



Prioritising Rural Sanitation Indispensable for Sustainability in India

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Abstract

Since 2000, the UN member-countries under the Millennium Development Goals have been implementing policy and programs for improving access to safe toilets by 2015 which has, however, not been fulfilled. Against this background, this article briefly highlights the significance of the sanitation, Indian scenario, performance under programs initiated by the Government and suggests specific measures to achieve the SDG-6 by 2030.

India will, therefore, need to have a long-term planning to provide sustainable improved sanitation as defined by the UN-WHO Joint Monitoring Programme for Drinking Water Supply and Sanitation (2008, 2010) which describes an “improved” sanitation facility includes facilities that flush or pour-flush into a piped sewer system, septic tanks, or pit latrines, as well as ventilated improved pit latrines. Program for providing toilet facilities to all by 2019 under SWA needs to be implemented on a missionary zeal fully supported, by following critical elements in accomplishing its strategy.

It is prerequisite to install an effective monitoring and management information system to monitor the progress of implementation village-wise monthly at Block level, Block-wise quarterly at district level, district-wise half-yearly at state level and state-wise annually at national level. Independent evaluation State-wise once in two years and discussion in State Assemblies and both Houses of Parliament is a must. Elected representatives at grass root level, print and electronic media have a critical role.

Keywords: Indian Scenario, Sustainable, Sanitation, Sanitary facilities

JEL Classification: Q01, H5

Paper Classification: Research Paper

Introduction

Since 2000, the UN member-countries under the Millennium Development Goals have been implementing policy and programs for improving access to safe toilets by 2015 which has, however, not been fulfilled. Now with the adoption of Sustainable Development Goals (SDG)

by the UN General Assembly in September 2015 member-countries including India has also committed sanitation for all by 2030 under the SDG-6 (Sustainable Development Goal 6 Ensure availability and sustainable management of water and sanitation for all).

In 2001, the World Toilet Organization founded by Jack Sim declared its founding day, 19th November, as the World Toilet Day (WTD). Since 2007, the working group report on "Public Awareness Raising" of the Sustainable Sanitation Alliance has also been supporting actions to create awareness on the WTD. In 2013, the Government of Singapore and the World Toilet organisation initiated jointly a movement which led to the first UN Resolution in Singapore called "Sanitation for All". This initiative will address the sanitation crisis being faced globally. It calls for collective action through the declaration of the World Toilet Day. This initiative was adopted by 122 countries at the 67th session of the UN General Assembly, which declared 19th November officially the WTD. WTD provides an opportunity to these countries to create awareness about the need for sanitation. It started with a momentum to reach all and everywhere the facility of improved sanitation which was balanced and equitable for all the global citizens.

With India accounting for more than half of the 1.1 billion people who defecate in the open, while celebrating the World Toilet Day every year, India is expected to review the impact of its policy and programs initiated during the previous year threadbare and redesign them learning lessons from failure and intensifying efforts to build on their successes.

Against this background, this article briefly highlights the significance of the sanitation, Indian scenario, performance under programs initiated by the Government and suggests specific measures to achieve the SDG-6 by 2030.

Literature Review

Sanitation

Sanitation is a human right, just as important as right to water. Inadequate access to sanitation impacts their health, dignity and security. Sanitation for India focuses on hygiene behaviour. While good sanitation habits contribute to a clean environment, it is also an instrument to promote development of society, in turn generating significant economic benefits. The critical parameters that cause health burden on poor need focused attention because they suffer the most as they can ill afford health care.

Often most developing economies including India have been confronted with unhygienic sanitation facilities like bucket or hanging latrines, open pit latrines or those without a slab, a lack of a planned sewerage or a septic tank. Unsafe disposal, lack of toilet facilities, and a whole range of unclean practices is inadequate sanitation, which is detrimental to human habitation, which is the right of every individual.

The principal sources of almost 80% of many enteric ailments are found in developing countries because of the various forms of waste they generate. Studies reveal that 50 types of infections can be transmitted from an ill person to a healthy one by direct or indirect contacts or ways. The chronic malnutrition in children is connected to environmental enteropathy which is a condition which arises due to exposure to human feces. Along with this it is seen that the spread

of many diseases is also linked to the lack of proper disposal. It is estimated that 58% of all cases of diarrhea are caused from drinking unsafe water, poor sanitation and hygiene and poor hand washing behaviour. A simple provision of clean sanitation only has been estimated to lower the children suffering from diarrhoea by 7% to 17%, and under-5 mortality by 5% to 20%. Ultimately, sanitation ensures that people are protected from diseases. Giving access to clean toilets decreases instances of disease by twice, when compared to the decrease due to access to clean and potable drinking water. It was estimated in 2015 that globally about 2.4 billion people lack access to improved sanitation facilities, and just a little less than one billion continue to defecate in open space.

Discussion

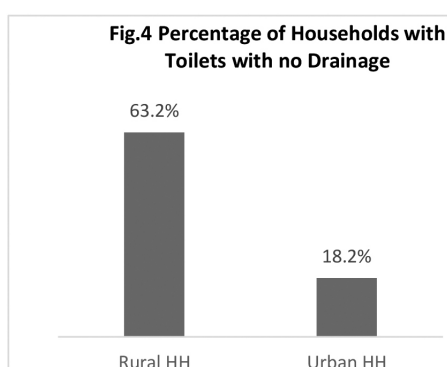
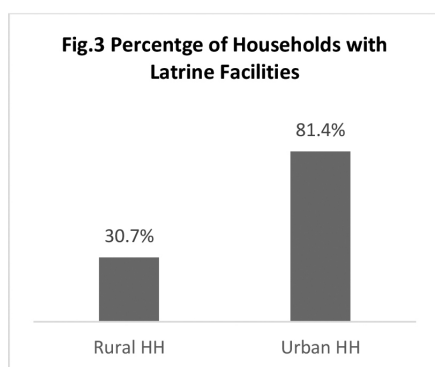
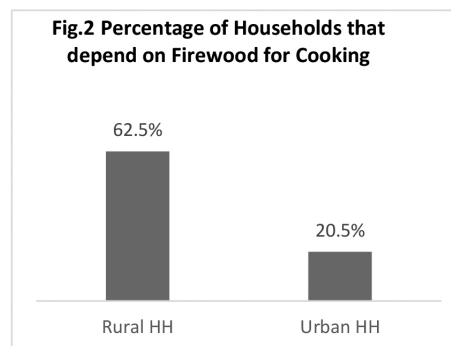
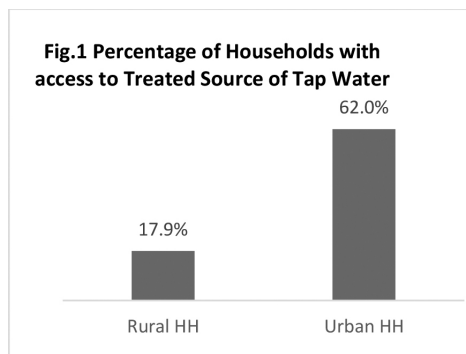
Privacy and Risk

Going out in the open, also, infringes human safety and dignity. More importantly, women and girls in developing countries lose privacy and face shame when using open space. Reports of harassment of women and girls when they leave their houses are common in India. Where it can be called a social evil the long term repercussions faced by a woman are both physical and psychological torment. Communities that persist to live with gender based inequalities are perpetuating economical loss because they cannot tap the full productive potential of victims. Surveys have found that by increasing access to good sanitation there are fewer incidents of sexual assault and gender-based violence inflicted on women.

Rural India, Low Priority

Government of India's first socio-economic census and comprehensive population survey, 2011, reveals significantly disappointing progress and developments on certain basic amenities to sustain human life. According to the 2011 Census the number of houses has increased by 132% from 2001 to 2011 (from 250 million to 330 million). The Government's policy which was biased towards industry and resultant enhanced purchasing power of urban population has facilitated easy access to state-of-the-art technologies. Purchase of consumer goods also increased. India economy has witnessed a transition during post-market economy, which many advocate as leaning towards private players. However, in sharp contrast, little attention was paid to policy measures that would provide Households (HH) access even to the most rudimentary facilities in rural areas. For example, according to the "Sanitation and Drainage, Analytical Report on Houses, Household Amenities and Assets" report,

- Rural households (167,826,730), account for 68.03% of total (246,692,667) HHs in India. Out of these only 17.9% rural HHs (Fig.1) has access to potable and treated tap water as against 62.0% of urban areas. Whereas 62.5% (Fig.2) of rural HHs depend upon firewood for cooking as compared with 20.5% urban areas. The matter of great concern is that 30.7% (Fig.3) rural HHs have latrine facilities as compared to 81.4% urban HHs. Out of this 63.2% (Fig.4) have no drainage in rural HHs as against 18.2% urban HHs. An abysmally low number of rural HHs, 2.2% only have piped sewer system.



India's Position in the World

According to the WHO, India spent 0.2% of GDP on sanitation, lagging much behind Pakistan and Nepal spending 0.4% and 0.8% respectively. This shows that our expenditure on sanitation is significantly lower than our poorer and geographically smaller neighbours. This inadequate investment on sanitation and health has negative impact on public health, which includes:

- Child mortality, due to diarrhoea and many other diseases spread and caused by poor sanitation
- There is increase in cost of healthcare that government has to spend to treat diseases, and
- Precious income is lost due to illness of the working group, productivity falls and expenses on recovering increases. Not only do the sick suffers but their caregivers go through the same losses in productivity.

The study on the impact of inadequate sanitation in India estimated that the total annual economic impact of inadequate sanitation in India amounted to a loss of 2.4 trillion (\$53.8 billion) in 2006 which was equivalent to about 6.4% of the GDP. This draws the pointed attention of the policy makers to the immediate need for increasing investment in improving sanitation accompanied by efficient planning and implementation of sustainable sanitation and hygiene programs.

The problem is especially acute in rural areas where women suffer the most due to lack of proper sanitation facilities. Going in the open, prevailing in rural India is a problem that baffles

both policy makers and civil society on how to eradicate it. The intensity of the situation can be judged by the fact that India has a large number of people who practice this (626 million) and it also has the largest number of child deaths due to poor water, sanitation and hygiene conditions when compared to the rest of the world.

A recent UNICEF report says 638 million people (54%) defecate in the open in India as against just 7% each in Brazil and Bangladesh. The report said that 6% of rural children who are below five years in India use toilets and 50% of all Indians do not regularly wash their hands using soap and follow hygiene standards. Former Union Minister for rural development Shree Jairam Ramesh once said "it was shameful that India accounted for almost 60% of unhygienic practices in the world". He had called for making India free of this unhealthy practice by 2017. While acknowledging "investment in sanitation and drinking water is as important as investment in defense", he added that, "you can invest in missiles and tanks, in aircrafts, but if you don't have clean drinking water, if you don't have sanitation then the population is not going to be healthy. More investment in these sectors will result into better health of the people".

Government Programs

Central Rural Sanitation Program (1968)

The Union Government for the first time in 1968 specifically initiated a Central Rural Sanitation Programme aimed at improving the quality of life of the rural people and also providing the privacy and dignity to women. The programme, in particular, envisaged provision of subsidies to encourage people to construct sanitation facilities. However, a Government's own study in 1996-97 revealed the immediate need to create awareness among rural people about sanitation as a whole rather than just incentivising them by way of subsidies for construction.

Total Sanitation Campaign (1999)

The understanding of the ground reality under the study marked the first change and shift of focus in the sanitation programme. In 1999, a restructured Total Sanitation Campaign (TSC) was initiated to create supply-led improvement in sanitation by supporting local sanitary marts and a variety of technological possibilities. The TSC, was to significantly improve the health and quality of life in rural areas, it had specific objectives, viz.

- intensive education and awareness campaigns and focus on ensuring that people understand the need for safe sanitation.
- promote cost-effective and appropriate technologies.
- fast-track sanitation handling in rural areas.
- create an environment where there is a push from the people to demand for sanitary facilities rather than wait for the Government, a demand-led promotion.
- promote the scheme from rural households to rural schools and public places with emphasis on promoting good hygiene practices.

Nirmal Bharat Abhiyan (2012)

In 2012, the scheme was further modified and renamed as the Nirmal Bharat Abhiyan (NBA) aimed at transforming India to "Nirmal Bharat" and the revised target year for achieving total sanitation from 2012 to 2022. NBA is a community led and people centred approach, inter

alia, emphasising Information, Education and Communication, and solid and liquid waste management. The components of the NBA include:

- help in improving the quality of life in the rural areas.
- accelerating coverage of sanitation facilities in rural areas to achieve the vision of Nirmal Bharat by 2022 so that all Gram Panchayats country attain Nirmal status.
- motivating groups and Panchayati Raj Institutions to incorporate sustainable sanitation facilities by creating awareness and educating them about health and hygiene.
- covering all schools in rural areas, those which were missed under Sarva Shiksha Abhiyan and Anganwadi Centres, with proper sanitation facilities.
- adopting proactive means to help students to promote education about hygiene factors and inculcating sanitary habits among students.
- encouraging cost effective and new technologies to have methods of ecologically safe and maintainable sanitation.
- developing community run sanitation systems focusing on separate solid and liquid waste management systems for complete hygiene in the rural areas.

Swachh Bharat Abhiyan (2014)

The Swachh Bharat Abhiyan (SWA) launched by the Prime Minister Narendra Modi on 2nd October 2014 has the core objective to eradicate going out in the open (as an integral component of significantly improving the health of the people) and aims at building 12 crore toilets in rural India at a projected cost of 1.96 trillion by 2019. Under the SWA over one crore toilets have been reported built. However, the National Sample Survey Organization revealed that not even half of these were being used and households were still continuing to use fields. Disturbingly, quite a good number of toilets constructed at a huge cost were being used to store grains or as general storage space, which makes the whole initiative unproductive and defeating the very purpose. The NSSO survey shows that the mission in its enthusiasm to achieve the toilet construction target, the Central and State governments and corporate houses under their social responsibility programmes have not paid due attention to the critical requirements of availability of adequate water and maintenance. In this situation, if one has to make a choice between dirty, unusable toilets and open fields, one cannot hope to spark behavioural change and persuade villagers to choose the former over the latter. The field level realistic findings of the NSSO survey, though unpalatable, should essentially help the government not just on sprouting toilets all over the countryside, but on making them usable and putting to its intended use.

State	2011	2010	2012	State	2011	2010	2012	State	2011	2010	2012
Andhra Pradesh	34.08	32.2	45.7	Chhatisgarh	14.85	14.5	23.3	Arunachal Pradesh	55.75	52.7	87.4
Karnataka	31.85	28.4	29.2	Bihar	18.61	17.8	27.2	Tripura	84.59	81.5	98.6
Kerala	94.41	93.2	97.2	Jharkhand	08.33	07.6	09.5	Sikkim	85.14	-	-
Tamil Nadu	26.13	23.2	33.6	Odisha	15.32	14.1	18.7	Delhi	86.50	76.3	100
Puducherry	40.41	-	-	West Bengal	48.70	46.7	60.3	Chandigarh	94.31	-	-

(Continued...)



Punjab	71.89	70.4	77.8	Gujarat	34.24	33.0	41.3	A&N	61.08	-	-
Haryana	57.71	56.1	74.8	Maharashtra	44.20	38.0	46.0	DNH	29.28	-	-
J&K	41.71	38.6	55.7	Goa	72.60	70.9	90.3	D&D	65.80	-	-
Himachal Pradesh	67.45	66.6	74.3	Assam	61.54	59.6	86.3	Lakshadweep	98.34	-	-
Rajasthan	20.13	19.8	27.0	Meghalaya	56.94	53.9	95.5				
Uttar Pradesh	22.87	21.8	24.7	Manipur	87.73	86.0	98.8				
Uttarakhand	54.96	54.1	80.3	Mizoram	87.10	84.6	99.8				
Madhya Pradesh	13.58	13.1	21.10	Nagaland	97.69	69.2	100	All India	32.67	31.7	40.6

Sources: 2011 Census for 2011 data, NSSO for 2010 and 2012 data

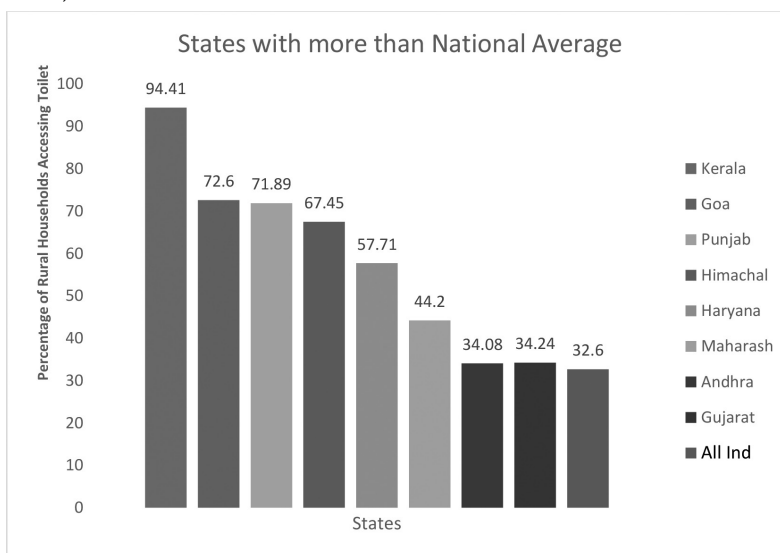
As per the Table No. 1, Census 2011 showed that 32.67% of rural households have latrine facilities. NBA aims at 100% access to sanitation for all households by 2022. The number of households provided toilets annually increased 6.21 lakh in 2002-03 and 45 lakh in 2012-13. Up to March 2014, over 49 lakh toilets were provided.

Results

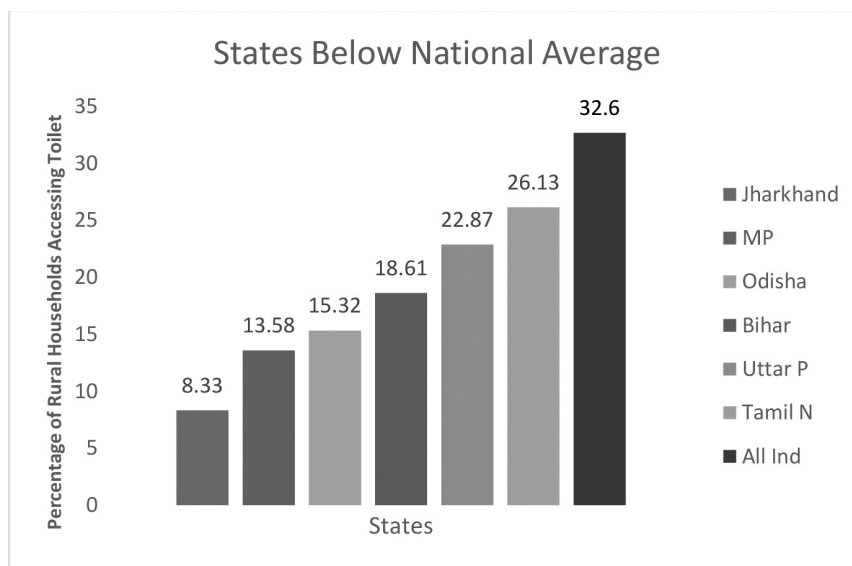
Discrepancies:

According to Census 2011, at national level only 32.7% HHs have toilet facilities.

- The States with HHs more than national average include Kerala (94.40%), Goa (72.6%), Punjab (71.9%), Himachal (67.5%), Haryana (57.7%), Maharashtra (44%), Andhra (34.9%) and Gujarat (34.2%).



- Whereas the States with HHs below national average include Jharkhand(8.3%), Madhya Pradesh (13.6%), Odisha(15.3%), Bihar(18%), Uttar Pradesh(22.9%) and Tamil Nadu (26.7%).



- Dismally, the number of HHs with toilets rose only 16.5% between 2001 and 2011. Increase is, however, just 4.8% in Bihar, followed by (6.12%) UP, (6.3%) MP, (8.3%) Odisha and (8.4%) Rajasthan.
- It is surprising that States reported HHs with toilets, on website of the TSC run by the Union Ministry of Rural Development, are significantly higher than that as per Census 2011, viz. national average (68.15%), Kerala (100%), Himachal (100%), Haryana (96.04%), Uttar Pradesh (81.76%), Gujarat (81.6%), Tamil Nadu (78.11%), Andhra (77.07%), Goa (76.24%), Madhya Pradesh (76.37%), Maharashtra (71%), Odisha (53.89%), Jharkhand (42.37%), and Bihar (32%).
- This invariably needs to be corrected since States in their enthusiasm to compete among themselves have reported significantly high achievements. It is also questioned whether toilets are really being used. People may agree to use toilets. But it is a challenging task to change to new habit. It is necessary to sustain behavioral change.

Conclusion

Poor performance of sanitary facilities continues to be a serious concern for the country. Factors attributing to this include:

- cultural and traditional reasons and lack of education contribute to this unhygienic practice.
- most of SCs, STs, BPL families and lower income groups generally are not aware of the importance of sanitation for better health and clean environment. Sanitation is not a “felt need” for them and, therefore, they do not participate in sanitation programs.
- low sanitation coverage due to inadequate and lack of concerted efforts to create awareness among rural households to motivate them to have toilet facilities, lack of affordable sanitation technology and trained implementing agencies and
- lack of choice of different toilet designs, technologies that are area specific, inadequate supporting delivery system, an absence of trained and skilled workers, and technical manpower.

Weaknesses:

The implementation leading to not achieving the intended targets revealed glaring weaknesses viz.

- Lack of commitment of state and district authorities for implementation, review, monitor and concurrent evaluation.
- High priority on hardware and low priority on Information, Education and Communication.
- Low utilisation of NBA fund.
- Inadequate social mobilisation for generating demand for sanitary facilities.
- Inadequate involvement of NGOs and participation of users.
- People not being offered alternative low cost technology options.
- NBA vis-à-vis other schemes involving higher subsidy amount in some states.

Recommendations

Need for Strategic Actions:

India will, therefore, need to have a long-term planning to provide sustainable improved sanitation as defined by the UN-WHO Joint Monitoring Programme for Drinking Water Supply and Sanitation (2008, 2010) which describes an “improved” sanitation facility includes facilities that flush or pour-flush into a piped sewer system, septic tanks, or pit latrines, as well as ventilated improved pit latrines. Program for providing toilet facilities to all by 2019 under SWA needs to be implemented on a missionary zeal fully supported, by following critical elements in accomplishing its strategy.

- a) A village-wide campaign is necessary to make rural people aware of adverse effects of unhealthy ways. The people need to know that poor hygiene is mainly responsible for infections and number of diseases. A massive campaign, by using every available means of communication, has to be launched. All the people in a village including school children, youth and women should be made aware that they should not walk barefoot; they should always cover with soil, this will prevent flies. Covering food must be done to avoid contamination of eatables, as this is the main cause of diarrhea, dysentery, cholera etc. Rural sanitation should find an appropriate place in education as a part of health awareness, it can be a compulsory subject in primary schools. The campaign should result in creating demand for hygienic facilities this will in turn particularly help and save women from the agony and humiliation.
- b) Proper sanitation and uncontaminated water ensure that the country is healthy. Health and sanitation go hand in hand; both are interrelated. Identifying that the outbreak of diseases like cholera, diarrhoea can directly be linked to water-borne problems is essential. Arsenic contents in drinking water are the main reason for increasing cancer cases. This makes it necessary to cogitate that health, water supply and sanitation are one sector rather than separate. There are tens of thousands of Accredited Social Health Activists (ASHA) in rural India. The ASHA workers are local village women, who are generally in the age group of 25 – 45; they are trained in the area of health. The ASHA volunteers who are affiliated to National Rural Health Mission can be of noteworthy help in creating awareness among rural masses, especially rural women, in imparting awareness to them on sensitive to hygiene and sanitation issues.

- c) Masons should be given adequate training on construction of proper toilets. The training should help them to use modern construction technology. The constructions should help the user to use the facility easily and they should also be given training on follow-up needed to maintain the facilities. Adequate number of pans, water seals with approved quality standard specifications has to be made accessible at various centers. People should have easy and reliable access to facilities; they should be given the freedom to be able to construct toilets that are suitable to their income levels.
- d) There is no uniform design for a toilet that can be forced on user-beneficiaries. Users of toilet should be free to decide on the design of his/her toilet. It is reported that Sulabh International has prepared 46 designs. They include designs of pour flush toilets meant for BPL families as well as for Middle Income Groups (MIG) or Higher Income Groups (HIG). BPL families can be provided toilet facilities free of cost whereas MIG and HIG can be extended subsidies. Banks can also consider them eligible for loan under priority sectors. In view of SWA being a program of national significance to promote clean environment Government can consider interest-free bank loans to all beneficiaries to motivate them to have toilets in their houses.
- e) The program requires house-to-house contacts and follow-up which can best be done by NGOs and dedicated volunteers. The role of NGOs has been central in most cases in India. They create awareness and help in generating an effective demand from rural households. They play a key role in planning and implementing many governmental programs, initiating follow-up etc. These NGOs should be selected for ground work, those that have a proven expertise and have demonstrated it should be involved. They must be trained to implement the program. A comprehensive training program, comprises requisite information, education, communication, implementation and follow-up etc.
- f) Implementation of program will require significant efforts for social mobilization on a large scale which will include people belonging to various groups. Elected representatives at grass root level have a critical role.
- g) In rural areas, public toilets are generally favored near panchayat offices, village markets, bus station, community places etc. Public toilets should, preferably, be constructed by NGOs who can also be entrusted with the responsibility to maintain on a "pay and use basis".
- h) Most of the schools in rural areas do not have toilet facilities for children. This is one of the main reasons for high drop-out rates in Indian schools, particularly girl students. Number of toilets must be adequate to match the strength of students. It is essential that a target of all schools having a facility should be accomplished by March 2017. Corporate houses, business entities, individual citizen donors, financial institutions, insurance companies, NRIs etc. can come forward and provide toilet facilities in schools to complement government efforts. The school management and teachers can play an effective role in spreading hygiene. Teaching students how to maintain toilets, keep them neat and clean and monitoring them, ensures that students follow the training given to them not only in schools but also at homes. These students can be brand ambassadors of hygienic habits as they feel like taking the responsibility of spreading information in the community. Training students ensures that the initiatives will have a long term impact as they will continue these healthy habits in their adult years too.
- i) It is necessary to strengthen Panchayats all over the country through Gram Panchayat Sashaktikaran Abhiyan and capacity building efforts for gram Panchayats.
- j) The recent policy shift on the decentralisation of funding and operations to the states should encourage and facilitate state governments to accord priority to rural sanitation .

- k) Other measures include:
- Higher investment for rural sanitation
 - Aggressive social marketing
 - Strong behaviour change communication
 - Village Planning
 - Strong alternate delivery system
 - Social mobilization and mass awareness at Panchayat level
 - Development of strong partnership with implementing agencies, NGO, bilateral agencies and Panchayat
 - Creation of adequate capacity of partners for better sanitation drive
 - Trained masons and social mobilization should work in tandem
 - BPL and APL families not having the toilet accessibility should be targeted simultaneously
 - Incentives and awards
 - Time frame for Panchayat and Block

India is an emerging economy and if we have to achieve double digit annual growth in productive activities, we will have to resolve problem of sanitation and thereby issues connected to health. Constructing toilet facilities with proper disposal system like piped sewer system for disposal of human waste are necessary in the long-term. Just like any other public initiative which has such wide spread impact and implications, neither the government, nor local authorities or beneficiaries can fully bear the cost of constructing and operating these facilities. These facilities come with maintenance and recurring costs of handling and disposing sewerage. For this purpose, vision 2022 may need to focus on sharing national and international experiences and knowing best practices of other developed countries. Financial resources can be mobilized from international financial institutions, like World Bank, Asian Development Bank etc. Reputed professional agencies can be contacted to harness their technical expertise and to encourage them to supply modern equipment. Perspective plans should be made and implemented in phases so that cities and villages are brought into a clean environment progressively by 2022. Public-Private-Partnerships can help to implement it faster. The thrust is not just to construct toilets, but to ensure their continued use, cleanliness and maintenance which calls for a behavioral change.

It is quite disappointing that despite government's efforts since 1968, rural open defecation in 2015 was as high as 61.3% as compared to neighboring and relatively poor countries, viz. Nepal (37.5%), Pakistan (21.4%), Afghanistan (17.4%), Bhutan (03.8%), Bangladesh (01.8%) and Sri Lanka (00.0%). This necessitates a detailed state-wise Action Research Projects to understand the precise factors responsible for such a dismal state of affairs even after 47 years. The Strength, Weakness, Opportunity and Challenge (SWOC) analysis can throw light on the strength and weaknesses of the planning and implementing agencies along with opportunities now available that can be seized to formulate a road map to accomplish the task of making rural India free from open defecation by March 2019 taking into account the likely threats in specific geographical areas.

Besides, it is prerequisite to install an effective monitoring and management information system to monitor the progress of implementation village-wise monthly at Block level, Block-wise quarterly at district level, district-wise half-yearly at state level and state-wise annually at national level. Independent evaluation state-wise once in two years and discussion in state assemblies and both Houses of Parliament is a must. Elected representatives at grass root level; print and electronic media have a critical role.

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Author's Profile

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