

Urban Sustainability: Issues and Alternatives in Water, Sanitation, SWM

Dr. Mridula Sharma

A132 Mahendra enclave Ghaziabad U.P.
Corresponding Author: Dr. Mridula Sharma

Abstract: Urbanization in India is growing very fast but in our urban areas we are facing very serious problem like urban water supply and sanitation, disposal of Solid waste is also a related problem. More than 90% of the urban population has access to drinking water, and more than 60% of the population has access to basic sanitation. Today we are talking about modern India but look at our so called metropolitan cities, water problem is become drastic here Delhi, Mumbai, Calcutta, Chennai all our developed cities are facing drainage problem, shortage of drinking water and the safe salvage of solid waste.

In present research paper we will discuss about the issues and alternatives in water and sanitation, SWM, in our urban areas. According to Mr. M.Shah (2013) have highlighted, the problems of the urban water and sanitation sector in India are complex and shall need concerted efforts to sustain the policy momentum. Present paper attempts to highlight the multidimensional nature of the challenge, and suggests a bunch of the alternatives to prevent the problems.

In the first part of paper we will discuss about urban sanitation. In our cities situation is more critical, about 64 million people are living in city slums without toilets nationwide. In cities the migrate population and unstable population is a big problem according to a survey 34,000-plus persons or 6,968 families have no access to community toilets and have no option but to defecate in the open. In the second part of the paper we will discuss about the availability of drinking water in our cities, 22 out 32 major cities have to deal with daily shortages. In cities like Delhi, Mumbai, Calcutta, Chennai you can't drink tap water people are helpless to spend a big part of their salary on drinking water. According to a **World Bank** report, at least 21 Indian cities are moving towards zero ground water level by 2020, which has already set the alarm bell ringing for policy makers and urban planners. In the third part of present paper we will discuss about solid waste management, this is a major problem for many urban areas in India, We are living in a second largest populated country and it is a very unbelievable thing that we have not any solid waste management in our country. We can see lots of heaps of rubbish here and there in so called posh areas of our cities; over 377 million urban people live in 7,935 towns and cities and generated 62 million tones of municipal solid waste per annum. Almost all municipal authorities deposit solid waste at a dump yard within or outside the city haphazardly. Experts believe that India is following a flawed system of waste disposal and management. In the end of the present paper we will suggest some ideas and alternates.

Key Words: Urbanization, SWM, Metropolitan, Community, Defecation, Multidimensional, Dump Yard.

Date of Submission: 12-02-2018

Date of acceptance: 01-03-2018

I. INTRODUCTION

In present century, urban populations have mushroomed throughout the world and disparities have grown. A number of cities have undergone a sanitary revolution, and their residents are virtually assured adequate water, sanitation and waste could be termed a pollution revolution, and clean up their ambient air and water. More cities with serious pollution, and a greater global ecological burden from cities than ever before.

Indian cities are now generating 60% of national income and attract large number of migrants from rural areas as well as small towns. By 2001, Indian's urban population had reached 285 million with most of this growth being concentrated in the metropolitan cities. This has brought about a rapid spatial expansion of cities which has placed increasing pressure on grossly inadequate sanitation infrastructure and services. But, as the gap between the supply and demand of sanitation and other basic services widens, the inequity in their provision places on even greater burden upon the urban poor who often live in illegal and insanity settlements. In 2004, these deficiencies in urban services meant that that 21% of urban dwellers living in slums and squatter settlements had extremely poor access to basic services such as water sanitation ans waste management. For

sanitation, only 36% of urban households are connected to the sewer system, even though 46% of households are reported to have water flush toilets.

This lack of adequate sanitation in India imposes a large burden of disease on the population and a substantial cost upon the economy. Each year an estimated 180 million person- days are lost due to the incidence of water borne disease which costs the economy Rs. 12 billion (Rs. 1,200 crores). In 2001, the burden of diarrhoeal disease imposed on 23 million (2.3 crores) children under the age of fourteen years has been calculated to cost 5 billion (Rs 500 crores). The environmental problem in Indian cities can be attributed to the failure by government to implement scheme that provide adequate and equitable access to sanitation and other basic urban services. Why has this situation arisen in Indian cities? In this research paper, will discuss about the sustainability of water and sanitation in urban areas and the problem of safe disposal of solid waste. The infrastructure development of urban cities inviting the culture of slums we can say that slums are the result of a failure of housing policies. Labors and the people who came from villages and from small towns lives in slums there is no toilets and no proper drainage facilities young man and woman can use community toilets but what about kids and old and disables they used vacant plots and open drains for defecation and urination. So government should make a proper plan for slum population.

II. METHODOLOGY

The present research paper is certainly based on desk study, involving compilation analyses of information and data from official websites, papers, media reports and articles. This research analysis the issues and challenges in water sanitation and solid waste management, in Urban areas. Our government applying lot of policies and plans to improve the condition of urban areas but with every development problems are increasing with leaps and bounds. By the help of data and analysis we will present the problems and their solutions to face the conditions. Total Sanitation problem in urban areas is so big in present research paper we will study on historic and present root problems and would come to know about cultural, environmental, economic reason of failure, with the help of population study, society management, distribution, standard of society, planning of cities.

III. RESULT AND DISCUSSION

Urbanization in India is a big cause of environmental risks, economically Indian cities are growing fast but economic growth had brought wealth to some, but also new forms of urban poverty, ill health and social discontent. We are extending our cities but what about planning? Since Independence, there has been a lack of coherent urban development policies at any level of government despite the deterioration in environment conditions. During the 1980s, urban growth reached 46.1 per cent for the decade which put sustained pressure on already inadequate infrastructures and services. Now Urbanization in India is expected to continue in the decades ahead, pushing urban population from 31% at present to 50% in 2030. This rises in population concerns over the development of infrastructure service for water supply and sanitation to serve the urban centre. Cities are extending, population is increasing but for extension we need more land and for population we need some basic facilities like infrastructure, drinking water, safely managed sanitation services so that we can live in decrease less environment and we could also provide a safe environment to our next generation.

IV. PLANNING AND SANITATION

There are 4,000 cities and towns in India. Approx 377 million people in India live in urban areas (around 31% of the population) the proportion of urban population in India is increasing consistently over the year from 11% in 1901 to 26% in 2001 & 31% in 2011. Estimated to increase to 432 million in 2021. Migration and floating population increase in urban poor and slums and it producing the basic problems like housing, health, transport, power, waste management, basic sanitation.

In Indian cities there is a huge fault in infrastructure planning and policies if we have glimpse on over all city planning, there is no place for poor. Usually Migrants come to city in search of employment or better future but because of unemployment, low wages and lack of infrastructure people just helpless to live in slums and squatter settlements, they use community toilets in some areas but what about kids and disabled who are helpless to go there. Indian slums are known for visual of children defecating in the open- alongside drains and railway tracks and all other possible areas that are near to their habitation areas.

According to the officials they are declaring ODF, but the reality is this that migrate population still suffering from the problem of open defecation. They are living in slums which are living in slums which are established in open plots. The plot owner only providing them the living there is no Toilet and not even sewer and drainage system so the liquid waste of those are slums going in open drains, they still not have toilet people are helpless to in open for defecation. We are planning to make our cities smart but we are failure to provide basic sanitation to our people.

On the other hand if we talk about Hygienic toilets condition is worst community toilets are the best example for this. One more flaw is recognized in the planning of cities that there are no toilets for women in old market areas and road side also specially highways. This is unfortunate that we are talking about women empowerment and there is no plan in our smart cities for our female, they are helpless to face humiliation and even sexual harassment while defecating in open, and get exposed to infections.

Drains and Dumping Yards as Living Areas: Unhealthy living conditions are the result of a lack of basic services, with visible, open sewer, lack of pathways, uncontrolled dumping of waste, polluted environments, etc. Houses, may be built on hazardous locations or land unsuitable for settlement, such as floodplains, in proximity to industrial plants with toxic emissions or waste disposal sites, and on areas subject to landslip. The layout of the settlement may be hazardous because of a lack of access ways and high densities of dilapidated structures.



Majority of the slums are also situated besides waste dumping yards. People who are living in slums they are helpless to live a basic sanitation less life there is no drainage, no toilets or unhygienic toilets, water problem, poor management of solid and liquid waste.

Illegal Settlements: Urbanization can fluctuate rapidly and be hard to predict. This makes planning for urban growth a challenge, especially in our country. Where more than 90% of urban growth is occurring. When data or government capacity is limited, housing shortages often result. Most of Slum areas are not notified in government documents that's why they are far away from the policies and skims those is constructed by government for refugee and migrant settlements.

Septage: As per Census 2011, piped sewer systems are only available to 32.7 percent urban households. India needs much better, scientific and locally adaptable management of septage.

Water Problem In Urban Areas:

It is alarming that more than half of India's water sources are polluted. The number of polluted rivers has more than doubled from 121 to 275 in the last five years. Major rivers like Yamuna and Ganga faces severe pollution and most of this is untreated urban sewage, industrial effluents and other wastes. Those polluted rivers and water bodies clearly effected to the health of the urban poor directly.

72% urban households have a water source on their premises. However, having a source inside one's complex does not guarantee the quality of water one gets. Only 32% of India's population receives treated water. Poor population, who is living in urban slums and on pavements helpless to drink contaminate water and they are suffering from water born deceases. Condition of women in Indian urban slums are worst they all spend their more than half time to fetch water, and girl kids are also they have to skip their school to collect water.

According to the recent research India's water program going on back foot just because of Government's ambitious sanitation program we should try to understand that 21% communicable deceases in India are linked to unsafe water and the lack of hygiene practices, Government should think about it that are they capable to provide drinking water to every citizen the answer is "NO". Today in urban areas people are helpless to spend a big part of their earning to buy safe drinking water. At this stage when India became a big growing economic country its citizens are helpless to buy safe drinking water isn't it miserable?

Solid Waste Management In Urban Areas:

With rapid urbanization, India is facing massive management challenge. Over 377 million urban people live in 7,935 towns and cities and generate 62 million tones of municipal solid waste per annum. Only 43 million tones (MT) of the waste is collected, 11.9MT is treated and 31 MT is dumped in landfill sites. All most all municipal authorities deposit solid waste at a dump yard within or outside the city haphazardly. Experts believe that India is following a flawed system of waste disposal and management. According to the experts In

India there is no affective policy and plan for recycling the waste and safe disposal of human waste also. If we have a look on our future waste generation in urban areas of India will be 0.7 Kg per person per day in 2025, approximately four to six times higher than in 1999. Urban India generated 31.6 million tones of waste in 2001 and is currently generating 47.3 million tones. By 2041, waste generated is predicted to be 161 million tones, a fivefold increase in four decades.

Waste management is a big problem in urban India, everywhere we can see the heaps of garbage and smelly block sever lines, this is the actual condition of Indian cities and just due to these block sever lines people are facing the problem of over flow sever. Government is making plans to develop smart cities but where, this is a web Huge chunk of garbage is remained untreated every single day. India's landfills are bursting at the seams and overflowing with items that shouldn't be thrown in the trash. More than 70% of collected urban waste is dumped straight into the landfills for example Ghazipur landfill site in east Delhi. It is one of the largest landfill of the country and is one of the biggest.

Issues And Alternatives:

In urban areas we have so many problems first of all increasing population and migrate population is the root of problem. It's like a never ended crisis if we will not concentrate on it. From the last few decades Population of Indian Cities is increasing with leaps and bounds government is usually failure to control it like other welfare programs government should make some effective policies to control the population and apply it strictly like china, china is the world's most populated country but it also have some effective laws to control it if we will not have control on it We'll be the first populated country soon.

India is a developing country and it is damn serious about its development so cities are expending and villages are shrinking. Everywhere we can see the infrastructure development construction work is carrying on everywhere, but one thing is missing in this that is planning, If we will see in our past Indian old civilization is the best example of city planning. Now There is no plan for drainage system, sever and saptages There are so many new expending colonies in developing cities where people are living without sever lines, They face water blocking problem in rainy seasons and in routine also. Corruption is the big reason behind this people who are making the plans they are not following guidelines in Delhi and Mumbai and there nearby cities are suffering with bad, unplanned infrastructure. We have world best civil engineer yet we are facing the problem of planning.

Urban areas are facing the problem of drinking water. In north India most of areas are fulfilling their needs by the river water which are originated from Himalayas and the two most important rivers are Ganga, and Yamuna both rivers are originated by the glacier Gangotri and Yamunotri. This time Ganga and Yamuna are most polluted rivers. According to the scientists water of both rivers is not able to drink and human use. Indian Population is fully dependent on Rivers the whole North Indian Plane is structured by Himalayan Rivers and now their water is not able to use what a miserable thing? Due to population growth people are covering the river ways to built infrastructure and result is when water increases in rivers those dry areas become full of water and we said that this is flood we blame climate and rivers and rain. At present in summer season most of areas are facing the drought problem they are helpless to buy pure drinking water. Government is carrying so many programs like "Namami Gangey" but after spending lots of money we are still stand at the beginning. To success of programs government should improvise its policies and industrial laws so that rivers could never be affected by urbanization.

Well Settlement of migrate population is a huge problem to solve, their employment, their settlement with basic sanitation needs and with basic fundamental rights like education, better clinical facilities, sanitized place to live. For all these things government should make affected policies and amplified those without corruption. Being developing country where most of population is living without home, without basic facilities we should respect our natural resources. Waste management is also a problem in our country recycling waste and safe disposal of it is major issue. Municipal Board should make some strict rules. Citizens should also be responsible to not throw their waste in open and do practice to use dustbins and try to recycle kitchen waste and other also so that minimum waste we got to manage.

V. CONCLUSION

Urbanization is growing rapidly in India but there is no proper planning for future we should learn to our old civilization and the planning for settlement. Harappan Civilization was one of advanced Indian civilization that time Indus Valley people had constructed their drainage system on very scientific lines. Our ancient civilizations are so elaborate that "the like of which has not yet been found anywhere in the world in any other city of the same antiquity". Now we have best equipments, facilities yet our cities are suffering from bad drainage system and unhealthy solid waste management.

Corruption and population growth is the basic reason of those problems and after that other problems relate with them. We cannot blame to government for everything there are so many rouls and policies but there

is no one to follow them. We will have to work on ground level water, sanitation; Toilet and solid waste management all challenges wants proper attention and willingness to achieve a difficult target.

Migrated population is a big problem for urban areas. People who are migrate towards cities in search of better facilities they live in unauthorized slums and these slums are major centre of unhealthy environment. Eight to ten people are living in a cottage in one room they are cooking, bathing, washing their utensils all activities they are doing there. They are using unhygienic community toilets. So, first Government should provide them better settlement with basic facilities at least.

Reference

- [1]. Chanathip pharino: Challenges for Sustainable Solid Waste Management Lessons from Thailand: Springer.
- [2]. An Inquiry into the Nature and Causes of the Wealth of Nations: Adam Smith.
- [3]. The Citizens at Risk; From Urban Sanitation to Sustainable Cities: Gordon McGranahan, Pedro Jacobi, Jacob Songsore, Charls Surjadi and Marianne Kjellen.
- [4]. Jeffery D. Sachs: The End of Poverty; How Can Make It Happen In Our Lifetime.
- [5]. J. Paul Guyer, P.E., R.A. An Introduction to Solid Waste Management Technologies.
- [6]. Anna Bernstad Saraiva Schott, Henrik Aspegren, Mimmi Bissmont, Jes La Cour Jansen Modern Solid Waste Management in Practice: The city of Malmo Experience, Springer.
- [7]. Pollution Control and Resource Recovery: Municipal Solid Wastes at Landfill Zhao Youcaj, Lou Ziyang
- [8]. Societies, Social Inequalities and Marginalization: Raghubir Chand, Etienne Nel and Stanko Pelc; Springer
- [9]. Water and Sanitation services: Public Policy and Management: Jose Esteban Castro and Le`o Heller.
- [10]. Solid Waste Management : Reduce, Recycle and Reuse: K.N. Kumar
- [11]. Understanding Poverty: Abhijit Vinayak Banarjee, Roland B`enabou, Dilip Mookharjee.
- [12]. Gary Grant: The Water Sensitive City.
- [13]. The Politics of Sanitation in India: Cities, Services and the State: Susan E. Chaplin.

IOSR Journal Of Humanities And Social Science (IOSR-JHSS) is UGC approved Journal with Sl. No. 5070, Journal no. 49323.

Dr. Mridula Sharma Urban Sustainability: Issues And Alternatives In Water.” IOSR Journal Of Humanities And Social Science (IOSR-JHSS). vol. 23 no. 2, 2018, pp. 28-32.