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Aqua Foundation XII World Aqua Congress

International Conference

22nd - 23rd November, 2018, New Delhi, India



Theme: Enhancing Water Use Efficiency

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 Enhancing Water Use Efficiency

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.

India is growing...practically in every aspect. At 7.2%, 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. Inefficiency of water use in agriculture, over-exploitation of underground water and contamination are other issues associated with water management in the country. It can not be 'business-as-usual' if India has to meet food and water demand and aspirations of its growing population. Smart solutions are urgently needed to holistically address to ensure adequate water supply for a growing India.

Water use efficiency includes any measure that reduces the amount of water used per unit of any given activity, consistent with the maintenance or enhancement of water quality. Water use efficiency has a clear role to play in sustainable development, in other words, the use of the earth's resources by today's inhabitants while assuring that future generations have sufficient capacity to meet their own needs. Improving the efficiency of resource use comprises one means of meeting sustainable development goals.

The objective of the XII World Aqua Congress was to bring various stakeholders on a common platform, deliberate on issues linked to water use efficiency, discuss inclusion of these solutions in policy framework and work towards ensuring a more sound future for the world we leave to our children. Accordingly, the Congress was targeted at scientists, practitioners, and technological innovators, as well as policy and decision-makers, financial stakeholders and investors, legal and regulatory specialists, and groups involved in capacity building.

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 provided a platform for display of these technologies.



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.

Enhancing Water Use Efficiency

- Physical, Social and Economical Dimensions
- Technological Aspects
- Environmental Aspects

Enhancing Water Use Efficiency Agriculture Sector

- More Crop per Drop-Agriculture Sector
- Emerging Irrigation Technologies
- Protected Cultivation Technology

Enhancing Water Use Efficiency-Rural Sector

- Multiple Use of Water Resources
- Water Safety Planning
- Sustainability of Water Systems
- Water for Livestock
- Drinking Water for Rural Sector- Meeting the Demand
- Reviving the Conventional Systems

Enhancing Water Use Efficiency-Urban Sector

- Water Use Efficiency in Domestic Sector
- Transportation and Distribution of Water
- Making Water & Wastewater Utilities More Efficient
- Process Automation and Operational Data Management
- Municipal Water Management
- Additional Resource Creation- Rainwater Harvesting, Recycling etc.
- Desalination and Related Technologies
- Municipal Solid Waste Treatment
- Green Infrastructure- Need, Concepts & Principles
- · Technologies for Urban Sector

Enhancing Water Use Efficiency-Industrial Sector

- Performance Optimization and Efficiency Improvement in Industrial Sector
- Reuse, Recycling and Recovery

- Waste Water Handling
- Guidelines for Exploration and Resource Creation
- Water Pollution & Quality Management

Water Efficiency in Construction Sector

- Grey Water Use
- Rain Water Harvesting
- Water-Efficient Plumbing Fixtures
- Irrigation and Landscaping Measures
- Water Recycling or Reuse Measures (Grey Water and Process Recycling Systems)
- Dust Suppression (Damping Down)

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 & Impact on Water Resource Management

Financial, Institutional, Legal & Policy Issues

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





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



Mr. S. Masood Husain Chairman. Central Water Commission



Dr. B R K Pillai Commissioner (CAD), MoWR, RD & GR, Gol



Cdr. Ashutosh Kaushik (Retd.) C.E.O. Parsan Overseas Pvt. Ltd., India





Mr. U.P. Singh Secretary, Ministry of Water Resources, River Development and Ganga Rejuvenation, Gol

Mr. V. K. Kanjliya

Secretary, Central Board of Irrigation & Power

Shri Anupam Mishra

Director (Commercial & HRD), WAPCOS Limited, New Delhi

Dr. Prabeer Kumar Parhi



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



Er. Vivek P Kapadia Chief Engineer, Narmada, Water Resources, Water Supply and Kalpasar Department, Gujarat



Mr. Gopal Chetri Adviser (IFC&WSM), NEC Secretariat, Shillong



Mr. A.B. Pandya Former Chairman CWC and Secretary ICID-CIID



Dr. D.K. Chadha Former Chairman, CGWA/CGWB and Chair Prof & Chairman, Manav Rachna International University



Dr. Subhash C Singh Head, Central Ground Water Board, Bhopal



Mr. Shailendra Singh General Manager (S&E), THDCIL Sewa, Rishikesh



Dr. R Vignesh Research Faculty, Vel Tech Rangarajan Dr. Sagunthala R & D Institute of Science and Technology, Chennai



Dr. Kadambari Chief Executive, PHD Rural Development Foundation, Social arm of PHD Chamber of Commerce & Industry, New Delhi



Dr. Sangita Ladha VP-Marketing and Business Dev, Jain Irrigation Systems, Jalgaon



Speakers/Authors



Mr. Rohit Lall Joint Director, NCPAH, New Delhi



Ms. Adity Ganguli Head Process Visulation& Diagnostic, Tata Steel Ltd., Jharkhand



Dr. Debasri Mukherjee Senior Research Officer, SIGMA Foundation, Kolkata



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Prof. K G Moodley Honorary Research Professor, Durban University of Technology, South Africa



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Mrs. Sohini Tarafdar Chatterjee Research Officer, SIGMA Foundation, Kolkata



Mr. Lokesh Kumar Assistant Chemist, Delhi Jal Board, Govt. of NCT Delhi



Mr. Sunil Shrivastava Head Water Security, Reliance Foundation, Navi Mumbai



Er. R. K. Khanna Former Chief Engineer, (Environment Management), Central Water Commission, New Delhi









Aqua Foundation's Excellence Awards 2018

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 2018:







Bridgestone India Pvt. Ltd. Water Management (Private Sector)



NTPC Limited – Kawas Gas Power Project Sustainable Development in Thermal Power Sector (Public Sector)



Ms. Vinita Dhawan on behalf of Mrs. Suruchi Gandhi Principal, Bal Bharti School- Dwarka Professional Excellence (Individual)

Life Time Achievement

Justice Swatanter Kumar (Retd.)



Earth Water Limited Breakthrough Water Technology Company of the Year (Private Sector)



Kodaikanal International School Excellence in Promoting Environmental Awareness



Mr. K. Jayaraj (Research Scholar, Gandhigram Rural Institute) Protection of the Quality and Supply of Freshwater Resources (Individual)



SJVN Limited Sustainable Development in Hydropower Sector (Public Sector)



Dr. Naveen B. P. Associate Professor, Amity School of Engineering & Technology Amity University Gurgaon Professional Excellence (Individual)



Mr. Vinod Kumar Jaiswar on behalf of Dr. Abhijit Maiti Associate Professor, Indian Institute Technology, Roorkee Academic Excellence (Individual)





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International Conference 22" - 23" November, 2018, N Theme: Enhancing Water U ficien





Recommendations of XII World Aqua Congress

- Enhancing water use efficiency needs greater focus and action in all the sectors i.e. Agriculture, Rural, Industrial & Urban.
- Government alone can not be expected to carry out this massive task which involves awareness, technology and funding. A collective effort by Government, NGOs, Industry, Technology Providers and all Stake Holders therefore is mandatory to enhance efficiency in all the sectors.
- 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.
- 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.
- 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.
- 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.
- There is an urgent need of capacity building in water sector. 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.
- WAC strongly recommends creation of a National Task Force on Data Sharing to ensure creation of a National Data Bank of water, to ensure adequate research on various aspects of water.
- Rain water harvesting for apartments in urban area should be mandatory for every cities and its functioning should be inspected periodically at least during rainy season.
- We need to promote the use of ground water monitoring tools, including GIS mobile phone based app, water table depth measurement kits, water quality probes and gauge board templates for water bodies and check dams.
- National Water Policy (NWP) has spelt our various measures for improving Water Use Efficient in all areas of Water Sector. NWP should be backed by suitable legislation so that so that various measures recommended by it are actually implemented by the concerned agencies, particularly the states.
- Awareness is very low about the scarcity value of water. There is an urgent need to create awareness among various
 water user groups regarding water conservation, to prevent large scale wastage of water. Community participation
 should be encouraged in all areas of Water sector to promote water conservation and improve water use efficiency
- The subject of water is being dealt by many ministries/ departments both at the center and states. The coordination between these departments should be improved to ensure that while various aspects of water sector are covered, there is no duplicity of efforts
- 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.



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Feedback Information/Communication Venue and Arrangements 96% 92.5% 2.5% 6.5% 1.5% 1% Good 🖬 **Excellent** Poor 📓 Very Poor Very Good Overall Hospitality of Organizers Technical Papers and Sessions Quality 95.5% 98.5% 1.5% 3.5% 1% Testimonials Many water related Very well arranged and coordinated. The jury events are organised in members of excellence Delhi every year. I can The event was very It was a well organised say this is the best of all. awards were eminent inspirational and event backed by a personalities. Wish you motivational in respect committed and earnest Er. R K Khanna all the very best for of water conservation. team. Ex-CWC taking up such a noble Shri Ashok Singh Panwar Dr. Akash Sondhi cause. Shall be a spokesperson for Aqua BBMB TERI foundation. Shri C.V. Subramanian NTPC It was really an informative & well planned conference World Aqua Congress organised by AQUA Each session was organisation for the last FOUNDATION. This will methodically conducted. 12 years tirelessly with There was hardly any time not only be helpful in The theme and the high spirits and creating awareness and overrun. The organizing arrangements and the enthusiasm works for a scientific knowledge team handled the whole time line and schedule Noble Cause. among delegates and event very well. followed for the event participants but will also Shri Anil Anant Bhagwan was excellent. Shri Surender Makhija aid the common people CANAR- Bahrain Jain Irrigation in understanding the Shri Ashwani Matolia main theme of the NTPC conference Shri Vinod Kumar Dubey DJB

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Previous World Aqua Congress - Themes & Topics

Previous conferences addressed the issues of Water Resources Availability, Management & Quality (2007), Global Climate Change & Water Resources (2008), Enhancing Water use Efficiency (2009), Emerging technologies in the water Sector-Present Status & Need for the future (2010), Adaptive & Integrated Water Management (2011), Water : Vision 2050 (2012), Balancing Panch-Tatwa (Five Elements) Strategically Towards Sustainability (2013), Balancing Development and Environment-Economic Growth with Environmental Sustainability (2014), Reviving Traditional Water & Environment Conservation Techniques (2015) and Water - Smart Solutions for Growing India (2016), Theme: Water & Environment Solutions: Cutting Across Borders - Presenting Best Practices from Across the World (2017).

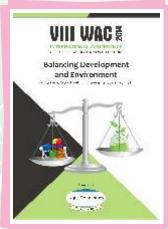


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"If you cannot love each other you cannot achieve your goal"





Aqua Foundation

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Infrastructure Line

Aqua Foundation