THE VALUE OF WATER

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Water is changing its value world over from an easily available uneconomical resource to most valuable diminishing resource. It is the most essential needs of life, from quenching our thirst to our food production and all human, social and economic activities. The wellbeing of a country is solely dependent on the availability of freshwater. The reality is although all social and economic activities depend on the supply of quality freshwater, there are still 2.2 billion people living without access to clean drinking water in the world and this figure is growing.

Valuing Water

The United Nations World Water Development report has correctly outlined that the tremendous value of water cannot be pegged to its price alone. There are more to it than just its cost of production and delivery. The report also put in focus the urgent need to change the way water is valued and grouped. It has suggested the methodologies and approaches to the valuation of water into five inter–related perspectives:

- Valuing in situ water resources and ecosystems
- Valuing water infrastructure for water storage, use, reuse or supply augmentation
- Valuing water services, mainly drinking water, sanitation and related human health aspects
- Valuing water as an input to production and socio–economic activity, such as food and agriculture, energy and industry, and business and employment
- Other socio–cultural values of water, including recreational, cultural and spiritual attributes

The report has correctly emphasized that the extensive wastage and careless use stems from the fact that we considers water exclusively in terms of its cost price without actually realizing its immense value that cannot be quantified through its cost only. It has precisely highlighted that water utilities across the globe mainly attempts for cost recovery and not the value delivered as there is no clear relationship between the two being considered.

The Economy of Water

Water has greater economic value than what we perceive. Estimated USD 18.5 billion in economic benefits each year can be derived from avoiding health complications alone by simply improving its access to every household. Every 1 dollar invested in water and sanitation provides a 4 dollar economic return from lower health costs, increased productivity and fewer premature deaths.

The availability and quality of water shapes a nation's economic development. An estimated USD 260 billion is lost globally every year due to the lack of basic water and sanitation. Another USD 301 billion will cost for neglecting issues including water pollution, over–usage, climate change impact, aging

FRP Pressure Vessels

infrastructure and others. Without clean water, the world economy will be severely hit resulting in huge GDP losses across the nations. The United Nations Children's Fund (UNICEF) has estimated that waterborne diseases in India have an economic burden of approximately USD 600 million a year mainly due to drinking contaminated water. India is also being predicted to lose as much as 6 per cent of GDP by 2050 due to insufficient water availability.

Water in India

India has a rich history with its heritage and culture remains unparalleled. The historians are of the opinion that, more than 2,500 years ago the Indus Valley civilization mysteriously lost its magnificence and disappeared mainly due to a catastrophic water scarcity caused either by shifting rivers or drastic climate change that forced people to abandon their habitats and settlements and the civilization vanished except for the ruins it left behind. The value of water was realized then and there is a fear that history may be repeating itself if we do not take care of our available resources now.

The current scenario in India is posing similar kind of challenges with limited global water resource and increasing population making it difficult to arrange clean drinking water facilities for the 1.4 billion habitants. If that is not enough, imagine the situation after 10 years when the present population, growing at a rate of 51 new born being added every minute to the tally. India would be facing a demand–supply gap of 40 per cent by 2030.

The water scenario in India is becoming more alarming with water scarcity reaching to different regions and habitats. The traditional water bodies like wells, ponds and catchments are drying up as groundwater sources are under growing pressure due to over–reliance on it with unsustainable consumption patterns. More than 70 per cent of our traditional water sources are contaminated and major rivers are dying because of rampant pollution. This has escalated the water stress further and placed an even greater burden of accessing water for drinking as India is suffering from the worst water crisis.

About 50 per cent of the population in India has access to safely managed drinking water, rest of them are dependent on water sources which are potentially harmful to health. Contamination of water with chemical and biological pollutants and presence of fluoride and arsenic in 1.96 million households makes the situation more frightening.

India is the second largest user of groundwater in the world and faster rate of groundwater depletion in India is a big challenge. Groundwater from over 30 million access points supplies 85 per cent of drinking water in rural areas and 48 per cent of water requirements in urban areas. About two–third of India's 748 districts are affected by extreme water depletion, and the Niti Aayog has projected that over 600 million people in the country is facing severe to extreme water stress and biggest cities are moving towards no water situation in near future affecting another 100 million population. But we have failed to understand the true value of this precious natural resource. Today, almost half of India's population has to deal with severe water scarcity and millions of people suffer every day due to lack of access to safe and clean water.

Government Initiative

The Prime Minister of India had announced the ambitious water supply scheme, Jal Jeevan Mission at the start of his second term. Launched in August 2019, the scheme aims to provide potable water through functional taps to 192 million rural households by 2024. A massive fund of INR 3.6 trillion is allocated to achieve the target in 5 years' time. The mission mode approach and advanced technology intervention to monitor the progress has helped the scheme achieving 54.46 million new households connection despite the disruption caused by the COVID–19 pandemic. The Centre and States' Governments are focusing on ensuring sustainability and quality of water supply by encouraging community participation in the operation and maintenance of water supply to their homes through Village Panchayat Samitis and Water Committees etc. The mission of this scheme is to create a people's movement for water, thereby making it everybody's priority. This scheme has helped in prioritizing integrated water management by addressing not only the drinking water but also the grey water treatment along with behaviour change and community participation while monitoring the quality of water being supplied. The Jal Jeevan Mission has so far contributed in achieving 45.16 per cent households gaining access to safe drinking water.

Sahara Industry Initiatives in Water

With a legacy of more than two decades, Sahara Industry has helped shaping up water treatment market in the country. With technologically advanced systems and world class quality compliance, it provides specialised industrial water treatment and management system, sewage and effluent treatment

Ultra–Pure Water Tretament Plant

system, ultra–pure and reverse osmosis purification plant along with drinking water softener and treatment facilities.

The treatment systems being designed and developed on the parameters of raw water quality that has a wide range from conventional to membrane filtration along with treatment for specific chemical contaminants and various disinfection technologies to meet all drinking water standards. With the leading edge technologies, including membrane filtration and desalination plant, it is a leading name in the water industry. The ISO 9001:2015 certified company; it has proven domain knowledge and experience of implementing sustainable solutions for water sector across India with footprints in several countries globally. With social and environmental consciousness, it always strives to maintain a healthy environment with high performance and sustainable water treatment solutions.

Way Forward

It is high time that we should focus on water as one of the resources that suffers most from human activities despite being the reason of life on earth. With just 1 per cent of fresh water available on planet's surface, it is continuously under depression with the effect of climate change, population growth and unsustainable practices by agriculture, industrial and municipal sectors. Looking at the consequences of our actions on water resources, the 'day zero' from cities to regions may soon become a reality. Recognizing the scarcity value, water is now being traded as a commodity on the Wall Street next to oil and gold. Our future is fully dependent on how it is managed and the way we value water.

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