrying capacity of Mahabaleshwar, a town in Western Ghats	Ankitha Shanbhogue, School of Planning and Architecture, New Delhi, India
4	11:45-12:00	Water infrastructure carrying capacity of Mahabaleshwar, a town in Western Ghats	Khondoker Ahmed, Chemical Research Division, BCSIR Laboratories, Dhaka, Bangladesh Council of Scientific and Industrial Research (BCSIR), Bangladesh
5	12:00-12:15	Prediction of Jamuna River bank erosion condition using deep learning	Kazi Hasan, Bangladesh University of Engineering and Technology , Bangladesh

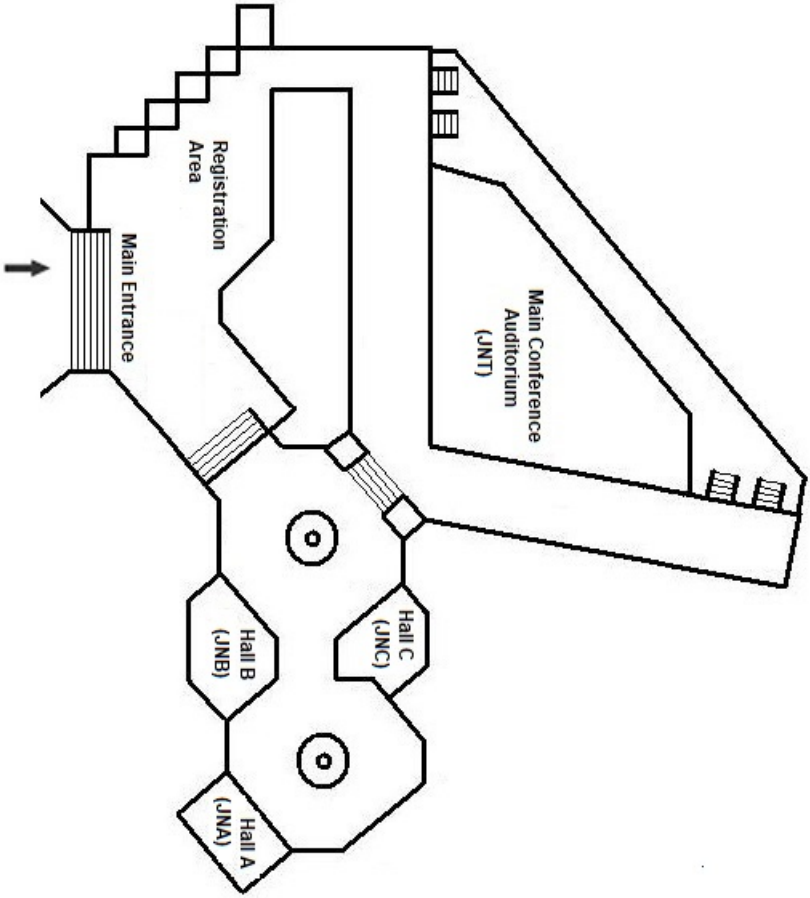
Friday, 27 September

	Time	Title	Presenter
6	12:15-12:30	The role of vegetation in river response to a flood	Joseph McMahon, Griffith University, Australia

Venue Layouts



LAYOUT - JN TATA Auditorium , IISC



LOCATION OF WORLD TRADE CENTRE

Important information

Dear Participant,
We have listed a few contacts in case of any queries or emergency.

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Conferences are usually huge generators of single-use waste that eventually add to the towering heights of our landfills. As an effort to make the conference sustainable and zero waste, we are doing away with the use of single-use plastic items. For this reason, we encourage you to bring your own water bottles.

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Ecological Management of Water: Himanshu Bhagat
Groundwater: Deepak Salim, Ganesh Khatei
Measuring Sustainability in the Water Space: Yoginder Negi
Sustainable Development Goal 6, Water Security and Water Ethics: Saroj K Nayak
Urban Water Resilience and Water Governance: Karthik Madyastha
Water-Energy-Food Nexus: Anasuya Gangopadhyay
Water Quality: Kavitha Devi Ramkumar, Rajesh Kumar
Special Session co-ordinator: Ravi Prakash

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JN Tata Auditorium: Anupama Nair
JN Tata Room A: Prashanth S
JN Tata Room B: Sudhanshu
JN Tata Room C: Sagar Ingale
Jupiter: Adithya Kaushik
Neptune: Arya A R, Nidhiya Jose
WTC Seminar Hall 1: Mansi Joshi
WTC Seminar Hall 2: Tejal
Poster Session: Linitha Mathew, Amita Sawant, Pradeep T L

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