International Journal of Trend in Scientific Research and Development (IJTSRD)
Volume 5 Issue 6, September-October 2021 Available Online: www.ijtsrd.com e-ISSN: 2456 – 6470

Effect of Poor Infrastructure and Lack of Framework towards Industrial Growth and Its Contribution to Water Crisis

Dr. Sumanta Bhattacharya[1], Debashis Sen[2], Bhavneet Kaur Sachdev[3]

[1]Research Scholar at MAKAUT, Kolkata, West Bengal, India
[2]IAS, Chairman Cum Manager at West Bengal Housing Infrastructure Development Corporation, West Bengal, India
[3]Political Science Hons, University of Calcutta, Kolkata, West Bengal, India

ABSTRACT

India require professional who can manage water resources, though rapid urbanization is training place in India, which is being in an unplanned way which has failed to provide basic infrastructure for the growing population, with rapid migration and rise of poverty in the region, we are also facing tremendous water crisis. Half of the population don't have access to drinking water they are dependent on water tanks, only 33 % have access to piped water, half of the cities groundwater has vanished, the government have introduced so many schemes but the situation has struck to 33 % waste water treatment, cities lakes and rivers have become a dumbing ground for the disposal of domestic and industrial waste. Today, individual states have introduced sewage treatment plant and innovative technology to tackle water waste. Smart living, smart farming and green technology is being adopted by the country to tackle climate change water crisis and treat waste water so that in future we can supply water to the growing demand and rise in population, where by 2050, India will emerge as a country with the largest population.

KEYWORDS: *Water resources, water tanks, green technology, sewage treatment, smart farming, Industrial waste*

How to cite this paper: Dr. Sumanta Bhattacharya | Debashis Sen | Bhavneet Kaur Sachdev "Effect of Poor Infrastructure and Lack of Framework towards Industrial Growth and Its Contribution to Water Crisis" Published in International Journal of Trend in Scientific Research and Development (ijtsrd), ISSN: 2456-6470, Volume-5 | Issue-6, October 2021, pp.619-623, URL: www.ijtsrd.com/papers/ijtsrd46470.pdf

IJTSRD46470

INTRODUCTION

Water management is a crucial issue in the world for most of the developing countries. In particular India, which is currently experiencing the worst water cataclysm. Extensive use of water has resulted in water crisis in many parts. The waste management structure of the urban parts are not developed as per the requirements to meet the needs of the society. There are many cities in India who are facing shortage of water, there are very regions in the urban sector who have access to water 24*7. People are talking about rapid urbanization, where you have better quality of life and standard but this is not true. India's population is expand, every minute you will find 25 to 30 people migrant to the urban region, the cities don't have the necessary infrastructure to accommodate the emerging population in Urban India. The government launched the Smart city mission for accommodation of more and more people to the urban region, as the present decent cities can afford more people. In order to end the issue of water crisis and make arrangement for better water waste management in India, smart cities are being formed which will run on technology, it is the launch of 100 satellite states. Today different technologies are being used to tackle water waste management, Nagpur has been working on better ways to manage waste water. India has a poor sewage and drainage system both in the rural and urban region. There is no control on the amount of toxic disposed into the water bodies, for some locality and poor people these river water is a place to wash clothes, take bath and drink that water. Domestic water waste is 135 litres per day as that I 1391 MLD which includes 672 MLD groundwater, 678 MLD cauvery water and 41 MLD recycled water. The level of urbanization is very low compared to it number, public services have not reached to all sectors of the society, water supply, management of resources, sewage, solid waste management and

sanitation is a major problem which people are facing today, the population is rising, people are coming to the cities but the basic facilitates have remained limited to a few section of the society. Many cities are now under the Municipalities, the new urban agglomerates have still remained under the rural governance and are unable to handle the water supply and sewage crisis. The government have launched many schemes for water waste management system, as India is facing one of its worst water crisis, where many cities don't have groundwater left, waste management is a solution to make waster avail for people in the coming further. Individuals, NGOs and civil society members have engaged themselves in supplying water to the needy and vulnerable section of the society who are the mot deprived.

Research Methodology

For the purpose of this exploration, I have used a amalgamation of two of the archetypical social sciences research tools application –as they are authentic and brilliant method to assemble statistics from multiple appellant in an methodical and convenient way. Question were asked to the common youth, public policy Analyst, urban people, slum dwellers, survey, interviews –consisting of several interrogation which were dispersed among representative of each contender group.

Objective of the Research Paper

The main areas of exploration in this paper incorporates

1. A study on water crisis in urban India and on water waste management in India.
2. What are the initiative taken by the government of India to provide water supply and tackle water waste management.
3. What are the challenges and future of water crisis in urban India with rising population.

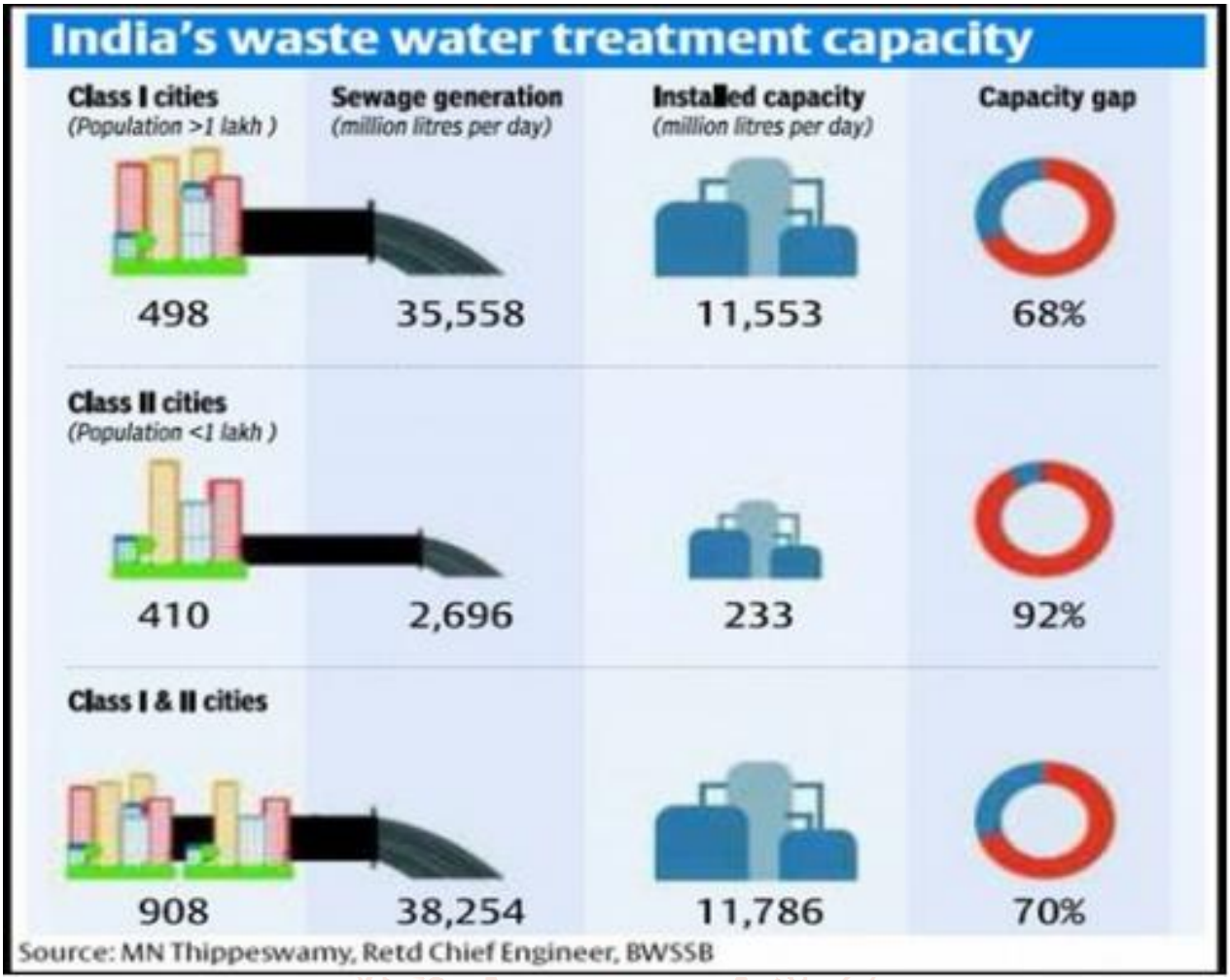
Literature Review

The government has launched the Atal Mission for Rejuvenation and Urban Transformation with focus on water supply and sewerage improvement, followed by Swachh Bharat Mission which works on waste management and smart city mission. No city in India has 24 hours water supply, the water quality is day by day becoming wort, where 70 % of the water is unpolluted which we are drinking, we have hardly groundwater left, which is a source of drinking water, the reason behind water crisis in urban India is the uncontrolled discharge of industrial waste and domestic waste into the rivers, which is also resulting in many health issues. 90 % of the people living in the urban India has access to water (drinking water) and 60% has access to sanitation, but there is no sustainable, reliable supply. Less than 50% of the people have piped water. In many households people are forced to cope with the Insafe drinking water, sanitation of poor quality, spend extra money on unsafe substitutes, the cost of maintaining is also high. The government has launched programme for easy access to WSS infrastructure, Urban WSS program and recent programme which includes Jawaharlal Nehru National Urban Renewal Mission, Urban framework growth schemes for small and medium conurbation. Since 2005 ever since its formation, it has provided 80% financial support to particular cities and for bigger cities it has provided 50% support. The JNNURM has allocated 60% of the funds on Water and Sanitation infrastructure, followed by the Ministry of Urban Development in 2008 introduced the National Urban Sanitation policy which the objective to make all Indian cities sanitized and healthy. The policy focused on total sanitation and the need for integration, pro poor cities sanitation development. It was compulsory for all states to develop sanitation provisions by 2011. The city sanitation plans in 140 cities intended to upgrade the sanitation system in India. Funding Infrastructure creation and exodus of institutional development and sustainable services, Many states have made it mandatory that if they want to enjoy the government schemes construction of Toilets at home is a need. Sikkim is the only state where she household has a Toilet and proper sanitation facilitates along with supply to fresh drinking water, due to their strict control over carbon footprints. In the modern urban cities, with growing population, there is also a rise in industrialization since the 1991 economic reform in India, a huge amount of water is required for development projects and nearby lakes are the dumping ground for disposal of toxic waste. Now will time and space people are adopted green technology and methods to treat water waste in Delhi this has started. In big metros cities the problem of drinking water is a major problem like in Delhi, Chennai, the 2015 floods, Mumbai, Bangalore and many other states.

Findings

Cities produce 40,000 million litres of sewage every day out of which only 20 % is treated. 33% of the people have access to piped waters, 50 million people practice open defecate. India has installed 30% capacity for excreta generates. Delhi and Mumbai generate 17 % of the sewage. As result many lakes, rivers, groundwater have untreated effluents and sewage dumped there which has made water toxic filled with chemical waste and it is a poison. 71 cities and towns depend on groundwater for water supply which amounts to 48%, metropolitan cities are dependent on groundwater by 56 %, this has also led

to depletion and contamination of aquifers. Today major cities have to travel distance like 100 Km to bring water supply into their cities which I required high transport cost and energy use. The ponds and the lakes in the cities are filled with garbage, the local authorities have not taken any action to clean them which is opening doors for water borne diseases.



Green technology is being used to treat water waste and recycle it, Constructed wetlands have a scope for the treatment of wastewater and it is an engineering wastewater treatment system which have helophytes, which basically depend on physical, chemical and biological processes to threat wastewater in root zone, it doesn't require electricity or chemical, it has the capability to remove Nitrogen and Phosphorus, Chemical oxygen demand, biochemical oxygen demand, Metals Toxic compounds like Chlorinated resin, fatty acids, cholorophenols and Pathogens of different origins, Total suspended Solids, which is applicable on any type of wastewater include domestic, agriculture, landfill leach ate, industrial waste water and acid mine drainage. This can be used very effectively to manage household waste water, from flood washing to gardening, car washing to flush toilets, Terrace Farming to Recharge ground water, green technology can support to treat water and the cost of installation is very low. In India there are 920 sewage treatment plants in several states out of which 615 are operational, 80 are not, 154 STP are under construction and 71 are under planning. The think tank of the government of India NITI Aayog introduced composite water management index in order to enhance the water management capacity of Indian states and union territories in a competitive manner. Apart from that, Namami Gange Mission and Yamuna Action Plan are adopted for sustainable management of river Ganga and Yamuna respectively. The establishment of Centre of Excellence in the area of Decentralised Wastewater Management at Indian Institute of Technology, Madras will promote the research and technological development in the field of wastewater development in India.

India produces 1.7 million barrel of waste every single day, out of which 78% of the sewage waste is thrown into water bodies like groundwater, rivers, lakes. With rapid rise in population and its industrial waste, water waste is also alarming, adding to a reduction water in rivers, groundwater, there have been introduction of artificial groundwater recharge in the country, technology advancement has helped to restore and clean the water in India,

This increasing waste water is resulting in harmful water borne diseases, effecting marine life, there is lack of drinking water provisions, dreadful impact on groundwater, rise in long lasting health issue related to poisonous synthetic which includes mercury and lead. also causing pollution in the coastal areas, there are so many beach in India which has been a dumping ground for domestic and industrial garbage. India is limited to only 33 % of the water waste treatment, The main states which produce maximum water waste are Punjab, Maharashtra, UP, Gujarat they also treat 65 to 100% of their urban waste, followed by Bihar, Madhya Pradesh, Andhra Pradesh have installed less capacity building waste treatment, where as in Case of North -Eastern states and Himalaya Pradesh there is very low or no treatment facilitates. Some of the measures and management practice introduced by different states includes; Avadi Sewage cure Plant : Supportable off-grid runoff cure in Chennai constructed by the Tamil Nadu Police Housing company, to enable the living condition in that colony, it cures 12 Lakh litres of waste every day, recharge ground, reduce the chance of water borne disease, along with treating water for fishing, vegetable cultivation.

Slop fed agriculture, an age old practised introduced by the farmers in the city of Joy, where they use domestic sewage for fishery culture and different agriculture purpose, it is also the largest operating system for converting waste into consumable use, and meets the demand of fish producing. Zero fluid release in textile Industry in Tirupur, it has alleviate the release of pollutants, ZLD reduces the requirement of freshwater, amelioration of water and salts. Central and state government both are working to treat water waste and provide water supply to all the citizens. Today many parts of the country depend on water tanks, they are only source of water.

Way Forward

We are facing water stressed, where 80% of the water waste is returning into the ecosystem, killing marine life and giving birth to water borne diseases. It is necessary for us to recycle and reuse water. We need to sewage treatment pant in every city. Green technology should be under taken by every state to remove effluent from their water. We need to put an end on the use of groundwater for construction and other development purpose. Every week, the individual and the civil society member should take the responsible to clean their near by rivers and beach, with wining price which will motivate them to participate in the clean up activity. We need to adopt indoor faming which will require less amount of water for cultivation, as in India 70 % of the groundwater is used for irritation. We need to construct more lakes and ponds in your urban locality. Domestic waste wage should be recycled followed by Individual household should start conserving rainwater in their terrace. We should plant more trees which can save and recharge groundwater in a natural manner.

Conclusion

Despite so many measures adopted by the government and the states, we have been unsuccessful in providing basic water supply to all its citizen. Water is an integral part of our life from drinking to sanitation it is used for many other purposes, it is estimated that by 2030 half of the populace will have no drinking water facilitates, already the country has started to face water crisis, every part of the urban India has received access to piped water, many are depend on water tanks. Slums dweller are worst affected by this lack of water supply, only 33% of the water waste is treated, we need to treat 100 % waste water is the only way by which we can supply water to all its citizen through innovative ideas and use of technology in treating waste. People have adopted smart ways and technology to reduce to use of water in different sectors including agriculture to provide freshwater for drinking, it's an initiative which requires more support and citizen participation to save water and treat water waste in India.

Reference

[1] National Water Mission, Ministry of Jal Shakti, Department of Water Resources, RD&GR, Government of India

[2] Central Ground Water Board (CGWB) Ministry of Jal Shakti, Department of Water resources, river development and Ganga Rejuvenation, Government of India.

[3] Prof. Bani, R., Amoatey, P., 2011, Wastewater Management, Research Gate

[4] Dhote, J., Ingole, S., Chavan, A., 2012, Review on Wastewater Technologies, International Journal for Engineering Research and Technology, Volume 1, Issue 5.

[5] DTE, 2021 April, Climate change may make India monsoons more volatile wet years ahead. Down To Earth,