# **Event Folder**



# Aqua Foundation XIII World Aqua Congress

**International Conference & Exhibition** 

30<sup>th</sup> - 31<sup>st</sup> October, 2019, New Delhi, India



# Theme: Water for all – Leaving no one behind

Organized by:



### About Aqua Foundation

Aqua Foundation is a Non-Governmental Organization working on key aspects of Water, Environment & Humanity. The ever balanced, ever harmonized cycles & arrangements of nature have been greatly challenged and disturbed by humans in last century, which inturn pose a threat to their own survival. The organization is working to reverse these damages and work towards a sustainable living, in oneness with fellow humans, other living beings, plants and nature. The ultimate goal of the organization is to ensure humanity's long term future.

The activities of Aqua Foundation include knowledge creation, information dissemination, research and education. The organization works through a diverse range of tools and techniques including, but not limited to, conferences, seminars, training programs, on-line learning, capacity building, community projects, school activities etc., with prime focus on Humanity and Sustainability.

Aqua Foundation is organizing international conference 'World Aqua Congress' since year 2007. The conference aims to bring various stakeholders i.e. policy makers, researchers, academicians, industry, NGOs etc., on a common platform for meaningful discussions & deliberations and implementation & execution. 'Aqua Excellence Awards' are also key highlight of the two days international conference. These awards are given to promote, encourage & recognise innovations and contributions in the field of environment & humanity.

### About Water for all – Leaving no one behind

Aqua Foundation is a Non-Governmental Organization working on key aspects of Humanity. Aqua Foundation is organizing international conference 'World Aqua Congress' since year 2007. The conference aims to bring various stakeholders i.e. policy makers, researchers, academicians, industry, NGOs etc., on a common platform for meaningful discussions & deliberations and implementation & execution. 'Aqua Excellence Awards' are also key highlight of the 2 days international conference. These awards are given to promote, encourage & recognise innovations and contributions in the field of water, environment & humanity.

Aqua Foundation's World Aqua Congress (Conference & Exhibition) brings water, environment and related professionals from around the world and offers new insights into how cutting edge research, technological innovation and leading practices shape the major transformation in water management. The conference provides a unique opportunity to learn about the latest trends in best practices, innovative technologies and cutting edge research. Connecting experts from across water and environment sectors, it deliberates on challenges of delivering clean water to growing populations, keeping rivers and water bodies clean & healthy, best practices for ground water exploration and management, industrial water management, enhancing water use efficiency, impact of climate change, policies and regulations, and acknowledging champions of water & environment. Experts, practitioners, decision-makers, business innovators and young professionals from a range of sectors and countries network, exchange ideas, foster new thinking and develop solutions to the most pressing water-related challenges of today. We believe water is key to our future prosperity, and that together, we can achieve a water wise world. The Congress presented the collective knowledge and know-how through leading keynote speakers, Tech-talks by industry leaders, research paper presentations, poster sessions, showcasing latest technologies in display areas, and open discussions.

When the 2030 Agenda was adopted in 2015 by the UN, all countries and stakeholders set out an ambitious agenda envisaging a world free of poverty, hunger and disease. A world where all life can thrive and where no one is left behind. At a time of immense global challenges – poverty, inequalities, natural disasters, humanitarian crises and forced displacement – the 2019 edition of World Aqua Congress aligns itself with theme of UN World Water Day and looks at why people have been left behind and how access to water and sanitation and sustainable water management can be drivers of change. Water for all implies that also elderly, disabled, marginalized and poor people get access to clean drinking water and proper sanitation, as is meant with universal access in Sustainable Development Goals #6.1 and 6.2.

India is growing...practically in every aspect. At 7.6%, India is the fastest-growing large economy in the world today. At the same time, Indian economy is struggling with excessive population growth and changing water resource conditions. India faces major challenges in the water sector with the per capita availability going down and demand growing due to urbanisation and industrialisation.

The objective of the XIII World Aqua Congress was to bring various stakeholders on a common platform, deliberate on various issues linked to water, discuss inclusion of these solutions in policy framework and work towards ensuring a more sound future for the world we leave to our children.

The conference was being organized along with exhibition on water technology. Various new technologies have emerged for efficient use of water, water management, waste water treatment, distribution, desalination, recycling, re-use etc., and exhibition provides a platform for display of these technologies.

The sub-themes of the conference had been aligned with identified goals of National Water Mission, to ensure integration of solutions with policies and priorities of the Government. Following themes broadly described the focus areas of deliberations, with a certain degree of overlapping. The structure had been deliberately kept flexible and was evolved depending on research contributions received from participants.



### **Themes & Topics**

Following themes broadly described the focus areas of deliberations, with a certain degree of overlapping. The structure was been deliberately kept flexible and evolved depending on research contributions received from participants.

#### Water Resources: Availability, Management, Quality

- Status of Water Resources
- Water Quantity- Gaps in Demand & Supply in Various Sectors
- Water Quality Criteria for various Uses-Present Status
- Water Exploration & Management- Latest Trends in Surface & Ground Water
- Water Quality Management
- Additional Resource Creation (such as Rain Water Harvesting, Recycling etc.)
- Population Growth, Urbanization, Economic and Industrial Development

# Global Climate Changes and Impact on Water Resource Management

- Validation of Future Projections
- Creation of Comprehensive Water Data Base
- Impact of Global Climate Change on Water Resources
- Modelling for Future Trends
- Solutions and Technology Development
- Politics of Water Crisis and Climate Change
- Climate Change and Water Security
- Climate Change and Polar Regions

#### Water for All- Action Plan

- Ensuring Adequate Water Quantity and Quality for All
- Quality Monitoring Mechanisms
- Identification of Vulnerable Sections, Wetlands and Springs
- Inclusive Water Security
- Capacity Building to Secure Inclusive and Sustainable
   Innovation
- Role of Good Water Governance to Improve Inclusiveness

#### **Enhancing Water Use Efficiency**

- Physical, Social and Economical Dimensions
- Technological aspects
- Environmental aspects
- Enhancing Water Use Efficiency Agriculture Sector
- Enhancing Water Use Efficiency- Rural Sector
- Enhancing Water Use Efficiency- Urban Sector
- Enhancing Water Use Efficiency- Industrial Sector
- Strategies to Increase Water Use Efficiency by 20%

#### Action Plan for Vulnerable and Over-exploited Areas

- Identification of Critical Areas
- Additional Resource Creation (Rain Water Harvesting, Recycling etc.)
- Detailed Aquifer Mapping for Effective Aquifer Management
- Technologies for Desalination, Recycling and Reuse
- Rejuvenation of Water Bodies and Traditional Water Conservation Structures

#### **Integrated Water Resource Management**

- Basin Level Integrated Water Resource Management
- Water Transfers
- Climate Change Considerations
- Water Budgeting

#### Water Technologies

- Water/ Wastewater Treatment
- Water Reuse and Recycling
- Water Quality Management
- Drinking Water: Purification, Bottling, Supply
- Salinity Management
- Latest Technologies in Water Exploration and Management
- Software for Water
- Rainwater Harvesting
- Ground Water Management and Modelling
- Technologies for Irrigation and Agriculture
- Water Leakage Technologies
- Utilities and Utility Management

#### Financial, Institutional, Legal and Policy Issues

- Water Policy and Water Usage Reform
- Water Rights, Pricing and Laws
- Government's Role in Water Management
- Water Access as a Fundamental Right
- Laws to Prevent Pollution of Water Bodies and Aquifers
- Municipalities and Sustainable Water Management at Local Level
- Water Infrastructure Investment and Financing



#### Event Folder '2019

Chief Guest : Shri Gajendra Singh Shekhawat Hon'ble Minister, Ministry of Jal Shakti, Dept. of WR, RD & GR Govt. of India

# Speakers/Authors



Shri U.P. Singh Secretary, Ministry of Jal Shakti Dept. of WR, RD & GR, Govt. of India



**Er. Vivek P Kapadia** Chief Engineer Narmada, WR, WS & Kalpasar Dept



Justice Swatanter Kumar (Retd.) & Former Chairperson National Green Tribunal



Dr. P.R. Swarup Director General Construction Industry Development Council



Dr. Manish Kumar Goyal Associate Professor IIT Indore



**Ms. Pradnya Mathur** Consultant National Water Mission Ministry of Jal Shakti, New Delhi



**Dr. Harini Santhanam** Assistant Professor National Institute of Advanced Studies



Ms. D. Vaishnavi Senior Research Fellow, CSIR Indian Institute of Chemical Technology Hyderabad



Shri A.B. Pandya Former Chairman CWC & Secretary ICID-CIID



Shri M. L. Franklin Dy. Director Ministry of Jal Shakti, Govt. of India New Delhi



Shri Samarakoon Banda Consulting Engineer (Civil) Structural & Hydropower Sri Lanka



Mrs. Kripa K. M. Assistant Professor Ahalia School of Engineering & Technolog, Palakkad Kerala



**Dr. B R K Pillai** Commissioner (CAD) Ministry of Jal Shakti, Govt. of India



Dr. Anish Jantrania Associate Professor & Extension Specialist TEXAS A & M AgriLife, Biological & Agricultural Engineering, U.S.A



Shri M. Lakshmi Kantha Rao General Manager (Civil) NLC India Limite Tamilnadu



Ms. Roshan Rathod Gender and Institution Building Specialist People's Science Institute Dehradun



Shri Devendra Kumar Sharma Chairman Bhakra Beas Management Board



Shri Nikhilesh Kumar Co-founder VASSAR LABS IT Solutions Hyderabad



Ms. Anita Sharma Research Scientist People's Science Institute Dehradun



**Dr. Raghu Pillai** Managing Director REWS (India), Bengaluru Karnataka



#### www.worldaquacongress.org



Prof. (Dr.) K. Mohamed Ali Professor Vinayaka Mission's Medical College Karaikal



Shri C K Gopan Senior Research Engineer Fluid Control Research Institute Palakkad, Kerala



Ar. Akash Deep Senior Program Manager GRIHA Council & Senior Fellow TERI, New Delhi



Shri Ritaban Mitra Project Officer SIGMA Foundation Kolkata



Shri Grandhi Srivardhan Manager Engineers India Limite Gurugram



Shri Rajat Chowdhury Senior Executive (Business Development) Electrosteel Castings Limited, Kolkata



Dr. Archana Tiwari Associate Professor Amity Institute of Biotechnology Amity University, Noida



**Prof. S.K. Mazumder** Former AICTE Em. Professor Civil Engineering, DCE/ DTU



Dr. Subhash C Singh Ex- Chairman Central Ground Water Board Govt. of India



Ms. Risha Jasmine Singh University of Otago, Dunedin New Zealand



Dr. Debasri Mukherjee Senior Research Officer SIGMA Foundation, Kolkata



Shri Patranjan Bhattacharya Assistant General Manager Secure Meters Limited Udaipur



Dr. Nupur Bahadur Fellow, TERI Deakin Nano Biotechnology Centre New Delhi



Dr. Aditya Sarkar Associate Professor Pesidency University Kolkata



Ms. Thummalapalli Nagamani Senior Research Fellow, CSIR Indian Institute of Chemical Technology Hyderabad



Dr. Sameer Vyas Scientist-B Central Soil and Materials Research Station New Delhi



Shri Vargish Bamola Hydrogeologist People's Science Institute Dehradun



**Dr. Sarika Kulkarni** Director Raah Foundation Mumbai



Ms. G. Shreeranjini lyer Millenium Institute of Technology Bhopal



Ms. Bukke Vani Senior Research Fellow, CSIR Indian Institute of Chemical Technology Hyderabad



Event Folder '2019

Dr. Prafull Singh Assistant Professor Amity Institute of Geoinformatics & Remote Sensing, Amity University Noida



Dr. Sangita Ladha Vice President Marketing & Business Development Jain Irrigation Systems, New Delhi



Dr. Chandra Gupta Principal Scientist (Agronomy) ICAR-Indian Institute of Sugarcane Research Lucknow



Shri S. Jagadeesan Carpi India Waterproofing Specialists Chennai



Shri Ajay Singh Director ILEX Academy, New Delhi



## Aqua Foundation's Excellence Awards 2019

The "AF's Excellence Award" are the highest award given by Aqua Foundation to its members & stakeholders in recognition of their outstanding achievement in the field of Nature. Aqua Foundation honours, in each World Aqua Congress, individual/nominees of corporate members who have made mark in their respective fields of expertise or have made a significant contribution towards the water & environment conservation techniques.

#### The awardees of Aqua Excellence Awards for year 2019:





A. K. Mishra Professional Excellence (Individual)



SPR Wing, DoWR, RD & GR, Ministry of Jal Shakti Sustainable Development in Food and Agriculture



Rajiv Gandhi National Ground Water Training and Research Institute Excellence in Capacity Building



Filter Concept Pvt. Ltd. Excellence in Development of Technology (Industrial)



SADHGURU Life Time Achievement



Lignite Mine-I of M/s NLC India Limited Sustainable Development in Mining Sector



Dr. Deepak Khare Professor, Indian Institute of Technology Roorkee Academic Excellence (Individual)



Jagadish Chandra Mazumdar Chief General Manager, Mine-II, NLC India Limited Professional Excellence (Individual)



Kent RO Systems Ltd. Domestic Water Purifier – RO





Life Insurance Corporation of India Excellence in Resource Management



Prof. (Dr.) K. Mohamed Ali Professor, Vinayaka Missions Medical College And Hospital Professional Excellence (Individual)



Karnataka Rural Infrastructure Development Limited Excellence in Development of Water Technology (Industrial) For BBMP Bellahalli LTP & Fresh Water Recovery Plant



Mine II - M/s NLC India Limited Sustainable Development in Coal Mining Sector

www.worldaquacongress.org



Ryan International School, Sec 31, Gurugram Excellence in Promoting Environmental Awareness



Ahalia International Foundation Water Management - Private Sector



WAE CORP INDIA PVT LIMITED Water Company of the Year - Private Sector



NLC India Limited Water Management - Public Sector



Ratnagiri Gas & Power Pvt. Ltd. Water Reuse Project of the Year



Dr. Rakesh Khare Professional Excellence (Individual)



Raah Foundation NGO - Revival of Rural Water Resources



V. K. Grover, Anil Kumar Singh & Bhupesh Kumar Excellence in Development of Technology (Individual) (From Left to Right)



Dr. Subhash C. Singh Innovation in Water Sector (Individual)



CSIR- Indian Institute of Chemical Technology Hyderabad Excellence in Development of Technology (Institutional)

#### Event Folder '2019



Dr. Nupur Bahadur Excellence in Development of Technology (Individual)



Paschim Hydro Energy Pvt. Ltd. Sustainable Development in Hydropower Sector



Ratnagiri Gas & Power Pvt. Ltd. Sustainable Development in Thermal Power Sector



Dr. Pradeep Kumar Naik Rajiv Gandhi National Ground Water Training and Research Institute Professional Excellence (Individual)



Samarakoon Banda Sustainable Development in Hydropower Sector (Individual)



# Glimpses 2019



























#### Event Folder '2019

# Glimpses 2019













JU













# Glimpses 2019





















#### Event Folder '2019









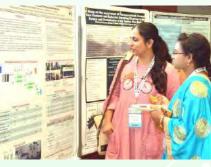
















### Recommendations of XIII World Aqua Congress

- Government programs like Jal Shakti Abhiyan and Jal Jeewan Mission are right steps in right direction. Regional guidelines and standard procedures, however, need to be established and propagated throughout the country to derive maximum benefits from these initiatives. There are also needs of large-scale capacity development and skillset creation to meet the ambitious targets. Ministry of Water Resources & other concerned Ministries need to review/ revise/ update training modules developed by various institutes, Aqua Foundation and other active NGOs in water sector, and give its 'recognition' and widely distribute these modules. Involvement of youths in water sector with proper training will help in both- employment generation and water management.
- Ecological issues in all river basins are becoming critical. However, a balance between utilization across sectors including environmental needs should be stuck. Quantum of environmental flow is critical, but the timings are also critical and managing the environmental flow in real time depending on biological needs of the downstream can provide an optimum solution. This is required to be established through field experiments and community consultations.
- Creation of storage is a priority to ensure water security. Even if large storage projects can not be provided in short timelines, distributed storage holds promise to generate additional storage needed. Climate change poses greatest challenge in the area of water management and we need to set our priorities and systems in line with our geographical and climatic context.
- Irrigation projects created at great cost and efforts are crucial to meet challenges of future. Careful and modern management practices are needed are needed for continues benefits out of these projects.
- There is a need to encourage more scientific research on traditional water systems, not just individual water bodies. The traditional water systems must also be maintained and revived. In villages, water bodies be developed for storage of water and recharging of the ground water. Program/ projects should be prepared for every village for water harvesting & Ground water recharge as per demand / water budget.
- Water quality assessment should be an integral component of water availability plans through spring-shed development. There is a need to set proper standards and develop stringent norms for construction of toilets and protection of spring recharge areas. There should be region specific guidelines for the design of toilets to prevent contamination of ground water sources.
- Enhancing water use efficiency needs greater focus and action in all the sectors i.e. Agriculture, Rural, Industrial & Urban. Setting up of 'Bureau of Water Efficiency' is need of the hour, which should carry out research on technologies for water efficiency, create public awareness and rate various products based on their efficiency, on lines of what is being done by 'Bureau of Energy Efficiency' in energy sector.
- Involvement of the community for water management through Panchayats is need of the hour. Capacity building programs at Panchayat level need to be conducted. Every Panchayat should be explained concept of water budget and be made aware of water level situation in their area. This would enable stakeholders have a first-hand feel of depleting water levels prompting positive action at their end.
- A mobile App should be developed enabling citizens report wastage of water, and App should transfer this information to concerned department for immediate action. This would empower every citizen to contribute towards stopping water wastage and would further create an eco-system and culture of water conservation.
- Water Conservation Audit for Industries should be made mandatory at two years interval. Audit can be done by authorized neutral agencies. Targets for reducing the Specific Water Consumption should be given to Industries. Thermal Power Plants have already been given such targets; other industries should be covered in the same line.
- WAC strongly recommends that nodal centers, 'Aqua Clinics', may be introduced in all towns of the country. This clinic may have the composition of policy makers, administrators, academicians, researchers, NGOs and farmers. These clinics can look into region specific issues and can also provide necessary relevant information and guidelines to public. For rainwater harvesting and ground water recharge, clear, region specific guidelines have to be prepared and implemented. Model Recharge Centers can be developed at district levels to showcase and educate the type of recharge structure suitable for that area.
- Recognising waste water as an alternative source of water, national and state specific action plan need to be developed for its reuse and recycle. India should develop standard norms for use of treated waste water for MAR (managed aquifer recharge) seeing the reducing rainy days in the country.
- Industries consume huge amount of water to produce the goods/ products. The waste water after process consists of harmful chemicals and toxic compounds which requires to be treated using advanced technology. One liter of industrial waste water can pollute nearly 10,000 liters of fresh water. Today a whopping 70% of wastewater from industry is released untreated or semi-treated, polluting surface and ground water. This poses great risk to public health due to water contamination. The government policy is stringent but more effective implementation is needed on the ground. Zero Liquid Discharge is the only answer to recover clean water from polluted water if we have to reduce the industrial water foot print and save the planet from the water crises.
- For proper ground water management, aquifers need to be understood. Nationwide aquifer mapping program should be made top priority using latest tools and technology, including airborne and ground geophysics, modeling etc.
- Agriculture sector, the biggest user of fresh water resources, needs urgent attention and modern techniques of drip irrigation, sprinklers, etc., needs to replace traditional irrigation systems. NGOs need to play major role by interacting with farmers at root level. Government needs to come up with required funding for adopting these modern techniques. Considerable amount of irrigation water can be saved and productivity of land can be increased by use of service reservoirs and application of irrigation as per consumptive requirement of crops at different stages of growth.





#### Feedback Information/Communication Venue and Arrangements 99% 100% 1% 0% 0% 0% 0% 0% 0% 0% Excellent Very Good 🖬 Good Noor 📓 Very Poor **Technical Papers and Sessions Quality Overall Hospitality of Organizers** 100% 100% 0% 0% 0% 0% 0% 0% 0% 0% **Testimonials** Industry participation Punctuality and session representing upcoming planning was very technologies new developments word-wide Opportunity was given methodical. The way of arranging time and great participation of to a wide range of schedule for speakers **Ms. Roshan Rathod** well-known personalities of people from different was very systematic. Gender and Institution Building water fraternity. levels. Specialist People's Science Institute Mrs. Indu Gupta Mr. Arvind Kumar Verma Ms. G. Shreeraniini Iver Dehradun Founder & Director Shri Ramdeobaba College Senior Manager-CSR PRASAR Foundation Tehri-THDC India Limited of Engg. and Management Moradabad Nagpur The open and comfortable situation for participation in the event without parallel sessions Adherence in time It was a very good mix of Time management, was a nice format which management by various ideas and initiatives quality of papers, Session Chairman. enabled active with excellent crosspresentations, overall Excellent & energetic exchanges between the learning opportunities. organisation. Very well co-ordination by OC academia, industries, done. dignitaries throughout Government Dr. Aditya Sarkar Dr. Raghu Pillai the event. organisations and NGOs Associate Professor Managing Director Replacement using alike. **Presidency University** REWS (India) Kolkata plants in place of Dr. Debasri Mukherjee Bengaluru routine bouquet was Senior Research Officer very thoughtful. SIGMA Foundation Kolkata Mr. Kachhal Prabhakar Scientist- C, Central Soil & Materials Research Station New Delhi

# Previous World Aqua Congress - Themes & Topics

### Previous conferences addressed the issues of :

- Enhancing Water Use Efficiency (22-23 November, 2018), India Habitat Center, New Delhi, India
- Water & Environment Solutions: Cutting Across Borders (9-10 November, 2017), India Habitat Center, New Delhi, India
- Water Smart Solutions for Growing India (24-25 November, 2016), India Habitat Center, New Delhi, India
- Reviving Traditional Water & Environment Conservation Techniques (26-27 November, 2015), India Habitat Center, New Delhi, India
- Balancing Development and Environment-Economic Growth with Environmental Sustainability (20-21 November, 2014), Scope Convention Center, New Delhi, India
- Balancing Panch-Tatwa (Five Elements) Strategically Towards Sustainability (11-13 December, 2013), India Habitat Center, New Delhi, India
- Water : Vision 2050 (28-30 November, 2012), India Habitat Center, New Delhi, India
- Adaptive & Integrated Water Management (16-18 November, 2011), India Habitat Center, New Delhi, India
- Emerging New Technologies in Water Sector-Present Status & Need for the future (8-10 December, 2010), India Habitat Center, New Delhi, India
- Enhancing Water use Efficiency (2-4 December, 2009), Habitat Center, New Delhi, India
- Global Climate Change & Water Resources (26-28 November, 2008), India Habitat Center, New Delhi, India
- Integrated Water Resources, Management & Quality (28-30 November, 2007), India Habitat Center, New Delhi, India



# "If you cannot love each other you cannot achieve your goal"





#### Aqua Foundation

Registered Office Address: 707-Eros Apartments, 56-Nehru Place, New Delhi-110019, India

Correspondence Office Address: E-166, Second Floor, Kalkaji, New Delhi – 110019, India Telefax: +91-11-41318030, Ph: +91-9818568825, +91-9873556395 Website: www.aquafoundation.in, www.worldaquacongress.org E-mail: info@aquafoundation.in, wac@worldaquacongress.org

#### **Cleared by:**



Ministry of Home Affairs Govt. of India Ministry of External Affairs Govt. of India Ministry of Jal Shakti

Dept. of Water Resources, RD&GR, Govt. of India

NABARD

National Bank For

Agriculture and Rural

Development

GEOVALE

Geo Vale Services

#### Sponsored by:

ARSA

PARSAN Overseas



National Water

Mission

Govt. of India

Ministry of

Jal Shakti

Ministry of Earth Sciences Govt. of India



Central Water

Commission

Govt. of India

Ministry of

Jal Shakti



Intelligence

WATER & WASTE WATER IS OUR CONCERN Global Water Smart Water & Waste World



PHD Rural Development Foundation

1927 New Delhi Central Board

of Irrigation And Power and Drainage

**Media Support:** 

EVERYTHING **ABOUT WATER** 

www.eawater.com/eMagazine

**Everything About Water** 



International Commission on Irrigation



Water Digest

PURCHASI

**B2B** Purchase

Council



Energy and Environment Foundation



British Water

#### Organized by:



Agua Foundation

ELECTROSTEEL **Electrosteel Castings** 

The SME Times

The SME Times

asianngo

The Water Network

The Water Network