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#### In Conversation with:

Naser Azeez Mohammed,

Managing Director, Aquality Water Solutions Pvt. Ltd.

## How would you describe the current state of the water industry in India, and what are the key challenges it faces?

India, the most populated country has a very large water market while also amongst the most water-stressed countries in the world. Estimated over 600 million people are facing extreme water stress. The country is facing a difficult challenge having only 4 percent of world's water resources for catering the needs of 18 percent of the world's population.

The water Industry in India is marked by both opportunities and significant challenges due to various factors, including population growth, rapid trends of urbanization, economic development, faster pace of industrial expansion, and climate change.

The significant challenges being faced by the sector includes extreme water stress, depleting groundwater, contaminated water sources, strained urban water supply systems, aging and inadequate water infrastructure, and high level of non-revenue water. The other notable challenges are a significant portion of the rural population still lacks access to reliable water sources, apart from inadequate sewage treatment plants leading to large amount of wastewater disposal without treatment making rivers and water bodies more polluted, water governance issues, lack of technology intervention, slow adoption of innovative water management initiatives among others.

The water industry in India presents a complex landscape, demanding continuous commitment from the government, private sector, and communities to address its diverse challenges and ensure the nation's future water management is sustainable.

What are the key technologies and innovations that are transforming the water industry in India? How are these advancements improving efficiency and sustainability?

India is not only on the cusp of economic growth, but water sector is also transforming and growing. The Indian water and wastewater treatment (WWT) technology market was valued at USD 2,100 million in 2021 is projected to register a cumulative growth of greater than 8% per annum during the period of 2022-2027.

Some of the key technologies and innovations that are transforming the water industry in India include AMI infrastructure, digital twins, intelligent asset management, geographical information systems, 5G, data analytics, artificial intelligence, internet of things (IoT), remote monitoring, smart metering and control, advance leak detection, and solar-powered water treatment solutions among others. The technology has enabled decentralized water and wastewater treatment systems to reduce burdens on centralized infrastructure and enabling reuse of treated water for non-potable purposes.

The advancements in technology and innovation are improving efficiency and sustainability in the water industry in India. It helps water utilities and municipalities to have a better management and control of water resources, reduction of water losses, optimization of energy consumption, and the provision of safe and reliable water supply. Ultimately, these advancements contribute to water conservation, environmental protection, and long-term sustainability in the water sector.

## In your opinion, what are the most significant opportunities for investment in the water sector in India? Which areas hold the greatest potential for growth and development?

With growing population and increasing commercial activities, demand for clean water is growing uninterruptedly providing opportunities to large scale investment in Indian water sector. Among the significant opportunities available, investment in water infrastructure is important. It includes projects related to water supply systems, treatment plants, distribution networks, sewage treatment, and solar powered water treatment facilities with a focus on improving water availability, quality, and efficiency. There is a need for even rehabilitation of existing infrastructure.

With large and growing industrial sector, there is a need for effective water treatment and reuse solutions for industries. Investing in industrial water treatment plants, including technologies like reverse osmosis (R0), ultrafiltration (UF), and zero liquid discharge (ZLD) can help industries meet regulatory requirements, reduce water consumption, and minimize pollution.

Investing in water technologies holds the key to driving innovations.



The areas that holds the promising technology intervention are in water treatment and purification, recycling and reuse, smart water distribution and network management, remote sensing and GIS for resource assessment, desalination, and water-saving technologies.

Investing in water sector is not only crucial for addressing current water challenges but also for building a more resilient and sustainable water future. Collaboration between governments, private sectors, research institutions, and local communities is essential to understand the need and address the issues effectively to ensure a more water-secure India.

# What are the key lessons that India can learn from other countries or regions that have successfully addressed water challenges? How can these lessons be applied in the Indian context?

There are quite a number of successful examples available globally. Several countries have demonstrated positive approaches in effectively addressing water challenges. These shining examples showcase innovative solutions and best practices that have made a positive impact on water management and sustainability.

## Some of the valuable lessons that India can learn and adopt are as follows:

 Integrated Water Management: Australia has implemented integrated water management approaches that consider the entire water cycle and balance the needs of different sectors. India can adopt similar strategies by integrating water resource planning, water allocation, and demand management across sectors to ensure sustainable water management.

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- Water Reuse and Recycling: Countries like Singapore and Israel have implemented advanced water reuse and recycling systems to treat their wastewater for reuse facilities even for drinking purposes. India can learn from these experiences by promoting safe and efficient reuse of treated wastewater for at least non-potable purposes in irrigation and industries, reducing pressure on freshwater sources and increasing water availability.
- Sustainable Agriculture Practices: Countries like Israel and Spain have implemented innovative agricultural practices such as drip irrigation and precision farming to optimize water use in agriculture. India can adopt these practices and promote efficient irrigation techniques, crop selection, and water-efficient agricultural technologies to reduce water demand in the agriculture sector.
- Technology and Innovation: Embracing technological advancements and innovation can greatly contribute to addressing water challenges. Countries like Israel have invested heavily in research and development to develop innovative water technologies that is helping them to efficiently catering the water needs despite resource crunch. India can promote research, innovation, and technology transfer in areas such as water treatment, efficient irrigation, leak detection, and data-driven water management solutions.
- Water Governance and Institutional Frameworks: Netherlands have established decentralized governance systems, involving local communities, water boards, and stakeholders. Effective water governance and strong institutional frameworks are crucial for successful water management and India can benefit from enhancing stakeholder engagement, establishing clear roles and responsibilities, and creating robust regulatory and enforcement mechanisms.
- Rainwater Harvesting and Conservation: India can draw lessons from countries like Brazil and Thailand, where rainwater harvesting and conservation practices have been successfully implemented. Encouraging decentralized rainwater harvesting systems, promoting water conservation practices at the community level, and integrating traditional water management practices can enhance water availability and resilience.

The successful experiences and case studies of other countries in mitigating their water challenges can be replicated in the Indian context to develop tailored strategies and approaches for effectively addressing the issues, ensuring improved and sustainable water management and achieving better water security.

Could you provide insights into the initiatives that your organization implemented to address water scarcity and promote sustainable water management in India?

Aquality Water Solutions Pvt. Ltd. is an ISO 9001:2015 certified leading provider of domestic, industrial, institutional and commercial water treatment systems. With the proprietary technologies, it provide innovative and custom-designed high quality water treatment solutions to consistently deliver safe drinking water to its diverse clientele that include civilian households to defense establishments, commercial establishments, institutions, technology companies including ultrapure water to industries.

It firmly upholds the belief that innovation plays a vital role in the growth and sustainability of any organization. While achieving high growth is crucial for success, it alone may not guarantee community development and environmental preservation. In the present socio-economic context, where global environmental concerns have taken center stage, focusing on local efforts that bring widespread benefits becomes imperative.

What distinguishes us is our integrated approach towards water treatment and management. We firmly believe that addressing water-related challenges is not only essential for the growth and sustainability of organizations but also for the well-being of communities and the environment. By combining innovation with effective water treatment and management strategies, we aim to contribute positively to local efforts and global environmental concerns.

At Aquality Water Solutions Pvt. Ltd., our focus on cooperation over competition allows us to collaborate with various stakeholders, pooling resources and expertise to achieve the most efficient and impactful results. Our commitment to sustainability ensures that our water treatment solutions not only meet short-term needs but also preserve precious resources for future generations.

We are passionate about creating livelihood opportunities in the water industry, nurturing a skilled workforce that can contribute to water management efforts worldwide. By delivering holistic solutions and emphasizing value creation, we aim to make a meaningful difference in the communities we serve.

What kind of innovative water treatment system your company has introduced recently and how it is beneficial for people?

Aquality Water Solutions Pvt. Ltd. leads the way in making



clean drinking water accessible to people, security forces, and establishments worldwide, particularly in African and Middle Eastern countries where access to clean water poses significant challenges. At the heart of this endeavor lies our pioneering solution, the Solar Powered Water Filtration System, which has played a crucial role in addressing this pressing issue.

It features a high-speed water filtration unit capable of purifying water from virtually any source, whether it's hand pumps, swamps, wells, floods, rivers, or even wastewater. This cuttingedge technology embedded system offers an ideal source of

clean water without the need for significant investment. Our system employs advanced purification techniques to make water absolutely clean, eliminating contaminants and impurities. The result is the production of high-grade water, perfectly suitable for drinking, without relying on conventional electricity requirements.

With this groundbreaking solution, Aquality Water Solutions empowers communities and establishments to access a sustainable and reliable source of clean drinking water, contributing significantly to improved health and well-being across the globe.

#### **Company Details Required:**

**VISION OF MY COMPANY** - Become a market leader in water treatment solutions and setting the benchmark in customer satisfaction with quality, integrity and value creation. We think about creating systems for the future.

NUMBER OF EMPLOYEES – 50+

**KEY ACEIVEMENTS OF THE LAST YEAR** – Completed several water treatment projects as well as recognized as Top Most Water Leaders of India Award 2022.

**MAJOR ORDERS WON RECENTLY** – We received orders for providing drinking water treatment solutions to two international companies and commercial establishments in India.

**NAMES OF MANAGING DIRECTOR AND SENIOR EMPLOYEES –** Mariya Azeez, Director; Afroz Musthafa, General Manager

#### **Miscellaneous Questions:**

**Favourite Book/Author -** "The Water Will Come: Rising Seas, Sinking Cities, and the Remaking of the Civilized World" by Jeff Goodell

**Favourite Movie -** "The Water Diviner" by Russell Crowe which touches upon the importance of water in arid regions and how it impacts communities.

**Favourite Holiday Destination** – Dubai, for its true international culture, a global hub for trade, tourism, and innovation.

One piece of advice for 'EverythingAboutWater' – Make it a unique platform for important and up-to-date information on water related topics.