

SPECIAL ISSUE



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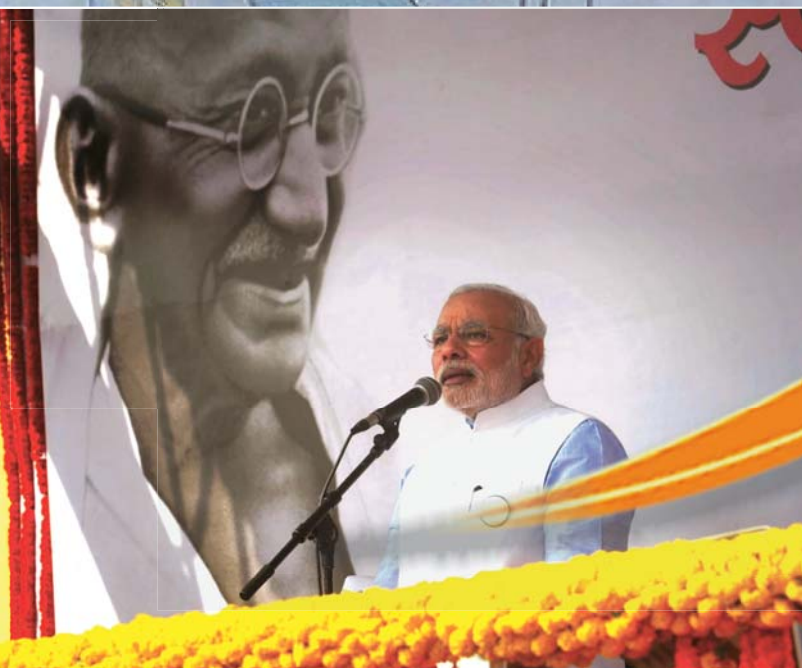
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Rural Sanitation

Changing Mindsets: Restoring Human Dignity



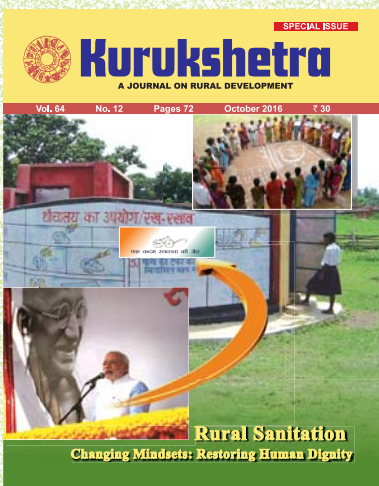
PM Appeals to end Open Defecation

...My dear countrymen, we had launched 'Swachha Bharat Mission' two years ago on 2nd October, the birth anniversary of our revered Bapu. That day too I had said that cleanliness should become our nature, a duty for every citizen and there should be an atmosphere harbouring a sense of revulsion against filth. Now it is going to be nearly two years on 2nd October and I can confidently say that one hundred and twenty five crore people of the country have now become more aware about cleanliness. I had said 'one step towards cleanliness' and today we can say that each one of us has definitely tried to take one step further. This means that the country has taken 125 crore steps in the direction of achieving cleanliness. This affirms that the direction we have taken is correct and also fruits of the action are very sweet. It has also been seen as to how much can be achieved through making small efforts. Everyone, be it a common citizen, an administrator, in Government offices or roads, bus stops or railways, schools or colleges, religious places, hospitals, from children to old persons, rural poor, farming women- everyone is contributing something in achieving cleanliness. Friends in the media have also played a constructive role. I also know that we still have to go much farther. Yet, the beginning has been good so far.

Whole-hearted efforts have been made and a conviction has now set in that we shall indeed succeed. This conviction is important. If we talk of rural India, so far 2 crore 48 lakh or say about two and a half crore toilets have been constructed and we intend to build another one and a half crore toilets in the coming one year. From the point of view of sanitation and keeping in mind the dignity of our citizens, especially the dignity of our mothers and sisters, it is necessary to put an end to the habit of defecating in the open. And, with this in view 'Open Defecation Free' or ODF Campaign has been launched. A healthy competition towards achieving liberation from the habit of defecating in open has started at the levels of states, districts and the villages. Andhra Pradesh, Gujarat and Kerala will achieve very soon cent percent ODF targets. I visited Gujarat recently and the officers there informed me that Porbandar, the birth place of Mahatma Gandhi, will achieve the target of total ODF on 2nd October, 2016.

My congratulations to those who have made it possible, and best wishes to those who are trying to reach the target. I appeal to all of my countrymen that to maintain the dignity of our mothers and sisters and for the sake of health of our children, our country needs to get rid of this scourge. Let us forge ahead with a strong resolution. I specially want to suggest a scheme to my young friends who are

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CHIEF EDITOR
DEEPIKA KACHHAL

EDITOR
DIVYANSHU KUMAR

JOINT DIRECTOR (PRODUCTION)
VINOD KUMAR MEENA

COVER DESIGN
ASHA SAXENA

EDITORIAL OFFICE

ROOM NO. 686,
Publications Division,
Soochna Bhawan,
C.G.O. Complex, Lodhi Road,
NEW DELHI-110003
Phone : 011-24362859
E-MAIL : kurupage@yahoo.co.in

FOR SUBSCRIPTION ENQUIRIES,
RENEWALS AND AGENCY
INFORMATION
PLEASE CONTACT:

JOURNAL UNIT, PUBLICATIONS DIVISION
MINISTRY OF I & B, ROOM NO. 48-53,
SOOCHNA BHAWAN, CGO COMPLEX,
LODHI ROAD, NEW DELHI-110 003
TELE : 24367453
FAX: 24365610
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CONTENTS

➤ Swachh Bharat Mission: From Behaviour Change to Social Change	Narendra Singh Tomar	5
➤ Rural Communities Embrace Swachh Bharat Mission (Gramin)	Parameswaran Iyer	8
➤ Swachh Bharat Mission (Gramin) Support through Data Analysis	Sujoy Mojumdar	10
➤ 'Mann Banao, Shauchalaya Banao': New Mantra for Rural Gujarat	Dr Jayanti S Ravi	17
➤ Making Sanitation People's Movement – the Jashpur Way	Dr Priyanka Shukla	22
➤ Swachhta Pakhwada: When Government Leads by Example	Akshay Rout	26
➤ Challenges of Cleaning Rivers	Sanjay Srivastava	30
➤ Rural Cleanliness and Gandhiji	Rajiv Ranjan Giri	39
➤ Basic Sanitation in Rural India: Road Map for Swachh Bharat	Dr Bindeshwar Pathak	44
➤ Waste Management in Rural Areas: Completing Swachh Cycle	Indira Khurana	50
➤ Environment and Sanitation	Utsav Kumar Singh and Seema	55
➤ Mahila Mandals Move Mandi towards ODF plus	Sandeep Kadam	59
➤ Swachh Bharat Abhiyan to End Open Defecation in Rural India	Dr Amrit Patel	61
➤ Rural Sanitation: The Way Forward	Rishabh Krishna Saxena	67
➤ Swachhta Soldiers Race to win 'Clean Village Award'		70

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Editorial

"Uncleanliness of the mind is more dangerous than that of the body. The latter, however, is an indication of the former."

This quote by Mahatma Gandhi truly summarises the importance of sanitation for mental and physical well being of an individual. Mahatma Gandhi was the first to realise the importance of sanitation. He performed scavenging work to prove that without clean and healthy surroundings, we would not develop as a nation. He even took cleanliness to the level of spirituality and declared cleanliness as next to godliness.

Historically speaking, Indians are the pioneers of town planning in which sanitation and cleanliness are vital components. Archaeological remains of Indus Valley Civilisation, be it Harappa, Mohenjo-Daro, Dholavira, Lothal or newly found biggest Harappan site Rakhigarhi have displayed the fact that there had been proper arrangements for sewage disposal with networks of culverts made of baked bricks. However, due to multiple factors, despite our scriptures mentioning cleanliness of body and mind, we stopped practising cleanliness, especially at the community level. Our streets are still dirty. Majority of people still defecate in open.

Good hygiene and sanitation are the indicators of social and economic development in a society. Sanitation and health status of a country significantly affects a nation's economic development and performance. As per a United Nations factsheet, there are 2.5 billion people in the world who still do not use an 'improved' sanitation facility and a little over one billion practise open defecation. Every 20 seconds a child dies as a result of poor sanitation. A recent UNICEF report says 54 per cent people defecate in the open in India as against just 7 per cent each in Brazil and Bangladesh. Only 6 per cent rural children below five years in India use toilets.

Successive Governments spent crores of rupees to clean up this mess but did not succeed in getting desired results. Realising the enormity of the problem Prime Minister Narendra Modi, in his first Independence Day speech on August 15, 2014 said, *"the poor need respect and it begins with cleanliness. I, therefore, have to launch a 'clean India' campaign from 2nd October this year and carry it forward in 4 years."* Rightly invoking Mahatma Gandhi, Father of nation, on the occasion of the formal launch of Swachh Bharat Mission on 2nd October 2014, he said, *"a clean India would be the best tribute India could pay to Mahatma Gandhi on his 150 birth anniversary in 2019."* Sanitation in rural areas is the corner stone of the programme. The Swachh Bharat Mission-Gramin aims at improving the levels of cleanliness in rural areas through Solid and Liquid Waste Management activities and making gram panchayats Open Defecation Free (ODF), clean and sanitised. Sanitation has been conceived as a symbol of dignity, health and safety.

So much work has been done in the last two years. Sikkim has already been declared Open Defecation Free (ODF) State. Kerala and Gujarat are poised to become ODF States soon. A sense of responsibility has been evoked through the movement. With the large scale participation in both rural and urban India, the Swachhta Abhiyan has turned into a National Movement in the two years of its launch. It has turned multi-dimensional as in many places it has been combined with anti-liquor and other social movements. Namami Gange aims to ensure effective abatement of pollution and rejuvenation of the river Ganga.

However, a lot more needs to be done to realise the dream of making India not only clean, but also Open Defecation Free (ODF). There is an urgent requirement to change the sanitation landscape and give it a universal coverage through partnerships at all levels with various stake holders like local bodies, village communities and NGOs. Community participation and behavioural change are critical for success of any sanitation programme. Strategic IEC interventions are essential to ensure a long term sustainable change as it seeks a behavioural change among the people.

Challenges are aplenty as State Governments/UTs have to work in tandem with the central Government. Gram Panchayats and Municipalities have even greater responsibility. The proposal of ranking villages, gram panchayats, blocks and districts and States on the basis of Cleanliness Index and Solid and Liquid Waste Management (SLWM) Index has instilled a sense of competitiveness. It is hoped that this will add momentum to the overall goals of Swachh Bharat Mission.

Support and participation of all stake holders is vital to realise the dream of Swachh Bharat. Cleaning of Thames and Elbe could not have been possible without the collective quest to have a clean and healthy environment.

SWACHH BHARAT MISSION: FROM BEHAVIOUR CHANGE TO SOCIAL CHANGE

Narendra Singh Tomar

SBM was envisaged to be a community-led people's movement with focus on behaviour change and not just construction of toilets. Other than ensuring hygiene, waste management and sanitation, the Mission has been focusing on removing the bottlenecks that were hinder the progress in terms of capacity building, coordination, logistics, finance, etc.

The practice of open defecation poses serious health risks, which have a cascading effect on economic well-being of a family. That nearly 50 per cent of the rural population of India continues with this traditional practice has certainly been a cause for disquiet more so from the view point of the womenfolk.

To accelerate the efforts to achieve universal sanitation coverage and enhance focus on sanitation, the Prime Minister launched the Swachh Bharat Mission (SBM) on October 2, 2014. "A clean India would be the best tribute India could pay to Mahatma Gandhi on his 150th birth anniversary in 2019," he said.

SBM was envisaged to be a community-led people's movement with focus on behaviour change and not just construction of toilets. Other than ensuring hygiene, waste management and sanitation, the Mission has been focusing on removing the bottlenecks that were hinder the progress in terms of capacity building, coordination, logistics, finance, etc.

The landmark initiative SBM-G

strives to improve the levels of cleanliness in rural areas through solid and liquid waste management activities and making Gram Panchayats Open Defecation Free (ODF), clean and sanitised.

The main objectives of the SBM(G) are: to bring about an improvement in the general quality of life in the rural areas by promoting cleanliness, hygiene and eliminating open defecation; to accelerate sanitation coverage in rural areas to achieve the vision of Swachh Bharat by October 2, 2019 to motivate communities and Panchayati Raj Institutions to adopt sustainable sanitation practices and facilities through awareness creation and health education; to encourage cost effective and appropriate technologies for ecologically safe and sustainable sanitation; and to develop wherever required, community managed sanitation systems focusing on scientific solid and



liquid waste management systems for overall cleanliness in the rural areas.

Towards this, MDWS has put in place detailed guidelines, outlining a strategy, steps for implementation and activities that states can engage in to achieve ODF status for all villages. Sanitation being a State subject, the focus of the strategy is to move towards a 'Swachh Bharat' by providing flexibility to State governments to decide their implementation policy and mechanisms, taking into account State-specific requirements.

On their part, the States were required to develop an Implementation Framework with a roadmap of activities comprising planning, implementation and sustainability phases. They have been encouraged to utilise the provisions under the Mission effectively to maximise of the interventions. The Government of India's role has been to complement the efforts of the state governments.

Swachh Bharat differs from earlier sanitation initiatives, in that it has sought proactive engagement with the corporate sector leveraging corporate social responsibility (CSR) opportunities created by the Companies Act of 2013.

The Ministry of Human Resource Development (MHRD) has also pitched in, encouraging companies to contribute to Swachh Vidyalaya Swachh Bharat, an initiative that aims to provide functional toilets

for elementary and secondary schools across the country.

To facilitate channelisation of philanthropic contributions from religious leaders and CSR funds from institutions towards this cause, the PM has also launched a fund - Swachh Bharat Kosh. Further he has evinced keen interest, prodding the implementing teams into taking action and delivering results while sharing success stories on Mann Ki Baat, a monthly radio programme. In addition, celebrities, the corporate sector, teachers, students and the media have been called upon to advocate the need for access to safe sanitation for all.

It's been two years since the launch and there has been significant activity across the country. To begin with, there has been a substantial decline in the number of people defecating in the open with over 20 districts and more than 80,000 villages becoming ODF. Along the Ganges, as many as 1,523 villages have been made ODF. Till date more than 23.5 million household toilets have been built. Behavior Change Campaigns have been launched to ensure usage of the toilets already constructed.

Among other activities at the Centre, MDWS has initiated 'Swachhta Pakhwada' (cleaning fortnight) under which all Ministries follow a fixed calendar to clean up their offices and areas that come under their purview. Various activities have been initiated to complement the mass movement for cleanliness,

demonstrating that the Government is leading by example.

Along with its development partners, it has organized a Global Interfaith Wash Alliance, enlisting support of religious heads to support the cause. It has actively sought support of gram panchayat heads of villages along the Ganga to clean up villages along the banks of the river commissioned to carry out the sanitation assessment of each district on four



distinct parameters with maximum weightage placed on accessibility to safe toilets and water.

The States should be appreciated for initiatives such as waste to wealth programmes, training of self-help groups to drive sanitation programmes, training of masons, setting up of rural sanitary marts, organising green elections, CLTS training, ODF mapping, creation of sanitary parks with model toilets, use of street theatre to communicate message of sanitation and other events, etc.

At district level, there have been numerous innovative activities that go to show change is happening. District administrative bodies along with civil society are playing a major role in propelling the movement with a comprehensive sanitation plan. These activities include awareness building, positive discrimination through activities such as ODF Olympics that is open only to individuals from ODF villages, morning follow up, monitoring committees, Gaurav Yatras, human chains and rallies and administering of mass sanitation pledges, among others.

In some cases the SBM movement has transformed into a fight against some social malaise. In Bungrail Chowk panchayat in Mandi district of Himachal Pradesh, women started a fight against their ostracisation during their menstrual cycle when they were forced to live in cowsheds during the 3-4 day period. It also became a war against liquor menace when women during their cleaning exercise



found that liquor bottles were a big component of garbage.

It needs mention that several individuals have gone the extra mile to bring about change and inspire others – children, women and the physically challenged. Their struggles are depicted through the success stories that come in from the field on a regular basis.

Above all, the SBM campaign is extensively using internet and social media to disseminate information and best practices towards meeting sanitation goals. The Ministry keeps abreast of developments in the field through regular video conferencing.

While lack of acceptability and proper usage of toilets built in certain rural areas still remains a major challenge in some areas, considerable progress has been achieved. The way ahead is to continue working towards combating the culture of open defecation through behaviour change. Systems have to be developed to sustain the ODF status once it is achieved.

Today, the Swachh Bharat Mission and “ODF” has become a household name among children, women and men, evoking in them a sense of responsibility and pride in keeping their surroundings clean.

As Mahatma Gandhi's dream of a ‘Clean India’ MDWS is keen to ensure that every individual has access to sanitation facilities and that no individual or community is left out.

(Author is Union Minister of Rural Development, Panchayati Raj and Drinking Water & Sanitation)



RURAL COMMUNITIES EMBRACE SWACHH BHARAT MISSION (GRAMIN)

Parameswaran Iyer

Considering the sheer magnitude of the operation, the Government has made every effort to make Swachh Bharat Mission a nation-wide movement by enlisting the support of prominent ambassadors, the corporate sector, development partners, NGOs and the media to support and advocate the need for everyone to have a toilet.

India has a huge demographic dividend with its billion plus population. India's immense potential has made it a force to reckon with. A massive 65.6 per cent of our population is below 35 years of age. But to make it an effective and strong working force, sound in body and mind, India needs to adopt good sanitation practices across the country.

Studies show that the health status of a country – both individual and collective – significantly affects a nation's economic development and performance. Ill-health of citizens has a definite impact on long-term development, economic growth and poverty reduction of the country. With a view to address these issues, the Prime Minister of India launched the Swachh Bharat Mission (SBM) on October 2, 2014. Two years since then, there has been considerable progress with 17 districts and 80,000 villages as of September 15, 2016 verified as Open Defecation Free (ODF), and the number increases each day. But the journey has not been without challenges.

The SBM differs from earlier sanitation initiatives, in that it is being personally led by the Prime Minister himself. It has made sanitation a national priority. A lot of flexibility has been provided to the States which are implementing the programme with emphasis on communities rather than individual households and

proactive engagement with the private sector as well as development partners. It also aims to provide functional toilets for elementary and secondary schools across the country. The target to achieve an ODF India is October 2, 2019, as a fitting tribute to Mahatma Gandhi on his 150th birth anniversary.

The key to achieving an ODF India lies in bringing about changes in people's behaviour. In most cases, open defecation is practiced not because of insufficient funds for building toilets, but because it is an attitude – a deeply rooted social and personal habit. Combating a culture of open defecation calls for mobilising communities into make a collective decision for stopping open defecation.

Toilets need to be made aspirational and people need to know the importance of using toilets and the dangers of open defecation. They



should appreciate the dignity of having their own toilets, the need for having separate toilets for girls in schools and, more importantly, the need to maintain those toilets.

Considering the sheer magnitude of the operation, the Government has made every effort to make SBM a nation-wide movement by enlisting the support of prominent ambassadors, the corporate sector, development partners, NGOs and the media to support and advocate the need for everyone to have a toilet.

There are numerous success stories revealing how community processes have worked wonders. Also, there are several incidents of children, women and people with disabilities who have persevered and inspired their communities to bring about a positive change. Take these instances – young brides who refused to marry into a home which does not have a toilet; a panchayat chief who touched people's feet to convince them to build toilets; or a physically challenged person who went around his town to spread the sanitation message, a marathon runner who did the same; or the lady who took on the massive task of cleaning the ghats of the Ganga in Varanasi.

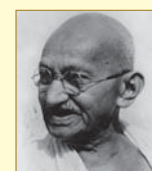


It is heartening to note that youth, teachers and women have pitched in to help change behaviour, becoming *Swachhta* champions in the process. While some villages have allocated a weekly cleaning day, others have nominated *Swachhta Doots* (agents) to monitor the the sanitation drive. Local authorities have been recognising and lauding such efforts.

All that has been established thus far would not have been possible without dedicated and committed individuals at all levels of administration. They are our change-makers who are working round the clock to meet aggressive aspirations. Fortunately, the use of social media has made the process transparent and efficient. As we continue on this journey and strive to clean up our nation, we seek the support of every citizen. With your help we can provide the right opportunity to every citizen and help our country reach its full potential and make it sustainable for future generations.

(The author is Secretary, Ministry of Drinking Water and Sanitation, Government of India.)

"Village tanks are promiscuously used for bathing, washing clothes and drinking and cooking purposes. Many village tanks are also used by cattle. Buffaloes are often to be seen wallowing in them. The wonder is that, in spite of this sinful misuse of village tanks, villages have not been destroyed by epidemics. It is the universal medical evidence that this neglect to ensure purity of the water supply of villages is responsible for many of the diseases suffered by the villagers."



Mahatma Gandhi
Harijan, Dated: February 8, 1935

SWACHH BHARAT MISSION (GRAMIN) SUPPORT THROUGH DATA ANALYSIS

Sujoy Mojumdar

The implementation of a large time-sensitive programme like the SBM (G), requires various types of information support to ensure the optimum and effective utilisation of available resources. The development of Management Information Systems and the regular input of programme progress data on a household basis has opened up the opportunity of analysing the data available, to provide information and suggestions that is useful to inform the programme policies, priorities, and implementation and allow for corrective measures.

Sanitation includes interventions for the safe management and appropriate disposal of waste. Provision of safe sanitation services also includes dealing with behaviour issues (like toilet use and handwashing), availability of infrastructure (e.g. latrines, sewers), and an enabling environment (e.g. policies, finance, delivery systems and human resources for achieving sanitation outcomes). Safe sanitation practices ensure that waste does not come into contact with humans. This leads to improved drinking water quality, reduced burden of disease and illness, and a cleaner environment, ultimately resulting in a better quality of life.

Lack of adequate safe sanitation is a concern in India, which is more evident in rural areas. The most striking of these issues is the inadequate access to improved toilets'. The 2011 census reported that 30.8 per cent of rural households had such access. To a large extent this is the cause of India accounting for the largest number of under-five deaths – nearly 1.5 million a year. Every year, an average of 3,00,000 young lives are lost in the country from diarrheal diseases, due to poor sanitation and hygiene (Jayalakshmy, 2015 Jan-June). Out of the 158 million children under five years who survive, 61 million are stunted due to chronic under-nutrition. Recent research suggests that Environmental Enteric Dysfunction (EED) plays a significantly greater role in stunting as compared to poor dietary intake etc., and is the primary causal pathway for chronic under-nutrition to stunting. EED reduces the intestines' efficiency in digestion and absorption of food, and is caused by ingestion of faeces among people living in conditions of poor

sanitation and hygiene (Jean Humphrey, Professor of Human Nutrition at the Johns Hopkins Bloomberg School of Public Health, 2014). Thus, providing access to safe sanitation is essential for a healthy society.

The rural sanitation programme in India was introduced in 1954 as a part of the First Five Year Plan of the Government of India. However the 1981 Census revealed that rural sanitation coverage was only one per cent. Despite the efforts under several programmes, like the Central Rural Sanitation Programme (CRSP), the Total Sanitation Campaign (TSC) and the Nirmal Bharat Abhiyan (NBA), implemented between 1986 and 2014, the rural sanitation coverage has grown at about one per cent a year. This has resulted in India not achieving its Sustainable Developmental goals (SDGs) for sanitation in 2015.

Recognising that the sanitation problem is not only that of inadequate infrastructure, but involves changing the mindset of the population regarding the sustained use of toilets, the current rural sanitation programme, the Swachh Bharat Mission (Gramin) (SBM-G), being implemented with the goal to make India free from open defecation (ODF) by October 2, 2019, the 150th birth anniversary of Mahatma Gandhi, brings in a new approach, focussing on bringing behaviour change through social mobilisation and collective action; gives flexibility to States and districts in implementation; provides financial support; aims at garnering partnerships for sanitation and attempts to leverage and use the respect and office of the District Collector for maximum impact. Though the programme has

been designed and is being driven by the Central Government, sanitation being a State subject in India, which is further devolved to the local bodies under the 73rd amendment of the Constitution, the responsibility of its implementation in rural areas, rests upon every lower tier of administration—States, districts, blocks and finally the Gram Panchayats. For the Mission to achieve success, every rural household of the country has to be reached and for this to happen, each level of delivery has to carry out its part of the responsibility in the effort. The issues related to planning, implementation and monitoring such a massive and complex programme makes it necessary for a steady flow of information and data, regarding the changing status of the outstanding problem and the implementation of the programme, so as to analyse and understand the work being done across each unit of administration over time, and enable the taking of appropriate programmematic measures aimed at moving towards the national objectives.

At the Government of India level, the SBM (G) is administered by the Ministry of Drinking Water and Sanitation (MDWS). This Ministry also administers the rural water supply programme, the National Rural Drinking Water Programme (NRDWP). The Ministry is also the nodal ministry of the sanitation efforts of all Ministries, departments and organisations of the Government of India. At the State level, the SBM (G) is implemented in the States by one amongst the departments of Panchayat Raj, Rural Development, Water and Sanitation or the Public Health Engineering. At the district level, it is the office of the District Collector/Magistrate or the Chief Executive Officer Zila Panchayat which supervises the implementation. These agencies need processed data to be able to take informed decisions related to programme implementation. This input is also needed by planners, researchers and programme evaluators.

The status of coverage of sanitation, in the rural areas in India, in terms of access of households to toilets, and the progress under the SBM (G) programme in providing toilet access is available and reported on an elaborate Management Information System (MIS), which can be accessed through the website of the Ministry (www.mdws.gov.in). This MIS is a treasure house of information that provides a one-stop data base and data source on rural sanitation in

the country. It is populated with information of the access to toilets of over 18.12 crore rural households, which was collected during a nationwide baseline survey carried out during 2012 and 2013, in the light of the results of Census 2011. The information collected, which was at the household level, was thought to be of crucial importance, if the country was to have an effective information and monitoring system of sanitation access. It was fed into the MIS from across the States and districts all over the country, at the time of the launch of the Swachh Bharat Mission in 2014 and became the base on which all planning and monitoring is done. The baseline survey had indicated that nationally out of the 18.12 crore rural households, 11.11 crore households did not have access to toilets. The compilation and entry of this large data of over 1.8 million households, by name of the householder with an identification, into one single database, was completed over a period of about one year, and is now an asset of significant importance for rural development. Since the launch of the SBM (G) in October 2014, this database is being updated on a monthly basis from about 5,000 locations across the country, down to the block level in most States, with entries being made of earlier unserved households that are being newly provided toilets. Updation of status of every household with a toilet, and the payment of the incentive if any as decided by the State, is also being informed to the household through an automated confirmatory SMS message to ensure transparency.

The implementation of a large time-sensitive programme like the SBM (G), requires various types of information support to ensure the optimum and effective utilisation of available resources. The development of the above MIS, and the regular input of programme progress data on a household basis, has opened up the opportunity of analysing



the data available, to provide information and suggestions that is useful to inform the programme policies, priorities, and implementation and allow for corrective measures.

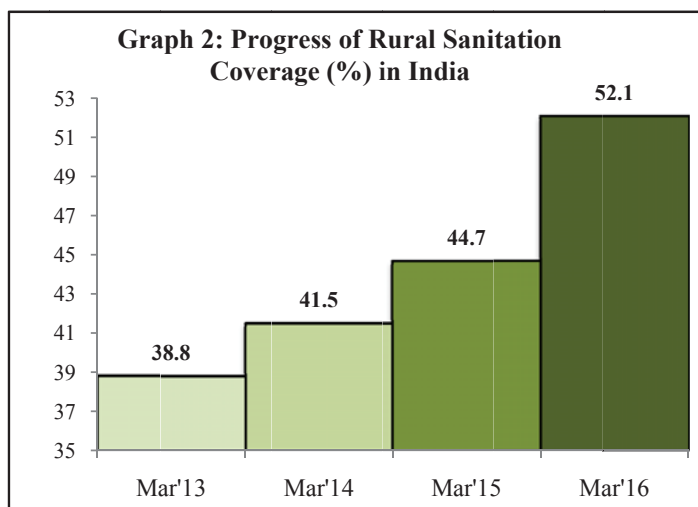
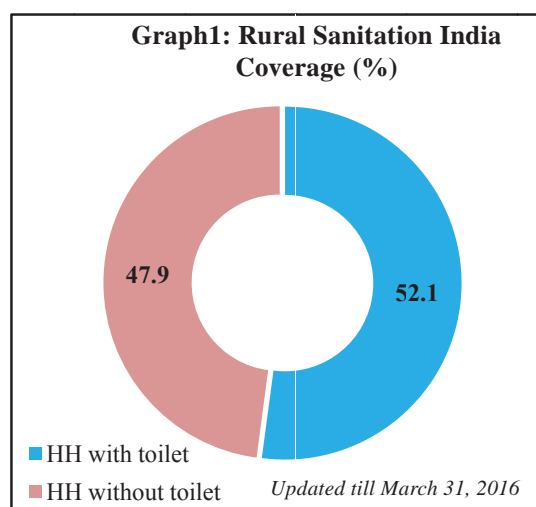
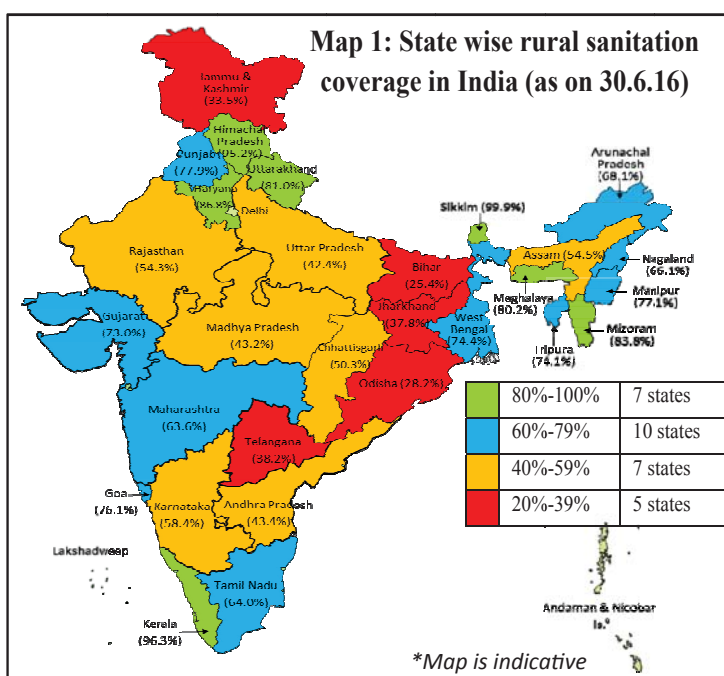
In order to make optimum use of the incoming data, a disaggregated analysis of the SBM (G) MIS data is being carried out, to appreciate advancement in the various dimensions of sanitation in rural areas in the country as well as across States and districts, which is useful for planners, implementers, researchers as well as others who have joined the mission for making the country ODF. The analysis looks at both physical and financial aspects of the Mission, and examines the increase in access to toilets in terms of number of households as well as the creation of ODF Gram Panchayats and villages. This activity, started in 2015-16, is now also being carried out for 2016-17 with the assistance of a professional agency. In this exercise, analysis is being carried out at the national and State levels on quarterly basis, while an analysis of the progress in 187 Phase I districts, identified as priority districts by the MDWS, is being done down to the block level once every two months. This analysis provides vital inputs in the District wide planning approach, that is the fulcrum of the SBM (G), and also into the Open Defecation Elimination Plans (ODEPs) that is prepared in most districts. The analysis also provides vital information to stakeholders looking for validation of the results of efforts, and assists deciding on

new interventions. Central and State departments, district and block administrators as well as support organisations working on and alongside the SBM (G) are finding this analysis useful, in their activities and processes.

The information that is provided from analysis of the SBM-MIS data include the following:

Access to Household Toilet

The change in the number and percentage of rural household with access to toilets is monitored. At the end of March 2016, as per the IMIS of the SBM (G), 52.1 per cent rural households of the country had access to IHHLs, as shown in Graph 1. Around



8.7 crore households were yet to have their toilets, at the end of the year, as against baseline. The coverage has improved by 7.4 per cent points during the year 2015-16. The corresponding increases during the year 2014-15 and 2013-14 were 3.2 and 2.7 per cent points respectively as shown in Graph 2.

The reports are in the same range when compared with the results of the Rapid Survey conducted by NSSO during May-June 2015 where the IHHL coverage in rural India was reported as 45.3 per cent and to NSSO 69th round (conducted during July-December 2012) which reported coverage as 40.6 per cent.

Coverage across States

The Individual Household latrine (IHHL) coverage across States is analysed on a quarterly

basis and the coverage map as on June 30, 2016 is depicted in Map 1.

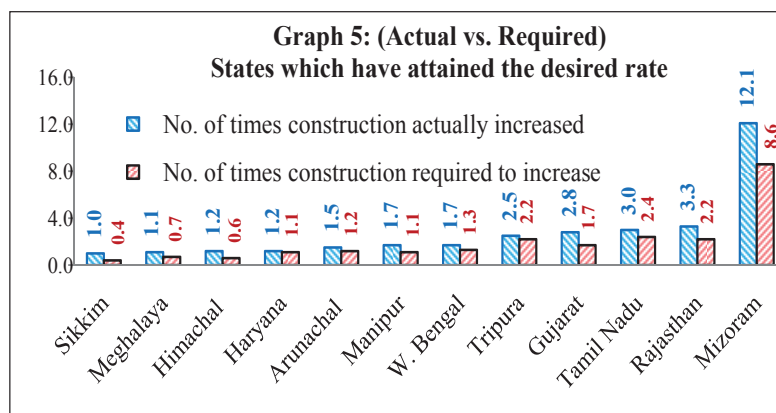
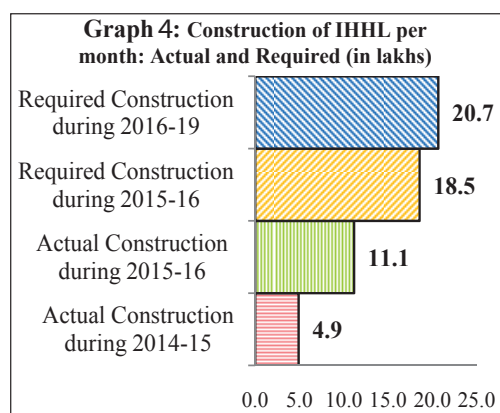
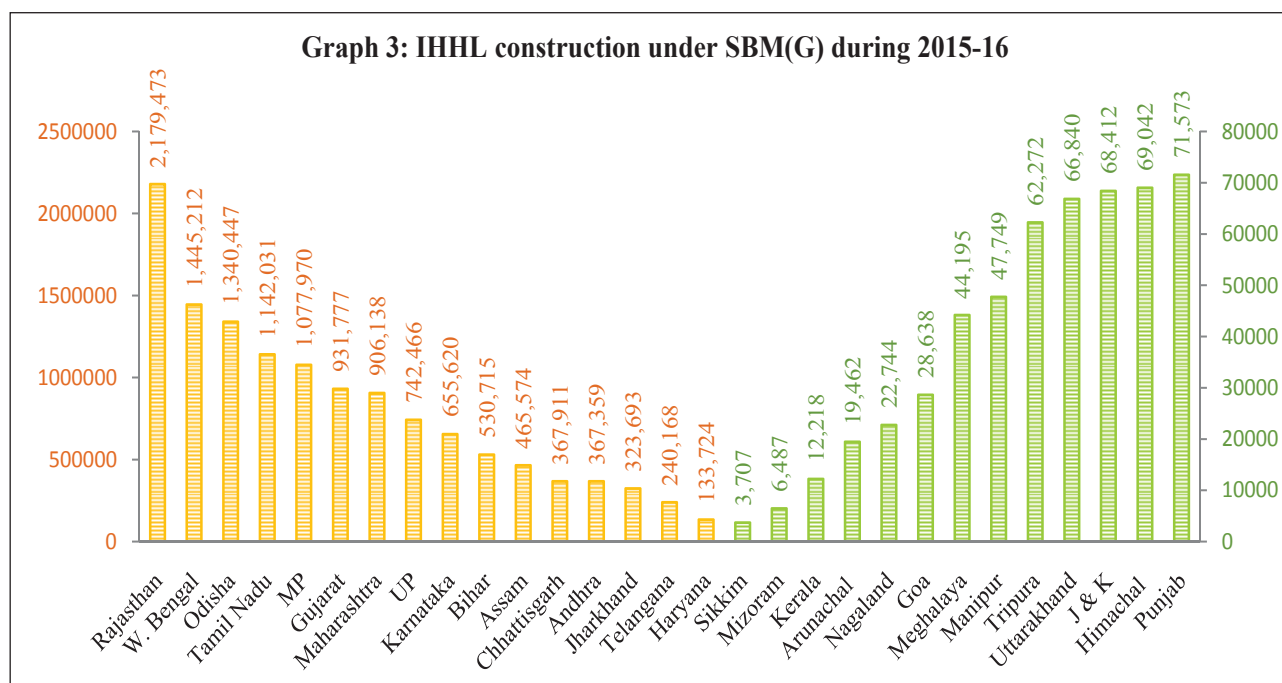
Performance during 2015-16

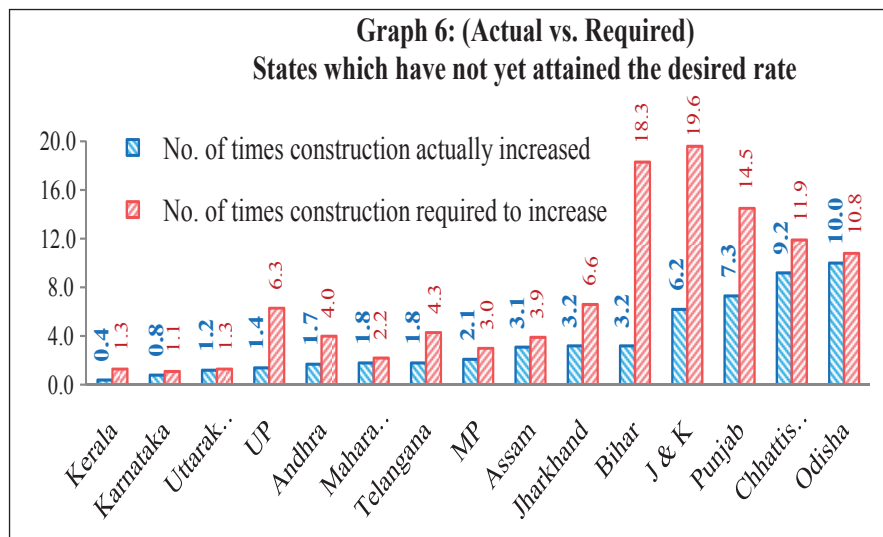
An analysis of the performance of the SBM (G) is carried out to give a nationwide picture of how the programme is performing. The number of IHHLs constructed across States during the year 2015-16 has been analysed and is shown in Graph 3.

Pace of Construction of IHHLs

To be able to achieve the physical targets by 2019, the pace of construction of assets needs acceleration, and this is regularly analysed and are represented in 4, 5 and 6.

Graph 4 indicates that India is likely to become ODF by October 2, 2019 if the States collectively





Status of attaining ODF by district wise aggregated rate of construction

A projection of the estimated year of attaining ODF status for States and districts is made on the basis of the current State wise aggregated rate. However, a State becomes ODF only after the last district attains such status and therefore knowing district-wise estimates of attaining ODF and how many of those will attain such status beyond the target date is very critical. That gives a

maintain an enhanced pace of construction of 20.7 lakh IHHL per month in next 42 months, which is about 67,000 toilets a day. Incidentally since July 2016, the average number of new toilets being reported is 50,164, and all these are against individual names of the household heads, with identification, and in most cases with geotagged photographs.

Graphs 5 and 6 show the State-wise actual and required increase in construction for becoming ODF by October 2, 2019. It appears that 13 States are on track for achieving the desired aggregated pace. The other 15 States will need to enhance the pace of construction further to become ODF by October 2, 2019.

Analysis of Coverage

Analysis of the current sanitation coverage of a State and the pace at which they are progressing, is done for all States on a quarterly basis. This analysis was done for June 2016, relative to national average, based on the data from March 2015 onwards. This helps to understand the inter-State variations and enables to pay appropriate attention to States which are lagging behind.

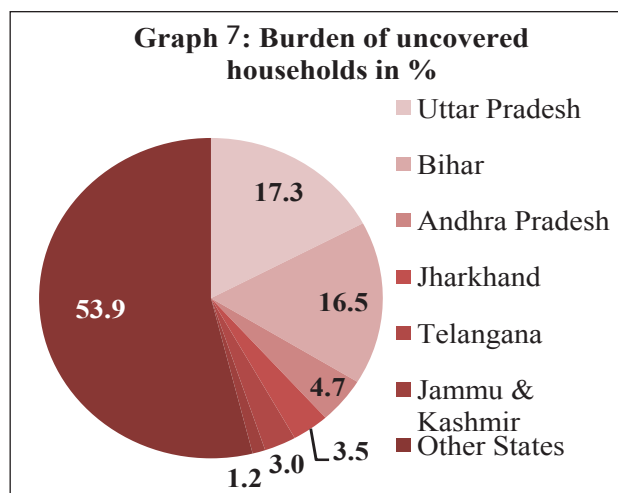
Projected Coverage and Estimated Year of attaining ODF

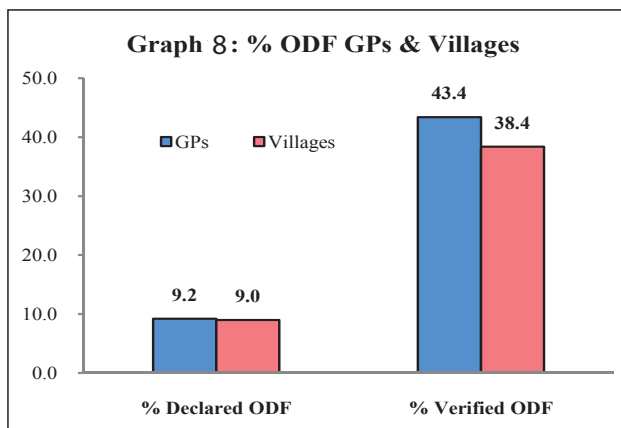
An analysis of the projected IHHL coverage of the States as on October 2, 2019, based on the pace of construction from 2015-16 onwards, is carried out. This is carried out at the National level and for all States.

better insight on the possibility of delay from the projected date because of one or more districts not being able to have the desired pace of progress. This is being estimated for all States.

Categories of States according to coverage and pace of Construction

IHHLs constructed in a year as a share of all the households without toilet at the beginning of that year, i.e. the speed of new coverage, is a key determinant of the time that will be required for a State to become ODF. The other obvious determinant is how far the State is behind universal coverage. Based on these two critical indicators, the States are in different positions, though all of them aim to attain the ODF status by 2019. The analysis regularly reviews the position each State is in and places them in relevant categories for appropriate attention.





Burden of Uncovered Households (Graph 7)

The burden of uncovered households of the country is distributed across States and an analysis of the changing situation is done every quarter. As of June 2016, 46.1 per cent of total rural households are without IHHLs in the country.

Overall Status of achieving ODF (Graph 8)

For India to be ODF, each village and Gram Panchayat (GP) of the country will have to eliminate open defecation. Therefore, the GPs are required to declare that their areas have become ODF, which

implies all their villages are ODF, which is verified appropriately. This status is also analysed quarterly. Graph 8 shows that 9.2 per cent of 2.5 lakhs GPs and 9 per cent of 6.1 lakh villages of the country have been declared as ODF upto March 31, 2016. Of these, 43.4 per cent GPs and 38.4 per cent villages, of those declared ODF, have been verified so far.

District wise Fact Sheets

In addition to the above national and State wise analysis done every quarter, from June 2016, an analysis of 187 Phase-I districts, which the MDWS has identified as focus districts, is being carried out once every two months. This is down to the block level and gives district administrators information and analysis on the status and performance of the programme at the block level, helping them to take appropriate administrative and other measures to ensure improved programme performance. Fact sheets of each of these districts reporting on their performance is prepared and shared.

(The author is Specialist in Water, Sanitation, Hygiene (WASH) at UNICEF-India. He can be reached at smojumdar@unicef.org. Views expressed are personal.)

SNAKEBITE TRIGGERS BUILDING OF TOILETS IN VELLORE'S PARADESIPATTI VILLAGE

Pushparaj (54) was recently discharged from a hospital near Salem in Tamil Nadu after being treated for snake bite. Of the 12 days he spent at the medical facility, five were in the ICU; and the treatment cost him about ₹2.45 lakh.

"I normally go to the same area for my ablutions each morning and saw nothing amiss," he said, certain that he had stepped on a snake that bit him. The agricultural labourer could not recall much thereafter but when he regained consciousness, he was in hospital.

According to his daughter-in-law Mahalakshmi, passers-by saw him on the ground and carried him home as they thought he had suffered a heart attack. But under his knee were marks of a snake bite; he might have stepped on one. He regained consciousness five days later, but had to remain in hospital for another week.

"A toilet is now being built as I cannot risk going out any longer," a traumatised Pushparaj says. The near-death incident has served as a catalyst, convincing others in Paradesipatti village in Kandili Block of Vellore of the need for toilets, persuading them to build and use them.

Confirming the incident, SBM trainer A. Radha said that open defecation is common in the village. This is because despite many households having toilets, they are used for storage instead of defecation. The SBM team has conducted several awareness and training programmes but not all people took the matter seriously. Nonetheless, she believes that the scare given by the snake-bite incident is making people rethink their actions.

Under the circumstances, Radha believes that by the year-end, the village can become Open Defecation Free (ODF).



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‘MANN BANA O, SHAUCHALAYA BANA O’: NEW MANTRA FOR RURAL GUJARAT

Dr Jayanti S Ravi

The Swachh Bharat Mission has received astounding cooperation from States, massive support from Development Support partners (DSPs), contribution from the Non-State agencies and groups, and most importantly heartwarming reception and acceptance by the people.

When the Prime Minister launched the *Swachh Bharat Mission* in 2014 with the aim to end Open Defecation (OD) in the country by 2019, it not only attracted the attention of each and every citizen of this country but also the whole world. With 60 per cent of all the people defecating in open in the world being in India, a *Swachh Bharat* is not just an urgent need for India but also for the whole world. It must be succinctly understood that when 50 per cent of the country's population is defecating in the open, *Swachh Bharat* could just not be yet another scheme, but had to be a grand movement with massive social mobilisation to be successful. Also recognizing the fact that more than 60 per cent of rural population is defecating in open, which also is almost 10 times that of urban population, the *Swachh Bharat Mission* was branched into two sub-missions – *Swachh Bharat Mission* (Grameen), for rural India and *Swachh Bharat Mission* (Urban), for urban India.

The Swachh Bharat Mission has received astounding cooperation from States, massive support from Development Support partners (DSPs), contribution from the Non-State agencies and groups, and most importantly heartwarming reception and acceptance by the people. After initial hiccups, it is now realized, accepted and have turned into a mass movement involving people at all levels.

Swachh Bharat Mission is also a remarkable campaign in terms of defining and strengthening the federal structure of the country. SBM is a massive countrywide programme initiated by the Central Government which received a befitting reception and support from all the State Governments of the

country. Also, it creates an environment of healthy competition on a national scale between States which leads to a culture of meritocracy among States. While some States have already shown wonderful results on the ground, others are on the verge of churning out Open Defecation Free (ODF) districts. The State of Gujarat has been working with great focus and single mindedness since the launch of *Swachh Bharat Mission* towards making Gujarat an ODF State.

The State of Gujarat has been working on war-footing to achieve the ODF targets for the 33 districts of Gujarat even before the 2019 deadline as articulated by the figures. The coverage in rural Gujarat was only 59.7 per cent in 2014-15(FY) and has jumped more than 20 per cent points to 80 per cent as on date. 70 per cent of people in more than three-fourths of all the districts in Gujarat now have access to toilets. 4,810 Gram Panchayats (GPs) and 6,180 villages have certified themselves as ODF and as many as 1,974 GPs have also been certified by the districts as being ODF.

However, the Vision Statement adopted by the Ministry of Drinking Water and Sanitation is not restricted towards statistics but is more inclined towards achieving greater qualitative results for the society and people. The vision Statement – “Developing sustainable open defecation free environment with safe disposal of domestic, industrial, agricultural solid and liquid waste in rural areas for healthy and clean growth, prosperity and happy life of people of Gujarat”, clearly emphasises words like ‘sustainable’, ‘healthy and clean growth’, ‘prosperity’ and ‘happy life’. These are soft targets against the



hard numbers which points towards a more humanistic approach towards the mission which will ultimately uplift the lives of the rural population.

The Gujarat team believes that qualitative achievements are as important as the quantitative ones. Unless we are able to touch people's lives meaningfully through sustainable efforts and are able to help them to adopt a clean and hygienic lifestyle, the vision will not be accomplished. ODF Gujarat necessarily entails keywords – sustainable, progressive and community owned.

The team has undertaken a mammoth task to engage with a large number of Governmental agencies and departments, Development Support Partners (DSPs), Non-Governmental Organisations, Community-based bodies and private citizens to make it a true people's movement and not just a Government scheme. There were integration challenges at the start but with the adoption of a simple four-legged tenet, 3Cs – Collaboration between stakeholders, engagement with Community, simple yet efficient Communication, and Technology assisted monitoring, the whole system has been working like a well oiled machine, with each part dedicated to a specific and well-defined task. The result of this symphony is visible in terms of qualitative changes seen on the ground as well as quantitative milestones achieved so far. The key

tasks entailed in the bigger *Swachh Bharat Mission* can be clearly identified as –

- Making the physical infrastructure available to people for them to stop defecating in open
- Social Behaviour Change to create awareness about healthy sanitation practices and ensure that the toilets being constructed are used by the owners

The team has conceived and implemented various innovative initiatives in order to achieve its ambitious goal of achieving Statewide ODF by early 2017. Some of these are as follows -

'Gandhigiri' and 'Nigrani Committee'–

Gandhigiri is a method where volunteers with folded hands request people not to defecate in open and adopt clean and hygienic lifestyle. The feeling of empathy towards the individual engaged in open defecation is of utmost importance. The individual is also requested to cover faeces with soil to create a barrier in the faecal-oral chain that helps in keeping diseases at bay. The volunteers even accompany the individual to the OD spot and cover the faeces with soil themselves.

This is a thought-provoking method which not only sensitises the individual about the ill-effects of open defecation and hence importance of building a toilet at home, but also motivates the individual to cover the faeces with soil after defecation for the period till the toilet is constructed in the household. *Gandhigiri* as a mindset changing tool is used effectively to make people feel guilty about defecating in open while ensuring that this is done with respect and empathy. The activity starts early morning at around 4:30 when people in the rural areas leave their houses to defecate in open, and goes up to 8 a.m.

The *Nigrani Samiti* (Vigilance Committee) watches for individuals who are defecating in

open and persuade them not to do so. Since the members of *Nigrani Samiti* are people from the same village it creates peer pressure among households who does not have a toilet in their houses.

Swachhta Shilpis – This is an innovative concept which meets the twin objectives of creating employment opportunities for women in the rural areas as well as getting support in toilet construction drives being carried out in villages on a large scale under SBM(G). Women from SHGs (Sakhi Mandal, etc.) are trained to be *Swachhta Shilpis* who are qualified to construct toilets in the villages. For example, Lilaben Vasoya from Jamnagar Taluka is an on-demand *Swachhta Shilpi* who has constructed more than 300 toilets. Nainaben Ranapriya from Jamnagar was awarded by CM and has constructed more than 200 toilets by herself. These women are skilled through RSETIs over a 10-module course covering areas like – Social Behaviour Change Communication (SBCC), Construction and Post-construction. About 13,000 *Swachhta Shilpis* have been trained so far across all 33 districts of Gujarat since March 2016.

Swachhta Sainani - is a NSS volunteer who is actively involved in the Swachh Bharat Mission (G) at district or village level. NSS volunteers have been contributing to the mission on a mass scale since its launch. NSS volunteers contribute in the SBCC/IPC activities extensively in the villages. There are usually two district coordinators for coordination and management. The villages are chosen based on requirement

and resource availability and there is an intensive communication campaign for the whole day in the respective village around healthy sanitation practice and ODF culture.

The NSS volunteers may also contribute in the ODF verification exercise where these volunteers will be guided by senior officials to verify the construction and usage of toilets by each family member in the household.

Mobilising communities through Leaders

– In order to achieve a mass movement in real terms, the department has been engaging with the community leaders who have the ability to influence and motivate local population as well as foot soldiers who are working incessantly towards the single goal of ODF Gujarat. Such inspirational role models, who act as ambassadors of change are being on-boarded which will give star power to the movement and help in reaching out to a wider audience. These community leaders come from almost all walks of life, like sports, religion, spirituality, arts and folk-dance/music, etc.

Policy intervention – Few challenges, like hard rock (soft rock-hard soil), which not only increase the cost of construction but also require better skilled manpower had been an issue in a few districts of Gujarat. On the other hand there were some concerns regarding the support that SBM(G) can get from other schemes in terms of contribution towards toilets, etc. These issues were dealt with on highest priority with the smallest turn-around time. The speed at which policy interventions are undertaken is an indication of how serious the State Government is about the mission and the sincerity of commitment by the highest authority.

GujCATS – is a Community Approach to Total Sanitation (CATS) methodology to execute 'Triggering' which creates awareness among target audience and influences people to build and use toilets. It has been a critical tool in sensitising people about the ill-effects of open defecation and has helped in turning several villages ODF over the period. Multiple GujCATS trainings are conducted to train people who in turn implement the CATS methodology in villages for Social Behaviour Change Communication



and Interpersonal Communication (SBCC & IPC).

Exhaustive trainings for stakeholders— The importance of communicating and training to all stakeholders cannot be exaggerated, especially in a mass movement. To uphold quality of execution, there is an incessant need of training manpower. These trainings cover district resource teams, district and block engineers and SBCC inventory building through conclaves etc. There have been about 35,000 man-days of trainings that have been imparted so far under various programmes.

VLC deployment – To achieve scale and quality in training, remote trainings are being conducted through Virtual Learning Centers (VLCs) which has helped in achieving scale in terms of number of people that have been trained in various modules. This has not only reduced the overall cost of training per person but has also allowed for scalable skill training in a very short period of time. A new VLC studio is currently being made at CRD, Gandhinagar to further expand the scale and reduce time-to-execute.

DSP collaboration – The department is working with three key Development Support Partners (UNICEF, Tata Trusts and World Bank), who are supporting the mission by undertaking activities on the ground. For better planning, resource allocation and quality implementation, the DSPs have been allocated specific districts to work on based on their presence, NGO network and individual capabilities. This has allowed them to innovate and implement various methodologies with tools to achieve the objective at local level.

Recently, about 6,000 volunteers from a group of engineering colleges in the State built more than 9,000 toilets, vividly demonstrating how SBM(G) has turned into a true mass movement with participation from everyone. But the State Government is committed to only accentuate its efforts to make it an even bigger movement and achieve its mission of ODF Gujarat. Starting this month, the department is organising an aggressive social drive, 'Lok Swachhta Jhumbesh Pakhwadiya'



that will see department-wise integrated campaigns, aggressive pitch by the community leaders across State, massive contribution of private citizens towards the movement and an intensive SBCC/IPC exercise across State.

The event will also see an all round effort put up by each and every department of the State Government and will also have addresses by several Goodwill Ambassadors on the issue of open defecation and necessity of an ODF Gujarat. 'Samuhik Khatmura' will be a specific part of the movement where villages will observe a day or more of complete dedication to building toilets and raising awareness, which will involve almost every individual from the village participating in one way or another.

While PM has kept the timeline to achieve ODF status across the country by 2019, Gujarat has proactively taken a target of early 2017 as the timeline to make the State Open Defecation Free. With the strongest commitment that the State has shown to achieve this target with its planning, collaboration and implementation in past 24 months, and massive support shown by the people towards this movement, achieving an ODF Gujarat by early 2017 looks definitely attainable and 'Team Gujarat' is not going to settle for anything less!

'Mann banao, Shauchalaya banao' – Towards ODF Gujarat!

(The author is Principal Secretary and Commissioner, Commissionerate of Rural Development, Government of Gujarat)

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Madhvi Mishra	IAS	2015	62 nd Rank
Smriti Mishra	IRS	2015	435 th Rank
Nupur Panna	IAS	2015	764 th Rank

2014 AND BEFORE CSE RESULTS

Gaurav Agrawal	IAS	2014	1 st Rank
Ashima Jain	IAS	2007	7 th Rank
Neeraj Kumar	IAS	2011	11 th Rank
Debasweta Banik	IAS	2014	14 th Rank
Chinmayee Gopal	IAS	2014	16 th Rank
Tanvi Hooda	IAS	2014	33 rd Rank
Surabhi Malik	IAS	2011	51 st Rank
Nitin Singhania	IAS	2011	51 st Rank
Rajan Vishal	IAS	2007	60 th Rank
Kumar Amit	IAS	2007	75 th Rank
Shaweta Dhankhad	IPS	2006	109 th Rank
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Aishwarya Rastogi	IAS	2012	222 nd Rank
Sanyam Joshi	IAS	2012	228 th Rank
Nandesh Shukla	IRS	2006	238 th Rank
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Swani Dikshit	IAS	2012	273 rd Rank
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Ruby Rani	Rank 3	2015
Preeti	Rank 4	2014
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Sukhdeep Singh	Rank 6	2011
Divya Sharma	Rank 6	2012
Neha Singh	Rank 6	2015
Nidhi Sharma	Rank 7	2011
Lipika Roy	Rank 7	2016
Sawni Dikshit	Rank 8	2010
Aarthy	Rank 8	2013
Shamin Ara	Rank 11	2014
Rajendra Meena	Rank 11	2016
Rakesh Kumar	Rank 14	2014
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Abhishek Meena	Rank 14	2015
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Bikram Nath	Rank 17	2014
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and many more.....

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Shanti Bindyasar	-	NET

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Harsh	-	NET
Kajod Meena	-	NET
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Dr Priyanka Shukla

In a country like India, which is known for its festivals, using the occasions of festivals to motivate people for SBM came handy and it added new vigour to the movement. To make the campaign more popular, in last five months almost every festival has been linked with *Swachhata* in Jashpur.

Shalima Nishad, a class VII student from Jashpur district in Chhattisgarh wrote an emotional 'appeal' to her parents on April 30, 2016 (the day when schools were closing for summer vacations), just like her other 69,663 school going friends in the district. All she wanted was to get a toilet built for her family before the school re-opens. She was tad more persuasive and persistent than some of her friends—who made similar demand, which compelled her 'Daau' to build one for her in the first week of May itself. After all Nishad wanted to be the best amongst all "*Swachhata Balveers*" of the district—a recognition which many of her age, would hardly think of striving for.

Constant motivation by Ms. Ursela Toppo, a primary school teacher in Nagar Panchayat Kunkuri, Jashpur led to construction of toilets by 20 families. Similarly, Rohit Lakda, president of a college social group started a campaign in early August where they reached out to the owners of the local eateries (*dhabas* and small hotels) of the district, asking them to construct a toilet. Courtesy to the effective "triggering" led by these youngsters, four of the eateries have already started the construction.

When women of village Geedha in Jashpur district, while fasting for their husband's longevity also observe "*Swachhata Upawas*" on this *Haritalika Teej*, it became evident that the impetus for change is not mere a trickledown effect, rather is emanating from the ground. The women observed the fast

so that their "prayers to ensure that their district becomes open defecation free in earliest possible time".

Such stories of incremental but substantive change abound the district. Quite evidently a revolution of sorts is underway in Jashpur. These all are stories of change. A change that is palpable not just in outcome but in a transformed mindset that necessitates and celebrates the change. It is an outcome that has not resulted from a fear or force but from sheer willingness to be part of the change. Jashpur is a district located in north east Chhattisgarh, about 500 kilometres away from State's capital—a district where 67 per cent population belongs to tribal community (including PVTGs like Pahadi Korwas and Birhors) and 51.7 per cent of its area is under forests.

Just like the entire country, in Jashpur too, implementation of SBM started in 2014. As on March 31, 2016 out of its total 427 Gram Panchayats and 766 villages, 21 Gram Panchayats and 43 villages had been declared Open Defecation Free (ODF).



However, it was in April 2016—to ensure that the Swachh Bharat activities gathered greater momentum in the district and ensure the sustainability of the changes—Jashpur District Administration took initiatives to make the programme more people centric.

From a Government Initiative to a People's Movement

April onwards series of interactive sessions were convened. Not only all grass root level workers – 397 Panchayat Sachivs, 201 Patwaris, 2946 Anganwadi workers, 406 ANMs, 3573 Mitanins etc.— were sensitised and trained to educate and motivate people, workshops were also convened with all 6,915 people's representatives of the district to make sure that each one of them understands the need and the importance of sanitation. All 214 nodal officers (deputed from district administrative machinery itself) were especially given the task to sensitise and trigger two gram panchayats each. In fact, till date, in every public meeting, sanitation related behavioral change is the first and foremost discussion point for the entire district administration.

Natural leaders from Community: The crucial Motivators in SBM

Identification of various natural leaders from community as Community Resource People (CRP), their capacity building regarding Community Led Total Sanitation (CLTS) techniques at regular intervals, district level experience sharing workshops and motivational sessions for them at regular intervals have been strategy of the district administration.

Many such CRPs have been intelligent enough to search for village specific trigger factors. For example natural leaders in Basantala village were quick enough to understand that open defecation led to elephant attacks leading to death of many locals. They used it as trigger factor and explained to villagers that such mortalities could effectively be minimised by construction and use of toilets. Within no time understanding the gravity of the fact, the villagers started construction of toilets. Regular felicitations of such natural leaders are now integral



part of the campaign to keep their motivation and enthusiasm intact.

Swachhata Balveers, Chauwa Tolis and 'Teelu ka toilet': Changing things children's way

John F. Kennedy once said "Children are world's most valuable resource and its best hope for future". Believing in the adage School Led Total Sanitation (SLTS) was made the linchpin of entire SBM campaign in Jashpur. Children not only understand things easily, they disseminate them with zeal. Innovations like especially dedicated comic booklets for children, educating them about needs of toilets were circulated in schools. They include "*Sh se Shauchalay*" and "*TEELU KA Toilet*". (The success of "*Teelu ka toilet*" has inspired Nellore district administration to get it published in Telugu).

Formation of "*Chauwa Tolis*" (group of children who on Sundays do door-to-door visit of their village and sing songs in local dialect to motivate local to build toilets) was yet another important success point. The 1,758 *Chauwa Tolis* have been formed in the district so far. Felicitations of all those children who succeeded in getting toilet made as "*Swachhata Balveers*" (142 as of now), a post of "*Swachhata Mantri*" in various schools and construction of attractive toilets (toilets made as "*Swachhata Express*") to instill a liking for *swachhata* in school going children—succeeded in ensuring that children become the

Teacher led special Initiatives in Jashpur

“Swachhata Corner”

has been established in all schools of the district. Teachers of all 108 schools of Manora went one step ahead and got an innovative Swachhata Rack (Cost ₹155/-) made all by themselves for their school students so that everything related to hygiene (comb, nail cutter, soap etc.) could be stacked neatly.



Friendship day was observed as “**Swachhata se Mitrata Day**” by more than 6,000 members of Shikshakarmi Federations and Farmer Producer Organisations in Jashpur who not only took out rallies in various villages but also made visits to about 20,000 families of Jashpur—gifted them flowers and requested them to build and use toilets thus befriending *swachhata* for a lifetime. 42 of them also gifted toilets to some of the destitute women as a Rakhi gift.

Swachhata Tables and Swachhata Nursery Rhymes (innovations by district administration and school teachers) painted on walls of various schools have proven to be immensely popular amongst school children.

most effective harbingers of social change on this front. Menstrual hygiene management was taken up as a special component of the campaign and thus “*Pyari Bitiya Camps*” are being organised in the district. Till date, about 5,000 adolescent girls have participated in such awareness camps in the district (more details regarding SLTS innovations are in the box above).

Quite literally: Celebrating the Spirit of *Swachhata*-by including it in local Festivals

In a country like India, which is known for its festivals, using the occasions of festivals to motivate people for SBM came handy and it added new vigour to the movement. To make the campaign more popular, in last five months almost every festival has been linked with *Swachhata* in Jashpur. Be it celebrating *Swachhata Bandhan Diwas* one month

before Raksha Bandhan or celebrating Independence Day as “*Hum Honge Kamyab—swachhata se hi swatantrata*” day or celebrating *Swachhata Ashtami* on Janmashtami day.

Innovation: The Key to Success

Music is a way of life in Jashpur so it had to be made a part of the campaign which was to be led by people. Apart from the routine *Kala Jatthas* and the rural *sangeet tolis*, Jashpur has a unique distinction of having a *Swachhata* Music Band of its own. The band called as “*Jashpur Jhankar*” is one of its kind as majority of its members like Shri Sandeep Sharma, its lead singer, a Panchayat Secretary, are grass root level Government functionaries. Courtesy to the band, Jashpur also has a *Swachhata* anthem of its own in Chhattisgarhi which inspires people more than anything. Competitions like ‘*Raj Mistry* No. 1’ have been organized to motivate the masons involved, which have proved to be immensely popular.

Giving the Campaign a Personal Touch

To give the mission a personal touch—not only did the District Collector (DC) and Chief Executive Officer (CEO) Zila Panchayat wrote 11,500 letters to brothers and sisters of district on this Rakhi requesting them to build and use toilets thus actually fulfilling the promise of protection that brothers give to their sisters every year on this occasion. Also Zila Panchayat president wrote letters to 5,000 people of various Gram Panchayats (GPs), which have been declared ODF to ensure sustainability of the usage of toilets. Even doctors of the district regularly prescribe construction and use of toilets to such patients of theirs who don’t have or don’t use toilets.

Courtesy its local culture and sharing of borders with different States in Jashpur, local dialect changes after every 50 kilometers. Thus to ensure that maximum people are able to relate to it and for effective communication of the message *Swachhata* pledge, songs, etc. have also been drafted in Surgujia, Chhattisgarhi, Oriya, Kudukh as well as Saadari.

The Outcomes that Speak for itself

Regular IEC innovations, capacity building of natural leaders, motivational sessions with children,



youth and women SHGs, constant interactions with community in form of *gram sabhas*, *ratri chaupal*, etc., all seem to have had a major impact on the sanitation scenario in the district:

- Not only have the numbers of ODF gram panchayats and villages risen to 71 and 145 respectively in just four months, on 15th August 2016 - Duldula was declared as the first ODF. The entire district now stands committed to the promise of making Jashpur ODF by 31st March 2017.
- Public representatives, community leaders, women SHGs, teachers, farmers, differently abled, children, youth, media–natural leaders have emerged from all sections of the society.
- Many SHGs have come up with their own initiatives like *Újiyara Toli* in Duldula block and *Peeli Paltan* in Patthalgaon not only to motivate more and more people to construct and use toilets but also to maintain an effective community vigil on the usage of toilets which have been constructed, thus ensuring the sustainability.
- More than 600 “brothers” in the district gifted toilets to their biological/non biological sisters as a part of *Swachhata Bandhan* campaign which was organised from 18th July to 18th August 2016 in the district. Inspired by the campaign, many of the public representatives also gifted toilets to many.

- Some Communities in the district like Ghasi community (20,000 members in Jashpur) by their own volition have vowed to spread the message of *Swachhata*.

- “*Swachhata Shramdaan*” has become a culture in Jashpur – all its MLAs, many teachers, farmers, NGOs, etc have already done *shramdaan* to construct toilets in various villages.

The aforementioned results stand testimony to the fact that “Swachh Jashpur: by all and for all” which is the underlying objective of all

initiatives taken up by administration-has already been attained to some extent in the district. Not only this various best practices of the district have inspired many districts of Chhattisgarh but of other States of the country as well.

However, as Robert Frost said, “The woods are lovely, dark and deep. But I have promises to keep, and miles to go before I sleep,” in the context of sanitation scenario in Jashpur too-while the change in the mindset of the people and the resulting outcomes are visible and heartening, certain challenges remain to be met. Difficulties in sensitising PVTGs to the importance of sanitation and ensuring long term sustainability of toilet usage are a few to name. But then for any committed lot-there is no challenge which can’t be worked upon-provided one has the will to do so. Therefore, the entire Jashpur, be it the district administration, be it the public representatives, be it the natural leaders or be it the community itself – is determined to tackle every obstacle of their path with their zeal, enthusiasm and dedication to make the district ODF by March 2017, as Shri Harivansh Rai Bachhan rightly puts it:

*Lehron se dar kar nauka paar nahin hoti
Aur koshish karne walon ki kabhi haar nahin hoti*

(Author is District Collector, Jashpur, Chhattisgarh)

SWACHHTA PAKHWADA: WHEN GOVERNMENT LEADS BY EXAMPLE

Akshay Rout

Swachhta Pakhwada keeps all formations connected and acts as a reminder for the task, along with providing an avenue for systematic contribution to the Mission. It has, so far proved to be an effective venture to make the country clean. The success however, would depend on the whole hearted involvement of all the people at every level of governance.

There is a buzz going on in all the Ministries and Departments of Government of India in Delhi. There is a flurry of special cleaning activities happening all around. Senior officials are personally reviewing the cleanliness work. It is time for Swachhta Pakhwada for all the Ministries and their offices.

As the name suggests, Swachhta Pakhwada denotes a fortnight-long cleanliness drive. It was envisaged by the Prime Minister of India to keep the momentum of Swachh Bharat Mission (SBM) going throughout the year. With the each of the Ministries allocated dates to observe the thematic cleaning programme, the Pakhwada indeed demonstrates that the Government sector is leading by example. If Government has given a clarion call to make Swachh Bharat Mission a people's movement, then practice must begin at home.

Ministry of Drinking Water and Sanitation (MDWS), the nodal Ministry for the whole Swachh Bharat Mission, is also coordinating the Swachhta Pakhwada. Launched in April 2016 the programme was soon revamped in June 2016 with a view to providing additional substance and outreach and increasing its scope much beyond the cleanliness work in office corridors and Secretariat buildings.

In the run up to their allotted fortnight, various Ministries are required to draw up an action plan and upload

it on the online monitoring portal of the MDWS - Swachhta Sameeksha which is connected with PM's *mygov.in*. Later, they upload pictures of activities undertaken countrywide and also ensure dissemination of information about their work through various media platforms. This has helped to bring accountability and seriousness in implementation. The Pakhwada performance by Ministries and Departments is being reviewed regularly at senior most levels in the Government. Personally monitoring of the drive by the Prime Minister has served as added motivation. He has been calling for even greater substance and involvement of the Ministers, MPs and all public representatives in this drive.

By allocating a fortnight each to different Ministries in a calendar, conveyed with due notice



with suggested activities and themes, the Swachhta Pakhwada initiative has successfully involved all Government Ministries to clean up areas that come under their purview. For example, World Heritage Day becomes an occasion for cleaning of Heritage Sites and International Labour Day for cleaning of factory premises and inspection of sanitation facilities. On the Youth Day, one sees NYKS, NSS, NCC and Eco-Club volunteers taking up sanitation exercises in streets and lanes and World Environment Day sees efforts of solid and liquid waste management in national parks and sanctuaries. World Food Day could be an occasion of taking up cleanliness and hygiene issues in hotels, restaurants and eateries. On Teachers Day, there was substantial engagement with the all-important teachers' community on the issues of school as well as community sanitation. On Friendship Day, sanitation workers were honoured. This is how a whole chain of cleanliness has been created across the spectrum. Interestingly, the Pakhwada has also brought to focus, the myriad ways in which all Ministries and Departments of the Government in which they can interact with the public, even when it might not be so obvious.

Swachhta Pledges among employees, campus cleaning, workshops and seminars, community sanitation initiatives have been carried out in a good measure. The list of activities which is truly long and has a wide variety, is now acquiring new dimensions as the Pakhwada is getting into its sixth month since introduction. The Pakhwada calendar provides a connection to each Ministry while allowing it to be flexible so that they can include new ways of mainstreaming swachhta in their jurisdiction and catchment areas. In this planning,



all institutions, PSUs, all field offices and projects with the Ministry have been included since the beginning.

Several Ministries and Departments have started engaging their CSR arm to take up some of the core programmes under Swachh Bharat Mission like adopting villages to make them free from Open Defecation or lend a hand in facilitating Solid and Liquid Waste Management. Airports and mining companies have come forward to adopt villages for sanitation in their vicinities. PSUs from Petroleum, Mining and Coal Ministries have come forward to sponsor special cleanliness campaigns at iconic places. Though started during the Pakhwadas, these initiatives would have a far reaching impact.

With Ministries having started ranking of organisations under their jurisdiction in terms of Swachhta, a healthy competition has been generated among the institutions- be it schools, tourist destinations, monuments or airports. Overall, MDWS has decided to institutionalise 'Best Pakhwada Award' so that Ministries and Departments get encouraged to go for more innovative interventions during the fortnight.

The Ministry of Drinking Water and Sanitation (MDWS), as the nodal Ministry itself set a leading example when its turn for implementing a Pakhwada came. The Ministry was indeed a hive of activities in August as it observed the special double Swachhta Pakhwada on the theme 'Freedom from Open Defecation.' It began with a cleaning exercise of every floor of the Paryavaran Bhavan, involving about 30 Ministries and Departments that operate within the 14-storey building. Quite recently, the

Ministry has also installed equipment to convert garbage into compost within its premises. To ensure that the machine which is currently in its testing stage, runs at its full capacity of two tonnes, it has been sourcing garbage from nearby buildings and office complexes.

In addition to the launch of Swachhta Samachar, a bi-monthly newsletter early in the month, the Ministry also convened a national media interaction on SBM issues. Further, with a view to promote Swachhta through icons, cricketing legend Sachin Tendulkar was invited to honour SBM champion managers. The Ministry also engaged with Rio Olympic champions and Bollywood icon Amitabh Bachchan to promote SBM messages. A short film series on the Swachh Bharat people's movement titled 'An Open Mind' was launched in honour of sanitation champions who are driving behavior change in their communities to eliminate open defecation and adopt safe sanitation practices.

Around Independence Day, the Ministry also mobilised the States and Districts to hold events such as rallies, runs, human chains, candle marches, involving ODF champions, opinion leaders, youth, women and children to promote 'freedom from open defecation.' At those events, District and Block levels, local sanitation champions were honoured.

The Ministry of Drinking Water and Sanitation, in association with the Ministry of Water Resources, River Development & Ganga Rejuvenation and Department of Youth Affairs, Ministry of Youth Affairs and Sports, even organized a National Convention of Gram Pradhans in Allahabad, with the support of the Government of Uttar Pradesh on August 20, 2016. The convention saw the participation from States like Uttarakhand, Uttar Pradesh, Bihar, Jharkhand and West Bengal. The objective of the Convention was to rally Gram Pradhans of 1,651 villages in 52 districts and 5 States situated along the banks of the river Ganga, to work together and make their villages Open Defecation Free (ODF) to meet the goals of the Swachh Bharat Mission (Gramin) as well as the Namami Gange programme. The programmes



were huge success and saw the convergence of *Swachh Bharat Mission* and *Namami Gange*.

However, having seen the potential of the Swachhta Pakhwada, the expectations from it are now continually rising. The aim is to take it to the next level. Ministries are being advised to introduce new mechanisms and systems during the Pakhwada which would deliver better results after the Pakhwada is over, making sustainable contribution to the cause of Swachh Bharat. Ministries are now expected to take up interventions that are of even higher significance and thrust.

The Pakhwada points to an interesting situation where sanitation and cleanliness are not the core allocated business of any Government department except largely of the Ministry of Drinking Water and Sanitation and the Ministry of Urban Development, but Swachh Bharat is an essential agenda of the whole nation and of the Government, as set by the Prime Minister. Swachhta Pakhwada keeps all formations connected and acts as a reminder for the task, along with providing an avenue for systematic contribution to the Mission. It has, so far proved to be an effective venture to make the country clean. The success however, would depend on the whole hearted involvement of all the people at every level of governance, so that all the citizens see the Government in action and get inspired to do the same.

(Author is Officer on Special Duty in Ministry of Drinking Water and Sanitation, Government of India)

KAMAKHYA TEMPLE CLEAN-UP INITIATIVE KICKED OFF

A formal launch of the Clean Up action plan for Kamakhya Temple as a part of Swachh Bharat Mission was organised in Guwahati recently by the Ministry of Drinking Water and Sanitation in association with the Government of Assam. The programme was launched by the Union Minister for Rural Development, Panchayati Raj and Drinking Water and Sanitation, Shri Narendra Singh Tomar and the Chief Minister of Assam, Shri Sarbananda Sonowal. As a symbol of cleanliness, advanced sweeping machines were inaugurated in the premises of the temple on the occasion.

During the launch, the Chief Minister expressed his gratitude to the Prime Minister for selecting Kamakhya Temple as one of the 10 iconic places in Phase-I of the clean-up initiative of 100 iconic places under Swachh Bharat Mission. He requested the people of Assam to help realise the vision of the Prime Minister to make the holy place the cleanest place in India and added that this would be a real tribute to Mahatma Gandhi on his 150th birth anniversary.

Union Minister said that the Ministry is fully committed to providing all the required support in making the selected iconic places “Swachh”, and that the process has been formally launched under the blessings of *Ma Kamakhya Devi*. He assured that all the 10 iconic sites will become models of cleanliness in a time bound manner.

During the launch, Chief Secretary of Assam made a presentation on the action plan prepared for the three, six, nine and 12 months’ timeframe. He also requested the Chief Minister to constitute a monitoring committee for the Temple clean-up work and volunteered to chair the committee. He concluded by highlighting that the Assam government was the first in the launching the programme and will also complete the implementation the earliest.

The Government of India, through its Swachh Bharat ‘Clean India’ Mission has proposed a multi-stakeholder initiative focusing on cleaning up 100 places across India that are “iconic” due to their heritage, spiritual and/or cultural significance. Ten places have been selected as a pilot for learning and demonstration basis. These 10 places are some of the most historically, spiritually and culturally



significant heritage places of India, including, Ajmer Sharif Dargah in Ajmer (Rajasthan), Chhatrapati Shivaji Terminus in Mumbai (Maharashtra), Golden Temple in Amritsar (Punjab), Jagannath Temple in Puri (Odisha), Kamakhya Temple in Guwahati (Assam), Manikarnika Ghat in Varanasi (Uttar Pradesh), Meenakshi Temple in Madurai (Tamil Nadu), Taj Mahal in Agra (Uttar Pradesh), Tirumala Tirupathi Devasthanams in Tirupati (Andhra Pradesh) and Vaishno Devi in Katra (Jammu and Kashmir).

CHALLENGES OF CLEANING RIVERS

Sanjay Srivastava

If urgent measures are not undertaken to clean our rivers they will soon become history. Foremost reason of pollution is discharge of all sorts of waste into our rivers. Next come religious practices which demand the leftovers after every ritual to be consigned to flowing waters of a river. Bathing of humans as well as cattle, washing laundry and consigning remains of dead bodies etc. are other contributing factors. If only we stop dumping our waste into rivers they would cleanse themselves.

Pollution in our rivers has grabbed our attention these days like never before. Our rivers have been subjected to the worst kind of pollution during the past decades and any clean up drive is no less than a big challenge. Majority of our rivers have been polluted to the extent that the waters they carry have become unfit even for bathing, let alone drinking. They have dried up to a level that they appear to be carrying only sludge and effluents. Growing industrialisation, urbanisation and construction of dams have robbed our rivers of their natural flow and purity. Ironically though, as long as we had no access to modern techniques for disposal of solid and chemical industrial waste and urban sewage, our rivers were, by and large, clean. But discharge of industrial and urban waste into them has choked them and they appear to be heading towards certain extinction. If no immediate measures are taken, the current situation may snowball into a major crisis for potable water.

As per Central Pollution Control Board (CPCB) estimates, out of 445 rivers flowing through our 29 States and six union territories, 275 have become completely polluted. Today 650 urban settlements located on the banks of 302 rivers are discharging 62,000 million litres per day (MLD) into these rivers as compared to earlier figure of 38,000 MLD while any capacity addition to the existing sewage treatment facilities has only been nominal. Out of these 302 rivers 34, have been accorded the first degree of priority which require immediate attention. During the past five years number of heavily polluted rivers has more than doubled. Their number has increased from 121 in the year 2009 to 275 in the year 2015. During the same period number of polluted river belts increased from 150 to 302. Today 85 per cent rivers of Maharashtra are polluted which also has the dubious distinction of having 45 polluted river

basins in the State, which is the maximum in India. In reply to a Parliament question sometime back, it was told that with 28 polluted rivers, Maharashtra tops the list in India while Gujarat and Uttar Pradesh are placed second and third, with 19 and 12 such rivers, respectively. Sensing the urgency of the situation the Government of India has earmarked a sum of around ₹4500 crores for reviving the ailing rivers of the country through National River Conservation Project (NRPC).

Namami Gange

Even as the Central Government's Ministry of Water Resources, River Development and Ganga Rejuvenation is working on the cleanup operation of all rivers in the country, its top priority is on restoring the holiest of our rivers Ganga to its pristine State. The drive has rightfully been named *Namami Gange*. Originating from Gomukh glacier near Gangotri, Ganga travels a distance of 2,525 kilometres before merging with the sea in the Bay of Bengal. The great civilisation of our country has developed on its banks. The Ganga has long been regarded by followers of Hinduism as giver of life and provider of salvation. Continued polluting has done great damage to it. A river that flowed freely



with its sparkling waters has now become tired and sluggish, carrying the burden of sewage and other pollutants of the cities located on its banks. It is a matter of great concern which has prompted the Central Government to create a new Ministry to clean the *Punya-salila* (the holy river). The Government has started the project *Namami Gange* to accomplish the task of cleaning the river Ganga in two years which could not be accomplished in thirty years by various governments. It might sound incredible but the it has been taken up as challenge by the Central Minister of Water Resources, River Development and Ganga Rejuvenation. Minister has stated that the results of the efforts being made in this direction will start being visible by October 2016 itself and by the end of 2016 Ganga will be fully restored to its pristine purity. Her claim is based on the success of 231 projects launched at a cost of ₹1,500 crore on July 7, 2016. Out of these 43 projects costing ₹250 crore will check pollutants from flowing into Ganga at eight places in Uttarakhand alone; rest will go into setting up facilities at 95 predetermined locations in Haryana, Delhi, Uttar Pradesh, Bihar, Jharkhand and West Bengal. These projects will basically concentrate on renewal of ghats, construction and cleaning of drains, construction of sewage treatment plants, disposal of industrial waste, plantation and development of bio diversity zones. For cleaning of river Ganga 118 municipalities located on its banks have been identified where total cleanliness targets would be achieved through latest techniques of waste water treatment and solid waste management.

Organic Farming for Conservation of Ganga Waters

The Central Government has taken one more step forward in its quest for speedy implementation of *Namami Gange* mission. It involves promotion of micro irrigation in the area lying in the vicinity of the river for water conservation. The Central Government's Ministry of Water Resources, River Development and Ganga Rejuvenation has entered into an agreement with the Ministry of Agriculture and Farmers Welfare for this purpose which will iron out the problem areas related to agriculture for accelerated implementation of the *Namami Gange* project. It has been proposed that clusters will be formed at village panchayat level to represent the rural settlements located

around Ganga. With the help of self help Groups and mobile applications, awareness programmes regarding cleanliness of Ganga would be launched to promote organic farming at these cluster levels. As per the terms of the agreement, the Ministry of Agriculture and Farmers Welfare will work to create awareness among farmers about balanced use of fertilizers and pesticides so that micro irrigation could be promoted in the Ganga basin for water conservation and farmers could benefit from it.

Agreements with other Ministries

The *Namami Gange* project is likely to cost about ₹12,728 crore in terms of a Unified Ganga Conservation Mission. Under this mission several small projects costing a sum of ₹7,272 crore have already been rolled out. The concerned Ministry has already entered into several agreements with other ministries of Central Government for *Namami Gange* mission. These Ministries are Shipping, Human Resources and Development, Rural Development, Tourism, AYUSH, Youth Affairs and Sports and Drinking Water and Sanitation.

Gangasagar to Gangotri March

The Minister of Water Resources, River Development and Ganga Rejuvenation is to flag off a Gangasagar to Gangotri March in October that will focus on creating awareness regarding cleanliness of Ganga. It will also take stock of the progress being on various components of the mission and speed up the work.

Ensuring the Continuity of Flow

As indicated in the reports of several studies and enquiry committees, it is difficult to ensure cleanliness of Ganga without ensuring its continuous flow. This is matter of great concern. Maximum dams have been erected on Ganga, which also bears the burden of maximum 54 irrigation projects. Certainly, these projects are the biggest impediment to the unbroken flow of Ganga. They are also robbing Ganga of its bacteriophage and special silt that are the part of the river's self-cleaning mechanism. The Environment Minister, considered an expert on rivers, had rightly opined on assuming office that "every river must flow". If he and the Water Resources Minister are able to ensure the flow of rivers, it would be a giant positive step forward.

On the occasion of the 4th River Festival in Madhya Pradesh, the latter had said, “No river would be allowed to dry up. Their continuous flow would be ensured by interlinking them. Rivers cannot be sacrificed for dams. If dams are to be erected, rivers will have to be saved first.

How to check Waste Dumping

Steps have been initiated to clean rivers other than Ganga as well. The National Green Tribunal (NGT) has directed to impose a fine of up to ₹50,000/- on instances of ritual-related, construction-related and other types of waste disposal in Yamuna River. Taking a tough stand on the issue, NGT has directed the CPCB not to allow industrial units to discharge their liquid or solid waste into rivers. Since every river flows at the lowest level in its catchment area, any waste dumped on the ground even far away from its banks will eventually find its way into the river. This phenomenon is contributing heavily to polluting of our rivers. Growing demand for water has led to construction of dams and diversion of rivers’ natural course which has further diminished their capacity to carry away waste materials. Such waste material will ultimately pollute the sea where a river empties.

Learning Points from Foreign Lands

Almost every major river in the world has been a victim of pollution at some point of time or the other but awareness among people and perpetual cleanliness drives have turned them into shining examples of what can be achieved on this front. Thames of London and Rhine of Germany had once turned black with pollution but were cleaned that ultimately. Now that these rivers have been cleaned, the locals have come forward to shoulder the responsibility of maintaining their present status. Rhine is only half as long as Ganga but it took Germany 30 years to clean it to the current level.

Rivers are considered a natural drainage for effluents and pollutants all over the world but are not left to themselves and thus, die a painful death. About a decade ago Elbe was considered the most polluted river of the world but today it is amongst the cleanest ones in the world. This turnaround has been possible because the Government in that country considers rivers as a legacy. Not long ago, German rivers were so polluted that fish were dying of ulcer in those waters but today these rivers have

been fully cleaned. From the biodiversity angle our rivers have been home to some of the most unique flora and fauna in the world ranging from temperate to tropical, but pollution is steadily destroying this uniqueness.

Yamuna in Delhi

When the Yamuna begins its downward journey from Himalayas, it is just like Ganga-clean and clear. By the time it enters the plains and reaches Delhi, its condition becomes miserable. At Wazirabad in Delhi, Yamuna on one side is clear while on the other it's black. Here all water is diverted to the treatment plant for purification and supply of potable water to Delhi households. The story of the river's misfortune begins here. Oxygen levels in Yamuna has reached zero in Delhi. Yamuna begins its journey from Yamunotri in Uttarkashi district of Uttarakhand and meets Ganga at Prayag (Allahabad) in Uttar Pradesh. The Water Resources Minister says it is not possible to even imagine a clean Ganga without cleaning Yamuna first. Regarding Yamuna, she claims that the Central Government would clean up the stretch of Yamuna between Delhi and Agra by 2018. Drains of Delhi emptying into Yamuna will be diverted to treatment plants. Japan and Netherlands are providing technology and soft loans for the project. Clean-up operation of Yamuna will be carried out in three phases. Work on first two phases involving the stretch between Delhi and Mathura has already begun. The third phase is likely to be launched in Agra next year. Out of the total distance of 1,029 kilometers that Yamuna travels, 700 kilometers lie between Delhi and Allahabad. Delhi, Mathura and Agra are the major contributors of pollutants to the river therein.

Hindan and the Rivers of North India

While talking about Yamuna one must not forget about the Hindan that merges with Yamuna near Delhi. Hindan is an important river of West UP. It originates from upper Shivalik hills in Saharanpur and covers a distance of about 400 kilometers through Saharanpur, Muzaffarnagar, Ghaziabad, Noida and Greater Noida before meeting Yamuna. Its catchment area is about 7,083 square kilometers that lies between Ganga and Yamuna. Once it meets Yamuna, it ultimately affects the water quality of Ganga as well. It provides drainage to several densely populated industrial townships located in its catchment area. This river has been in news

for quite some time due to heavy pollution. Waste from stone crushers legal as well as illegal located in upper parts of Ghaziabad has changed the colour of its waters to red. Besides this, countless paper mills, sugar mills, abattoirs, distilleries and chemical mills located in West UP directly discharge their untreated effluents in this river.

Oxygen levels in Hindan have fallen so low that no fish can survive in it. The U.P. Government has been working with 'Water Resource Group' of the USA to clean it and might enlist the help of Belgium as well for the purpose.

Gomti is another prominent river of North India which has now been converted into a gutter. Originating from Gomad Tal near Madho Tanda in Pilibhit district of Uttar Pradesh, it journeys through Sitapur, Hardoi, Lucknow, Bahraich and Jaunpur before merging with Ganga at Kaithidhar near Varanasi. At no point during this journey it is clean. Gomti Riverfront Development Project has been launched to clean it. UP Government has been making claims to start work on cleaning two other major rivers of the State-Varuna and Saryu.

Plight of Narmada

Narmada is the second holiest river in India after Ganga. It is also worshipped like Ganga. It begins its 1,289 kilometers long journey from Amarkantak in Madhya Pradesh and passes through Vindhya and Satpura hills before merging with the Arabian Sea, meeting with endless exploitation en route. Same treatment has been accorded to *Suryaputri* (daughter of Sun) Tapti, which originates from Multai in Betul district of Madhya Pradesh and meets Arabian Sea near Surat. River Tamsa has already ceased to exist.

Findings of a survey conducted by the Government agencies suggest that about 100 drains from the urban and rural settlements located near its banks discharge their effluents and sewage in Narmada. It appears quite polluted at the place of its origin, Amarkantak, itself. At several places, level of pollution in the river is dangerously high. The State Government has declared that it will launch a special drive to clean Narmada with a budgetary allocation of ₹4,000 crore.

Environmentalist Anupam Mishra says that every river in India, howsoever polluted, cleanses itself once a year during monsoon when it gets

flooded with rain waters. This unique phenomenon may be attributed to our weather cycle. But once cleaned we start polluting it again. So the need is not to clean up but to stop polluting our rivers.

Pamba River of South India

Young Indian scientist Shilly David has been conducting research on the river Pamba of Kerala at the Centre for Marine Tropical Ecology in Germany since 2009. She wants to revive ailing rivers of India.

After finishing her research at the Centre for Earth Science Studies, Thiruvananthapuram, Shilly went to Germany for further research. The professors at ZMT University were impressed by her synopses and she was admitted with scholarship. At ZMT, she is doing research on the third largest river of South India. The river is sick with pollution. Working with support from ZMT, Shilly as a guest scientist wants to save the river along with its fragile ecosystem. She visits India every 6 to 8 months and takes samples of river water and the fertilizers being used in the catchment area. The river is dying due to human intervention.

Ever deteriorating water quality is an indicator that our rivers are slowly dying. Ecosystem of a river is dependent on the oxygen dissolved in its waters for its survival and starts dying with dwindling supply of oxygen. When the oxygen level falls below a certain point, the river is scientifically declared dead. It takes a minimum of 30 to 40 years to revive a dead river. Onset of massive industrialisation in Europe killed several rivers and some of them have not been revived till date. Polluted rivers ultimately affect our seas and are responsible for climate change as well.

The Way Ahead

If urgent measures are not undertaken to clean our rivers they will soon become history. Foremost reason of pollution is discharge of waste into our rivers. Next come religious practices which demand the leftovers after every ritual to be consigned to flowing waters of a river. Bathing of humans as well as cattle, washing laundry and consigning remains of dead bodies etc., are other contributing factors. If we stop dumping our waste into rivers, they can cleanse themselves. As per findings of a report, a bacterium found in rivers does multiple jobs, such

as joining stones, to filtering water, which is part of a natural mechanism for rivers to cleanse themselves. But their falling numbers over the past decades has worsened the situation.

Significance of River Basins

Various small streams, small ponds, flora and rain-fed and other tributaries found in a river basin contribute to the flow of a river. Any plans to revive or rejuvenate a river must concentrate on enriching these contributors. Every river basin has a unique physical structure and biodiversity. Basically these two factors determine the quality of water of a river at its place of origin. Gradient of the river, structure of riverbed, erosion of its banks, structure of underlying rocks and sand and aquatic plants and animals also contribute to the quality of water a river carries. To what extent a river is capable of cleansing itself also depends on these factors. Environmentalists are against the tendency of destroying natural flora and fauna, small river bed ponds created on the bends of a river by its natural flow through extensive use of heavy earthmoving machinery in the name of desilting. This practice may adversely affect the natural flow and quality of water of a river. Rather employment generation through cottage industries using eco-friendly technology should be promoted in the catchment area.

Points to Ponder

In 1932, the then Commissioner of Banaras passed an order regarding linking of the main gutter of the city with the Ganga. There are no known instances of linking a drain to a river prior to this. Should we not decide that no waste is poured in our rivers and all waste disposals would be done where it is being generated? Ironically, today, polluted water carrying waste is flowing in our rivers while fresh water is flowing in irrigation canals. There are basic flaws with this practice which need to be reversed. Rivers should carry fresh water while treated water should flow in canals for irrigation and industrial purposes. This is not too difficult to achieve. Sewage treatment systems linked to community and private septic tanks are freely available in India. Today, the residents of Lucknow are passing on their sewage to Sultanpur and Jaunpur while Delhites are handing over their filth to Mathura and Agra. Surprisingly exceptions are coming up. Residents of Kolkata

recycle their sewage and do not discharge it into rivers. Honeysuckers of Bengaluru are extracting compost from septic tanks. On the one hand, they are saving our rivers by checking discharge of sewage and on the other, providing organic manure for agricultural purpose. If we take a close look at the technology for organic disposal of human excreta as developed by the Defense Research & Development Organisation (DRDO), we find that there is no need to link our new settlements, apartment buildings and commercial complexes with sewage pipelines.

SBM (G) in Namami Gange Villages

Swachh Bharat Mission (Gramin) endeavours to achieve Swachh Bharat by October 2, 2019. Swachh Bharat includes freedom from Open Defecation and appropriate Solid and Liquid Waste Management (SLWM). Namami Gange is the umbrella programme coordinated by the Ministry of Water Resources, River Development & Ganga Rejuvenation.

The programme involves multiple Ministries mainly Ministry of Urban Development and Ministry of Environment, Forests and Climate Change (since checking of source pollution and checking industrial pollution are the major components). A major role of Ministry of Drinking Water and Sanitation is to prioritize the villages on Ganga bank and work with States for making them free from Open Defecation as part of SBM (G).

In the 5 riparian States of the Ganga i.e., Bihar, Jharkhand, Uttar Pradesh, Uttarakhand and West Bengal, 1,651 Gram Panchayats in 251 Block of 52 districts have been identified as being adjoining the river Ganga. These Gram Panchayats comprise of 5,169 villages in all, of which 4,279 villages are directly adjoining the Ganga, which have been prioritized to achieve ODF status.

As per Baseline Survey (2012-13) conducted by States 15,18,649 households in these GPs did not have toilets. Of these, a total of 5,58,608 (36.78 per cent) individual toilets have been constructed so far. As far as achievement of ODF is concerned, of the 4,279 villages, 1,523 (35.59 per cent) villages are ODF. States are taking efforts to make these villages ODF within this year.

(Author is senior journalist and can be reached at sanjayratan@gmail.com)

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SUCCESS STORY

POSITIVE DISCRIMINATION MAKES 'HARDA' OPEN DEFECATION FREE

Making optimum use of the flexibility that states have for deciding upon the activities of the Swachh Bharat Mission (Gramin) campaign to suit their specific requirements, Harda in Madhya Pradesh was declared open defecation free (ODF) in August 2016. This was achieved by a planned process of positive discrimination to bring about behaviour change.

In the run-up to the recently concluded Olympics, the district administration of Harda organised ODF Olympics amongst the Nigrani (monitoring) committees of the various *gram panchayats*.

The event was named thus because only ODF villages were eligible to participate, regardless of whether they had good players or not, according to Harda Zilla Panchayat CEO Priya Mishra. “Nigrani committees, comprising of men, women and children, are the real champions in our efforts to stop the practice of open defecation. They watch over the villages to check people from relieving themselves outdoors,” Ms Mishra says. But when a village, especially one that has skilful players, is denied participation at the event, its people are motivated to work harder to bring about behaviour change, she adds.

Another innovative competition was the ‘Swachh Kitchen, Sundar Kitchen’ (clean kitchen, beautiful kitchen) where only school kitchens of ODF villages participated. Further, people ODF villages don’t need coupons to enter the offices of the district administration.

Since the onset of the SBM(G) campaign, Harda, which was an early starter, began an operation called *Malyudd*, meaning war against insanitation. In fact, several terms which are commonly used in the SBM people’s movement across the country originated in Harda, one such term being ‘Lota Jallao’.

One of the activities during this event is burning of the pots that people used to carry water when they went out to defecate earlier. In addition, every ODF village organises a ‘walk of pride’ or *Garv Yatra* across former ODF areas to celebrate their new status in contrast to the earlier ‘walk of shame’ to areas of open defecation.

Harda has also involved its people in the ‘Waste to Wealth’ programme, an experiment to make soft toys stuffed with sanitised shredded non-biodegradable waste like plastic bags, wrappers, and other items, from used bangles and plastic straws, to x-ray sheets. This has also helped train many self-help groups and introduced new avenues of livelihood to them. Harda’s campaign was truly a people’s movement. More than 4,000 people, including religious leaders, caste and community leaders.

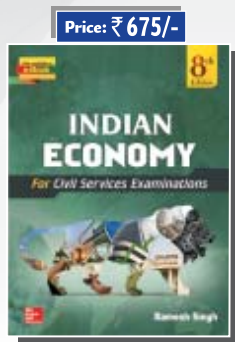




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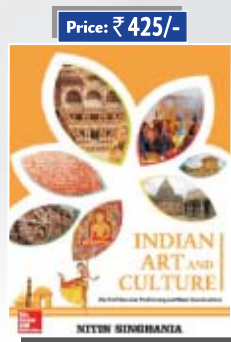
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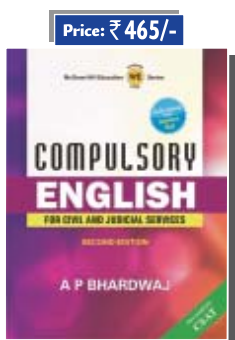
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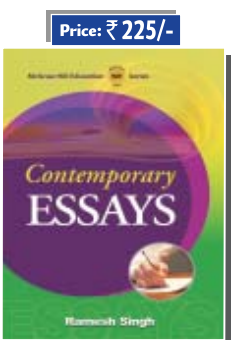
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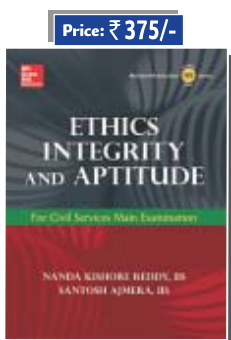
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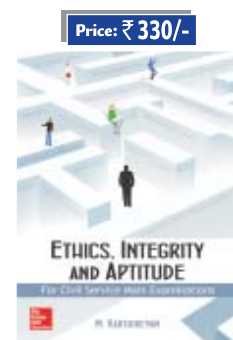
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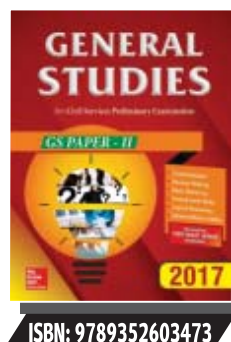


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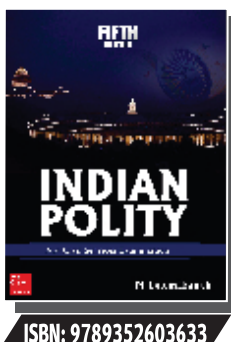
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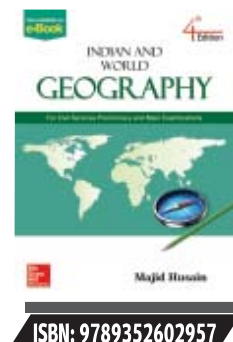
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Musings of Mahatma...



एक कदम स्वच्छता की ओर

I have come to the conclusion from my observation of so many municipalities that the greatest problem they have to tackle is sanitation. I am aware that it is a stupendous problem. Some of the national habits are bad beyond description, and yet so ingrained as to defy all human effort. Wherever I go this insanitation obtrudes itself upon my gaze in some shape or another. In the Punjab and Sind, in total disregard of the elementary laws of health we dirty our terraces and roofs breeding billions of disease-producing microbes and founding colonies of flies. Down south, we do not hesitate to dirty our streets, and early in the morning, it is impossible for anyone in whom the sense of decency is developed to walk through the streets which are lined with people performing functions of nature which are meant to be performed in seclusion and in spots which human beings need not ordinarily tread. In Bengal, the same tale in a varying form has to be told; the same pool in which people have washed their dirt, their pots, and in which cattle have drunk, supplies drinking water. And here in Cutch men and women think nothing of repeating the performance I have seen in Madras. These are not ignorant people; they are not illiterate; many have travelled even beyond the borders of India. They ought to know better; but they do not. And nobody worries about giving them an education in the elements of sanitation. It is, or should be, one of the privileges of municipalities and local boards to make it their chief concern to eradicate insanitation within their limits. If we are to live in cities, if we are to live an organized life, if we are to grow in health and wisdom, - we shall have to get rid of insanitation some day or other. The sooner we do so the better. Let us not postpone everything till *swaraj* is attained. Some things no doubt will only be done when that much-wished-for event has happened. But it will never happen if we do not do the many things which can be done today as easily as under *swaraj*, and which are signs of corporate and civilized national life. No institution can handle this problem better and more speedily than our municipalities. They have, so far as I am aware, all the powers they need in this direction and they can get more, if necessary. Only the will is often wanting. It is not recognized that a municipality does not deserve to exist which does not possess model closets and where streets and lanes are not scrupulously clean all the hours of the day and the night. But the reform cannot be brought about without infinite application on the part of members of municipalities and local boards. To think of all the municipalities in the aggregate and to wait till everyone has begun the work is indefinitely to postpone the reform. Let those who have got the will and the ability commence the reform in right earnest now, and the rest will follow.

Excerpts from Young India, Dated: October 29, 1935
Source: Collected Works of Mahatma Gandhi, Vol: 28, Pg: 400-402

RURAL CLEANLINESS AND GANDHIJI

Rajiv Ranjan Giri

Gandhiji was struck by the duality of Indians about cleanliness. They discriminate between personal and community hygiene. Quoting some foreign authors Gandhiji wrote in 'Harijan' dated February 8, 1934 that Indians probably lead the world in terms of personal hygiene. But he has also underlined the paradox that when it comes to cleaning our villages or the surroundings, the position is just reverse, "people will keep their own homes neat and clean but will take no interest in keeping their neighbour's home clean."

Village, village folk and rural society have been at the heart of Gandhiji's ruminations. He repeatedly stressed the need to look back towards our villages in order to understand the true soul, character, nature and mental set up of India. That is why our villages always remained at the focal point of his contemplations about India ever since he entered public life. In addition to occupying a central place in his concerns and musings, villages form the foundation of the India of his dreams. So naturally if we want to make an assessment of the extent to which his dreams have been translated into reality we would have to assess how strong this foundation is today. Any assessment of the India of his dreams must naturally take into account the condition and strength of our villages, village folk and rural society at large today.

Physical labour, community life and coexistence with the nature are the aspects of village life that appealed to Gandhiji greatly. But he did not romanticise about the village life. He never believed that all is well with everything that was rural. Out of several dimensions of rural society if we focus on cleanliness only, it would be interesting to know the thoughts of Gandhiji regarding it. It would also help us know what his vision about the village of his dreams was.

In 1941 Gandhiji wrote a booklet for his (Congress) workers. It was named- 'Constructive Programme-its Meaning and Place'. Beginning with the *Satyagrah* (passive resistance) in South Africa and later while leading the Indian freedom struggle he had made constructive work and struggle complementary to each other. It is not impossible to understand the freedom movements

led by him being placed alongside the constructive programme. For Gandhiji freedom struggle and his constructive programme were two sides of the same coin; parts of the same structure instead of being independent entities. In his foreword to 'Constructive Programme-its Meaning and Place', he has elaborated that, "Readers, whether workers and volunteers or not, should definitely realize that the constructive programme is the truthful and non-violent way of winning *Poorna Swaraj*. Its wholesale fulfillment is complete Independence." Gandhiji had included 18 dimensions in it. In other words, these 18 dimensions of constructive programme are the only true and non violent paths that lead to *Poorna Swaraj* or complete freedom. Not only that, complete freedom is possible only through their fullest accomplishment. It implies that the constructive programmes are the means as well as the end. Village sanitation is one of these 18 programmes. This is indicative of the significance attached to cleanliness in Gandhian thought and philosophy.

What was the condition of our villages on the parameters of cleanliness? What was the experience of Gandhiji about it who extensively toured the different regions of this country? He has commented that "instead of having graceful hamlets dotting the land, we have dung heaps. The approach to many villages is not a refreshing experience." He is brutally honest when he says, "Often one would like to shut one's eyes and stuff one's nose; such is the surrounding dirt and offending smell." (Constructive Programmes Page-27) What is the reason behind such observations? Why was he forced to make such observations about villages which are at the very core of the India of his dreams? The reason is filth and the

stench generated by it. In this context it is worth mentioning that when Gandhiji returned to India in 1915 after spending two decades in foreign lands and extensively toured India for one year; he maintained silence on public issues. It was only on the occasion of inauguration of Banaras Hindu University on February 4, 1916 that he delivered his first public speech. In this highly talked about speech he raised the issue of cleanliness and linked it with *Swaraj*. Not to mention the dirty bylanes of towns and villages, he even drew attention to the filthy stinking lanes surrounding our temples, “Undoubtedly, if we want to march towards *Swaraj*, we must improve this situation.” (*Purusharth, Tyaag aur Swaraj*- Mohandas Karamchand Gandhi, *Gandhi Smriti Evam Darshan Samiti*, New Delhi, Edition 2014; Page: 30-32)

Now the question arises why our villages were in such a disgraceful condition? Gandhiji cited the reason, ‘alienation between the physical labour and intelligence.’ That is why “we have become careless about our villages.” The direction in which our civilization has progressed, it has further widened the chasm between the mental and physical labour. Mental work has come to be considered superior to physical work. Consequently an understanding has developed that considers those who do mental work superior and those who are engaged in physical work are considered inferior. Gandhiji called this division of labour and the resultant nonchalance ‘criminal.’

Gandhiji was struck by the duality of Indians about cleanliness. They discriminate between personal and community hygiene. Quoting some foreign writers Gandhiji wrote in ‘*Harijan*’ dated February 8, 1934 that Indians probably lead the world in terms of personal hygiene. But he has also underlined the paradox that when it comes to cleaning our villages or the surroundings, the position is just reverse, “people will keep their own homes neat and clean but will take no interest in keeping their neighbour’s home clean.” Gandhiji

further elaborates this lack of interest, “they will guard their courtyard from waste, bugs and stray animals but will not hesitate in dumping the same in the neighbour’s courtyard.” This miserable condition is a result as well as evidence of differentiation between ‘personal responsibility’ and ‘collective responsibility’. According to Gandhiji, “lack of collective responsibility has turned our villages into dump yards.” People maintain personal hygiene and clean their homes due to inherited customs and rituals and rites but “A sense of national or social sanitation is not a virtue among us. We may take a kind of a bath, but we do not mind dirtying the well or the tank or the river by whose side or in which we perform ablutions. One regards this defect as a great vice which is responsible for the disgraceful state of our villages and the sacred banks of the sacred rivers and for the diseases that spring from insanitation. (*Constructive Programme*, Page-27-28)

In Gandhiji’s eyes sanitation of public places on community level is as important as cleanliness on personal level. To make our lives disease free



cleaning of our surroundings through community participation is indispensable. Public wells and water reservoirs have occupied an important place in our society. In spite of their utility there has been a social neglect regarding their cleaning. In 'Harijan Sewak' dated February 15, 1935 Gandhiji wrote an article wherein he linked clean water to physical health. He wrote, "Health science unanimously agrees that that villagers' indifference towards clean drinking water is the prime reason behind their several diseases." Gandhiji had observed that village ponds were used for bathing, washing laundry and procuring water for cooking and drinking purposes. Several ponds were used by animals as well. Some ponds are often inhabited by buffaloes. He was appalled by this dirty practice. He has written, "It is surprising that our villages have survived being wiped out due to epidemics in spite of this sinful abuse of our ponds." He explains cleanliness as being sacrosanct and its absence as being sinful. A mind trained in modern way of thinking might find this categorisation awkward. Why not just link cleanliness with health and a sense of duty? But such imagery is quite acceptable and commonplace from the awareness viewpoint regarding personal and communal hygiene. Such images provide a bigger canvas in terms of tackling the abuse of water sources.

Sanitation for Gandhiji is not confined to health only. He links it with the entire environment. Waste and filth affect the whole environment. They also contribute towards tilting the ecological balance. All living organisms have to suffer due to environmental pollution. The important thing is no animal other than humans pollutes the environment. Only the so called discerning humans do it. Gandhiji has written, "With our dirty habits (defecating in open) we spoil the banks of our holy rivers and prepare

breeding grounds for flies. As a consequence of our criminal negligence the same flies which sit on human excreta, come back and sit on our bathed bodies, thus dirtying them." (*Mere Sapnon ka Bharat (India of My Dreams)*- Gandhiji, Navjeevan Prakashan Mandir, Ahmedabad, August 2013, Page-179) According to Gandhiji defecating in the open, blowing ones nose and spitting on the roads are all crimes against humanity and the God and display a pathetic lack of courtesy towards others. A person who does not cover his excretions is liable to be prosecuted, even if he resides in a jungle. It is clear that spreading filth and grime is not pardonable irrespective of its location-whether it is done in a densely populated area, village or town or in a remote jungle. To call this offence a crime against humanity and God shows how seriously Gandhiji took it.

Gandhiji was not confined to expressing concern over lack of sanitation in villages. He suggested measures as well to tackle this menace. He wrote in 'Harijan Sewak' dated February 15, 1935, "At first the place should be cleaned after removal of waste. Then the waste should be classified. Part of it may be converted into manure. Part will have to be buried and some of it would be such that may be recycled. Bones found in the garbage heap will be a precious raw



material for several utility items such as precious manure after being ground. Clothes, rags and waste paper may be recycled as paper and human and animal excreta may be converted into organic manure for agricultural purposes. Thus waste material spreading filth may be utilized in this manner. It will boost soil productivity and strengthen village economy.” Gandhiji does not offer mere advice; he suggests practical ways also for concrete solutions. He writes, “to recycle, human excreta whether dry or liquid, should be mixed with earth and buried in a pit not deeper than a feet.” Quoting Dr. Poor he suggests that excreta should not be buried deeper than 9 to 12 inches as bacteria found in the top layer of soil convert it into normal odorless soil through organic reaction with the help of air and sunshine which is easily accessible on the surface.

No remedy suggested by Gandhiji requires great capital. Nor does it need great resources including human resources. Villagers can implement these measures on individual as well as community levels. He clearly states that any villager can verify the truth behind these methods through experiments. He further explains the process of converting human excreta into manure: “This work can be done in two ways. Either latrines should be made where evacuations would be done in iron buckets/earthen pots which could later be emptied in to pre-dug trenches and covered with earth. Or open pits could be dug in the ground straightaway and the human waste collected in these should be covered with soil. The human waste thus collected may be buried into personal or community fields.” Strong determination is needed to implement this scheme as suggested by Gandhiji. Any individual or the rural society can do this provided it has the will. By doing this villagers can make their environment clean and healthy. Gandhiji states, “any enterprising villager can at least do this much individually to convert human waste into something valuable for himself. These days this precious manure worth lacs of rupees goes waste every day, pollutes the air and generates filth and diseases as the by product.” One must admit that by proposing these measures Gandhiji links dirt, filth and grime with community health, sanitation, economy, nature and environment. He also suggests development of a new culture which does not discriminate between physical

and mental labour. His thoughts on development of a new work culture expose our indifference and collectively irresponsible understanding towards cleanliness and sanitation and provide a viable alternative model. This has become a part of our mental set up to consider those who are engaged in sanitation as inferior while those who are spreading filth as superior. Gandhiji’s thoughts on cleanliness and sanitation provide a strong and credible counterpoint to this misconception.

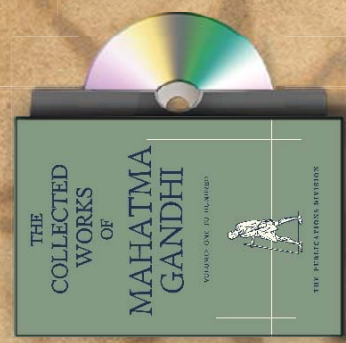
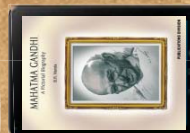
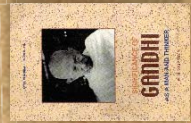
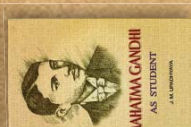
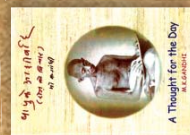
Beauty of Gandhian thoughts on the issue of cleanliness lies in self reliance. It does not require outside intervention. Wherever there is filth, the locals would clean it up. He has stressed upon the role of Gram Sewaks, Gram Panchayats and socio-political workers for ensuring rural sanitation. Naturally all these entities reside within the boundaries of a village. The second most significant aspect is-he does not assign the task of sanitation to any specific community. According to him maintaining cleanliness on personal and community level should be everyone’s duty and religion. The only segment whom he expects to initiate the process is the Congress worker or the volunteer. Inspired by Gandhiji during National Movements, a whole army of workers and volunteers had been raised. As they were also under the spell of inherited customs, Gandhiji had to declare, “If such inspired volunteers come forward who feel the same pride in holding a broom or spade as is felt in holding a pen or pencil, then there will no expenses involved in this work. Even if some expenses will be required it will be limited to purchase of some brooms, spades, baskets and probably some germ killers. Dried ashes are probably as good a germicidal as any chemist might provide.”

Village of Gandhiji’s dreams will be spotless clean and self reliant. The village and the village society that finds repeated mention in his musings are the work of imagination. It is a dreamland of Gandhiji and he is criticised by those who fail to comprehend this.

(Author is a Gandhian scholar and has been associated with the journal Antim Jan published by Gandhi Smriti and Darshan Samiti (GSDS). He can be reached at rajiv.giri19@gmail.com)

Mahatma Gandhi

His Life & Message



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BASIC SANITATION IN RURAL INDIA: ROADMAP FOR SWACHH BHARAT

Dr Bindeshwar Pathak

In developing countries, neither the Government, the local authorities, nor the beneficiaries can bear the total capital expenditure, and operation and maintenance costs of a sewerage system. Moreover, it requires skilled persons and good management for the long-term operation and maintenance. Similarly, the septic tank system is also expensive and requires large volumes of water for flushing. They also have other problems, like periodic cleaning and disposal of sludge. Inadequate effluent disposal is a source of foul smell, mosquito breeding and health hazards.

Environmental sanitation includes clean water supply, safe disposal of human waste, waste water and solid waste management, control of water-borne diseases, and domestic and personal hygiene.

Sanitation means not just keeping clean but protecting those sources of the environment which support sustainable development. Development programmes, innovative as they may be, are not likely to yield desired results unless environmental sanitation is improved and protected.

The Problem

Globally, 2.5 billion do not have access to basic sanitation, of which 1.1 billion still practice open defecation. The countries where open defecation is most widely practiced are mostly the countries with the highest numbers of under-five child deaths, high levels of under-nutrition and poverty, and large wealth disparities.

In 2010, the UN estimated based on Indian statistics, that 626 million people practice open defecation. It means, more than half of India's population does not have access to basic structured sanitation facilities. According to the 2011 Indian Census, 53 per cent of households do not use any kind of toilet or latrine. However, the effect of lack of sanitation facilities can be seen much more beyond open defecation. Over 28 per cent of Indian children (2.3 crores) under the age of six suffer from malnourishment and are underweight, a direct result attributed to poor sanitation.

Swachh Bharat Abhiyan

On October 2, 2014, Prime Minister Narendra Modi launched the Swachh Bharat Mission, which aims to eradicate open defecation by 2019, restructuring the Nirmal Bharat Abhiyan. The campaign was officially launched at Rajghat, New Delhi, where the PM himself took up cleaning the road. The aim of the nationwide cleanliness drive by 2019, the year that marks the 150th birth anniversary Gandhi, who wanted to make sanitation a priority for India. The current drive aims to end the wide-spread practice of open defecation, build more toilets and improve waste management, among other goals.

The programme plans to construct 12 crore toilets in rural India by October 2019. The PM spoke of the need for toilets in his 2014 Independence Day speech stating, "Has it ever pained us that our mothers and sisters have to defecate in open? Poor womenfolk of the village wait for the night; until darkness descends, they can't go out to defecate.



What bodily torture they must be feeling, how many diseases that act might engender. Can't we just make arrangements for toilets for the dignity of our mothers and sisters?"

Problems of Sanitation in Rural India

In the developed countries, the standard practice for the sanitary disposal of human waste is sewerage. Due to financial constraints and exorbitant maintenance and operational costs, sewerage is not the answer at present to solve the problem of human waste management in India. In developing countries neither the Government the local authorities, nor the beneficiaries can bear the total capital expenditure, and operation and maintenance costs of a sewerage system. Moreover, it requires skilled persons and good management for long term operation and maintenance. Similarly, the septic tank system is also expensive and requires large volumes of water for flushing. They also have other problems, like periodic cleaning and disposal of sludge. Inadequate effluent disposal is a source of foul smell, mosquito breeding and health hazards.

Technological Intervention

Essayist believes a technological intervention is the answer to India's sanitation problem in rural areas. To this effect in 1968 essayist innovated a revolutionary affordable technology- the two-pit pour-flush toilet.

Sulabh Two-Pit Pour-Flush Compost Toilet

Sulabh flush compost toilet is eco-friendly, technically appropriate, socio-culturally acceptable, and economically affordable. It is an indigenous technology and the toilet can easily be constructed by local labour and materials. It provides health benefits by safe disposal of human excreta on-site. It consists of a pan with a steep slope of 25-28 degrees and a specially designed trap with 20mm water seal requiring only one litre of water for flushing, thus helping conserve water.

It does not need scavengers to clean the pits. There are two pits of varying size and capacity depending on the number of users and location. The capacity of each pit is normally designed for three years' usage. Both pits are used alternately. When one pit is full, the incoming excreta is diverted to the second pit. In about two years, the sludge gets digested

and is dry and pathogen free, thus safe for handling as manure. Digested sludge is odourless and is a good manure and soil-conditioner. It can be dug out easily and used for agricultural purposes. The cost of emptying the pit can be met partially

from the cost of the manure made available. Sulabh toilets can also be constructed on the upper floors of buildings. They have a high potential for upgradation, and can later be easily connected to sewers when introduced in the area. Sulabh has so far constructed over 15 lakh individual household toilets in different parts of the country.

Sulabh flush compost toilet does not cause water pollution. When constructed in homogeneous soil, bacteria, in general, do not travel more than three metres horizontally, and the seepage is not more than one metre vertically. So, as a precautionary measure, the toilet is built at a safe distance from the source of water, keeping the above points in view. No vent pipe is needed since the gas gets absorbed in the soil. The parameters change depending upon the coarseness of the soil and the type of terrain where the toilet is being constructed. Depending on the availability of space, the shape of pits may be designed. It fulfils all the seven conditions of a sanitary latrine laid down by the WHO. (Excreta Disposal for Rural Areas and Small Communities by E.G. Wagner & J.N. Lanoix, WHO, 1958, pp. 39).

Sulabh's Road Map for Rural Sanitation

The aim of Swachh Bharat Abhiyan is to build 12 crore toilets over a period of five years. That is almost one toilet every second. It seems like a mammoth task but with strategic planning and community mobilisation, it is not an impossible one.



Target

The target will be to make India open defecation free (ODF) by 2019. In India, there are 686 districts, 6849 blocks, 2.51 lakh panchayats and 6.46 lakh villages. The target to be achieved is construction of nearly 12 crore toilets.

Funds Requirement

Funds requirement will be ₹3,60,000 crores to build 12 crores toilets in three years. (with the cost of one toilet being ₹30,000, inclusive of cost escalation in three years. Therefore there will be no requirement of extra fund over and above, during the envisaged three years' period.)

Funds from Various Sources

- Contribution from beneficiaries
- Subsidy from the Government
- Bank loan
- CSR fund
- Donation from India, abroad, industries and affluent people.
- NRIs

Technology

The two-pit pour-flush compost toilet technology was invented by the essayist. It is affordable, eco-friendly, indigenous and a culturally acceptable technology, popularly known as Sulabh Shauchalaya (Sulabh toilet). It has been accepted and adopted by the Government of India as well as other countries like China, Vietnam, Bangladesh, South Africa etc.

Methodology

It will be a Centrally sponsored scheme and the Central Government, through its Ministry of Drinking Water and Sanitation, will place funds with about 1.25 lakh rural banks in India. The total number of panchayats is 2.51 lakhs. So, one bank will cater to the needs of two nearby panchayats.

Financing Pattern and Procedure

The implementing agency/agencies will be selected on the basis of their expertise, experience, infrastructure, financial turnover, management capabilities and any other condition/s the Government may decide upon.

Agency/agencies so selected will choose one person from each panchayat, to be known as motivator. This means 2.51 lakh motivators will be selected throughout the country for implementation of the programme. Apart from motivation, education and communication, the motivator selected from one panchayat, with the help of two masons and four labourers, will/should be able to construct minimum 20 toilets in a month and will subsequently follow-up the functioning of the toilet.

Construction of minimum 20 toilets in a month will mean 720 toilets in three years. There being 2.51 lakh panchayats, it would mean construction of more than 18 crore toilets in three years. Therefore, even if there are slippages in construction, attainment of target of construction of 12 crore toilet should be possible.

The motivator will motivate the beneficiary and after the latter agrees to get the toilet constructed in the house, will fill-up a form and authorise the agency to receive money from the bank on behalf of the beneficiary. After receiving the application and proper scrutiny the bank will give 50 per cent amount as advance to start the construction work. The bank will inspect the construction work and after satisfying itself that 80 per cent work of the received amount has been completed will then release another 45 per cent amount as advance and rest 5 per cent of the money will be released after the completion of the work after being so satisfied. The implementing agency will be given 15 per cent as implementation charge, out of which 10 per cent will be given to the local youth who will implement the project.

Review

After completion of the work the progress review should be conducted jointly by the bank, the beneficiary, implementing agency and coordinating agency. The completion certificate will be submitted to the bank signed by the beneficiary and the executing agency and the bank will adjust the amount after the inspection of the work done.

- Ten per cent of the families who have no toilets in their homes have been excluded from the

assistance because they are supposed to be rich people.

- About 54 million families have already been provided assistance or subsidy from 1986 when the cost of a toilet was ₹500 except few percentage or maximum are either non-existent or non-functional. The Government should consider giving them fresh subsidy, otherwise they will not be able to build toilets on their own within three years.
- At present, the Government of India is giving loan of ₹12,000 per toilet. This amount is not adequate to build good quality toilets. So, loans of up to ₹50,000 should be given to help achieve the target.
- The Government can provide ₹30,000 as a subsidy then there will be a chance to achieve the target 100 per cent.
- In India, there are 675 districts, 6,849 blocks, 2.51 lakh panchayats and 6.46 lakh villages. We have 16,057 companies whose profits are more than ₹500 crores. Depending on the capacity of the company, they can take up one village, one panchayat, one block or one district.
- Price of ₹30,000 per toilet has been calculated for three years, that is, up to 2019, keeping in mind the inevitable escalation in price. Thus, the company may like to donate a minimum of ₹30,000, the cost of one toilet, and so on and so forth. If there are 200 toilets needed in a village, the cost will come to ₹60 lakh. For one panchayat comprising of three villages, the cost will come to ₹1.8 crore. Similarly, the cost for covering a block or tehsil is ₹60 crore and for one district ₹600 crore. The Bharti Foundation has taken responsibility for one district—Ludhiana—and the company may decide whether it will take responsibility for one toilet, or for toilet in all homes of a village, a panchayat, a block, or a district. The work will be carried out in the name of your company or organisation. Before taking the decision, the company may like to interact with the people of the village for whom the work will be done.

Case study 1: Ludhiana

In Ludhiana district, in the northern Indian State of Punjab, Paramjit Kaur, 27, a mother of three children, just had a toilet built in her house and describes it as a precious gift.

With a monthly income of ₹6,000, the family had no means to build a modern toilet. Her family dwells in a tiny cluster with four other families, also with no toilets. The semi-concrete houses adjoin a dusty motorway with fast moving lorries and cars.

Paramjit narrates how her life changed drastically when a toilet was “gifted” to her. “I had to walk almost two kilometers, taking three little children with bottles of water just before day-break, crossing the highway far into the fields for relieving ourselves so that no one could notice us during dawn.”

She says it was a nightmarish and humiliating exercise as the owners of the nearby paddy farmlands would shoo and abuse if they were caught defecating in their fields. There was a constant threat of snake and rodent bites, and also the fear of unknown elements lurking in the dark.

This took a toll on the family’s health. “My children would fall sick with diarrhoea, cholera, fever, stomach infection or cold. We had high medical expenses almost every month. We never had the luxury to sleep, and even during the winters, we had to brave the chilly winds and the fog.” she says.

Answering the call of nature was further difficult if any of the family members felt ill. That meant relieving near the house and disposing the poo at a safer distance. There were other problems like children often getting late for school, which invited the ire of the teachers.

A few months back, the Bharti Foundation offered to construct toilets for her and her neighbours free of cost. The project is part of a ₹100 crore initiative with an aim to provide 12,000 toilets covering 900 villages in Ludhiana district. The toilets are being built and maintained by Sulabh International, a globally

renowned sanitation NGO with over four decades of experience in proving affordable two-pit pour-flush compost toilets.

Case study 2: Hirmathla

Hirmathla is a village in Mewat district of Haryana where Sulabh has undertaken promotion of sanitation awareness and construction of toilets for all inhabitants. Sulabh got financial assistance from the Rail Tel Corporation India Limited under its Corporate Social Responsibility Programme for construction of 100 individual household toilets.

Out of the total cost, the beneficiary's contribution was ₹3,000 and the rest of the cost was borne by Rail Tel Corporation for 100 units and for 36 units by Sulabh.

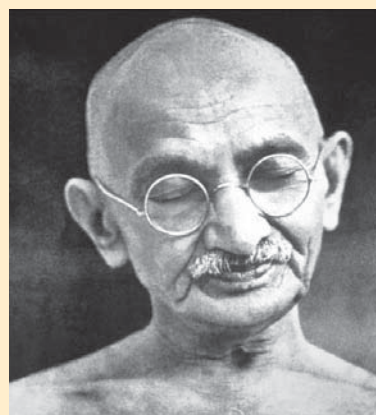
Every household in the village has a toilet now. Thus, the village has become free of open defecation. Having been declared a Nirmal Gram, Hirmathla has been awarded for the same. Sulabh has provided Total Sanitation Coverage in the village: construction of toilets for all individual households; creation of awareness for sanitation; promotion of health and hygiene programmes in schools; encouragement of women empowerment; and strengthening of Self-Help Groups (SHG) for monitoring and implementation of the sanitation and social plans.

Conclusion

Sulabh's approach is based on partnerships with local Governments, backed by community participation, and this has substantially improved environmental quality in rural and urban slums inhabited by poor people. Sulabh's system is never out of commission because there are two pits; so one can always be used while the other is being cleaned. The latrine can be built with locally available materials and is easy to maintain. It also has high potential for upgrading. Sulabh has also introduced 8,500 pay-and-use public toilets, staffed by an attendant round the clock. The public toilets include facilities for bathing and doing laundry and offer free services to children, disabled and poor people. As a result, more than 2 crores people have received improved, low-cost sanitation, and 50,000 jobs have been created. Sulabh's door-to-door campaigns also provide free health education to millions of people. The organisation trains local people to construct more latrines themselves, and has helped set up and maintain fee-based community toilets in slums and other areas. The extent and magnitude of the sanitation problem is tremendous and as an organisation, Sulabh with its family of more than 50,000 dedicated volunteers must rededicate their services to be equal to the challenging tasks.

(Author is an Indian sociologist, social activist and founder of Sulabh Sanitation and Social Reform Movement. He has received various national and international awards for his work in the sector. He can be reached at sulabhinfo@gmail.com.)

"... No one should spit or clean his nose on the streets. In some cases, the sputum is so harmful that the germs are carried from it and they infect others with tuberculosis. In some places, spitting on the road is a criminal offence. Those who spit after chewing betel leaves and tobacco have no consideration for the feelings of others. Spittle, mucus from the nose, etc, should also be covered with earth. Near the villages or dwellings, there should be no ditches in which water can collect. Mosquitoes do not breed where water does not stagnate. Where there are no mosquitoes, the incidence of malaria is low. At one time, water used to collect around Delhi. After the hollows were filled, mosquitoes were greatly reduced and so was malaria."



–Mahatma Gandhi

Navajivan,

Dated: November 2, 1919.

PANCHKULA WINS OVER STIFF OPPOSITION

There were 12 villages from total of 128 gram panchayats in Panchkula District of Haryana that were firm in their refusal to build and use toilets. No form of motivation seemed to impress upon them the need to adopt safe sanitation practices, until district administration hit upon a novel idea.

Earlier, the district administration had carried out various triggering and awareness building activities in the district that is home to about two lakh people. Nonetheless, while all other villages conceded as they were convinced that using toilets would lead to well being of the communities; the 12 villages stood their ground. With a view to creating psychological pressure on them, the administration said they would publish names of the 12 villages in the media, stating that open defecation prevailed there. The result immediate. Village elders met and after several rounds of animated discussion concluded that such a move would be disastrous for their village.



In just four months Panchkula's villages were made Open Defecation Free (ODF). The success of the campaign can be attributed to all sections of the community including political executives, administration, government departments, the three tiers of Panchayati Raj, school students, Anganwadi workers, ASHA workers and the public. "Every section of the society came together, in a determined manner to construct toilets and ensured its usage through early morning field visits," said Mittal, highly impressed with the zeal and motivation they displayed.

As far as the strategies employed, various workshops and residential trainings were organized between January and March 2016 to train motivators, nodal officers and the Gram Sarpanches. "This was the trigger for the change that followed," she explained.

Thereafter, nodal officers including heads of different departments were assigned one Gram Panchayat (GP) each and held responsible for its progress. In this regard, they visited the villages every morning and uploaded photographs and information on their Whatsapp Group named Paavan Panchkula.

"By around 6AM in the morning, the WhatsApp group would have updates from most of the villages with photographs," Mittal recalled. The mission became such a priority in the district that even when major preparations for other important events such as International Yoga Day were undertaken; officers that were directly linked to SBM were not involved so they could continue with their work. Further, SBM workers visited sites regularly to check on delays or dealt with scarcity of materials, organizing masons for construction of toilets even on holidays.



Today, the villages and roads in rural Panchkula are cleaner with a drastic reduction in flies that are normally attracted to filth.

WASTE MANAGEMENT IN RURAL AREAS: COMPLETING SWACHH CYCLE

Indira Khurana

One major drawback in the current scenario is absence of the provision of end-to-end solutions. In rural India and urban slums, toilets are constructed with little after thought about their care, upkeep and maintenance. Overflowing toilets become a source of stink and a breeding ground for mosquitoes and flies, and water leaching, which is a source of serious contamination. In such cases, one of the main purposes for which toilets are constructed and used is defeated.

On Sept 9, 2016, the Ministry of Drinking Water and Sanitation, Government of India issued a letter to all Principal Secretaries/ Secretaries in charge of sanitation in all States and UTs on the development of a Cleanliness Index and Solid and Liquid Waste Management (SLWM) Index, to rank villages, Gram Panchayats, blocks and districts and States; to raise awareness and, instil a sense of competitiveness. It is hoped that this will add momentum to the overall goals of Swachh Bharat Mission (Gramin), which is all about open defecation free and clean environments, where the waste generated is either reused or safely disposed of. The objective of SBM (G) is to bring about improvement in the cleanliness, hygiene and the general quality of life in rural areas and SLWM is naturally one of the key components of the programme.

Waste is a severe threat to public health and cleanliness. In rural areas, despite the waste generated being pre-dominantly organic, incorrect disposal can lead to serious problems including the growth of water borne diseases such as Diarrhoea, Malaria, Dengue, Cholera and Typhoid. Estimates indicate that people in rural India are generating 0.3 to 0.4 million metric tons of organic/ recyclable solid waste per day and that 88 per cent of the total disease burden is due to a lack of clean water, sanitation and improper solid waste management (Gol, 2008). One of the emerging

serious challenges in both rural and urban areas is that of faecal sludge management.

Management of SLWM in rural areas is much easier than urban areas, since chances of industrial contamination are lower. The wastes can thus usually be recycled safely. Moreover, space is not as big a constraint in rural areas as it is in urban areas.

SLWM is thus, an important determinant of improved sanitation in any community. The goals of sanitation will not be met unless this waste is safely disposed off. In rural areas, this aspect is often ignored due to lack of proper infrastructure, non-availability of sustainable and affordable technology.

Waste Management Options

Interestingly, the diversity of India extends to its waste generation also. The diversity of climate, topography, resource availability, livelihood and culture play a major role. Traditionally, rural communities have been known to use and reuse



most resources, leading to zero waste generation. However with the passage of time, the situation is changing given the growing consumerism, changing food habits and easy availability of plastic bags and non-degradable packaging.

Most waste treatment options are based on some or all of the 4R principles: Reduction, Reuse, Recycle and Recover.

What the SBM Guidelines Propose

Under SLWM, the following activities may be undertaken:

- i) *For Solid Waste Management:* States are to decide the technologies suitable to their areas. Collection, segregation and safe disposal of household garbage: Decentralised systems like household composting and biogas plants are permitted. Activities related to maximum reuse of organic solid wastes as manure should be adopted. Such technologies may include vermi-composting, NADEP composting, or any other composting method, individual and community biogas plants. Funds allocated for SLWM may be used to implement safe disposal solutions for menstrual waste (used sanitary cloths and pads) and setting up incinerators in schools, Women's community sanitary complexes, Primary Health Centres, or in any other suitable place in the village where collection mechanisms can be taken up. Technologies may include appropriate options that are socially acceptable and environmentally safe.
- ii) *For Liquid Waste Management:* States are to identify suitable technologies. Methods adopted for management of liquid wastes may focus on maximum reuse of such waste for agriculture purposes with least operation and maintenance costs. For collection of wastewater, low cost drainage/small bore system, soakage pit may be adopted.
- iii) For treatment of wastewater, technologies that can be considered include (a) Waste Stabilization Pond (WSP) Technology (b) Duckweed based wastewater treatment and (c) Phytoreid Technology, developed by NEERI.
- iv) Anaerobic Decentralised Wastewater Treatment.

All GPs have to achieve SLWM coverage and these projects should be part of the annual District Plan, which is approved by the State level Scheme Sanctioning Committee.

Solid Waste Management

In rural areas, solid waste from most of the households is largely organic with some amount of inorganic waste. Composting, an age old practise here really, is thus the most suitable, sustainable and environmentally friendly method of recycling and reuse of solid waste.

Composting is an organised method of decomposing organic material which can then be used as manure. Various options for composting are available and include the NADEP method, Bangalore method, Indore method, Vermi composting, Rotary drum composting and Biogas technology.

Liquid Waste Management

Liquid waste poses its own set of challenges. Stagnant water is a perfect breeding ground for disease causing vectors. Absence of storm water drains exacerbates the problem. Wastewater also is a threat to groundwater, more so in high groundwater table areas. Classification of the different types of wastewater is given in Table 1.

Table 1: Classification of different types of wastewater

Grey Water	Wastewater generated from bathing, kitchen and other household activities except toilet
Blackwater	Wastewater generated from toilets
Combined waste water	A mix of grey water and effluent of septic tank treating black water or effluent of septic tank treating black and grey water
Sewage	Combined grey and black water generated from households in the absence or presence of septic tank

Several options are available for wastewater management in rural areas (See Table 2) and selection criteria should be based on:

- Health risks of choosing a technology
- Environment implications in terms of pollution caused and energy used:
- Economic implications in term of capital

- and Operation and Maintenance (O and M) expenditure
- Socio-cultural aspects for acceptability and adoption
- Technical aspects for robustness with respect to the weather, environmental conditions and operational practices
- Capacity to sustainably operate and maintain the treatment processes and technologies.

Faecal Sludge Management (FSM)

One major drawback in the current scenario is absence of the provision of end-to-end solutions. In rural India and urban slums, toilets are constructed with little after thought about their care, upkeep and maintenance. Overflowing toilets become a source of stink and a breeding ground for mosquitoes and flies, and water leaching, which is a source of serious contamination. In such cases, one of the main purposes for which toilets are constructed and used is defeated.

Peri urban areas, mid-size cities and slums and rural areas can share the same set of solutions, since challenges are common. In the former, the challenges are of space shortage for defecating and even if toilets are constructed, where does the waste go? In rural areas, toilets often do not exist, and if they do, these are not used because (a) People remain unconvinced about the benefits; (b) The construction is faulty; (c)

Water is unavailable for cleaning purposes; (d) O and M does not take place; and, (d) Options for pit cleaning are limited.

Even if septic tanks are provided, these are seldom cleaned and become a solid waste disposal pit, remaining as a part of the house for years – again a source and breeding ground of disease. This is a pity since the use of septic tanks has great potential (*see Box Septic tanks: A neglected option*). In the US of example, according to an EPA 2009 report (Septic systems fact sheet), in 2007, an estimated 20 per cent (26.1 million) of total U.S. housing units were served by septic systems. Many municipalities have framed byelaws and rules governing the septic tank provisions, design and Operation and Maintenance (O and M). In India, while BIS codes are framed for large septic tanks, there is a need to frame guidelines and byelaws for individual household (HH) septic tanks in urban and rural areas.

Septic Tanks: A Neglected Option

Septic tanks are the first step in the process of sewage conditioning, in a subsurface disposal system. The importance and function of the septic tanks is commonly disregarded, yet science and experience proves its importance.

Septic tanks collect and treat wastewater; separate sewage into three different zones: sludge, scum (floaters) and clear zone in the middle. It allows

Table 2: Options for Waste Water Management in Rural Areas

No.	Type	Collection	Treatment/ Disposal	Reuse Option
1	On-site	Not required	Soakage pit for grey water. Twin pit latrine for black water	Nil
2	On-site	Not required	Septic tank + soak pit	Nil
3	On-site – advanced	Not required	Advanced on-site systems	On-site reuse for agriculture
4	Mixed	Covered surface drains for grey water only	Decentralised STP for grey water, septic tank +soakage pit for black water	Reuse of treated grey water for agriculture
5	Decentralised non-sewered	Covered surface drains	Septic tank for black water, treatment of grey water +effluent from septic tank in decentralised STP	Reuse of treated combined waste water in agriculture

for anaerobic digestion of organic matter. While anaerobic digestion does not remove disease-causing organisms, it reduces the biological oxygen demand, total suspended solids, fats, oils and greases. The removal of disease causing microorganisms occurs in the subsequent steps when the supernatant is disposed in an aerobic drain field system.

As a final stage of disposal, the treated effluent from the septic tank is discharged to the leach field where it percolates through suitable 'septic zones' and finally into the subsoil for further purification.

The functioning of septic tank is correlated to the design, usage, its correct size for occupancy and long term storage of the sludge. Settling of solids and flotation of scum requires a calm glow to promote growth of bacteria. A proposer design and functionality is critical in improving the effluent quality leaving the tank.

Changing the Sanitation Landscape

It is important that the solutions for faecal sludge disposal be (a) Cost effective and safe; (b) Generate local employment and entrepreneurs; and, (c) Provide dignified and safe employment to persons involved in excreta management. If this is not done, the faecal matter may be washed away into waterbodies or left in the open, leaving the community vulnerable to disease.

Based on self-experience, field studies, interaction with various groups involved in sanitation and research on ferro-cement toilets and septic tanks a business model is proposed for consideration for entrepreneurship development.

The advantages of using ferro-cement toilets include (a) Low cost; (b) Durability, (c) Clean technology, (d) Quality control – one point of quality control, and (e) Standardisation of sanitation system.

The model looks at providing total solutions: Providing toilets and mechanised FSM services. The economics are calculated for providing services to 1,200 households (HH).

The business has two components: Provision of toilets and FSM services. The model can be adopted in rural areas and for urban mid-size cities and slums and wherever a sewerage system is not available. In



rural areas, 1,200 HH will be provided with a toilet and septic tank within a 25 km radius. This septic tank can be cleaned once in a year.

The model therefore, looks at the development of two entrepreneurs – one for constructing the ferro-cement toilets and the other for the FSM business. For the FSM business, those already involved in excreta management should be the first choice for supporting them develop as entrepreneurs, since they have knowledge and experience in excreta disposal and this business. Given that no manual handling of excreta will take place, their dignity will be upheld.

During the first stage, Entrepreneur I sets up the ferro-cement toilet and septic tank unit and constructs 1,200 toilets and septic tanks in the first year. The investment required to set this up is around 3.5 lakh which can be availed of as an SME loan. Requisite training can be availed of under Skill India.

Total cost of construction of 1,200 toilets is ₹2.4 crore which can be accessed from available Government funds, donors/ CSR and the community. For this, the Entrepreneur needs to generate demand through raising awareness and strategic marketing and leveraging Government funding. This Entrepreneur will also build in profit for himself/herself in this cost. This implies that with an investment of Rs 3.5 lakh, the Entrepreneur I will have generated business worth around Rs 2.4 crore if he succeeds in building 1,200 toilets. The Government also provides for up to ₹20 lakh for solid and liquid waste management, which can be availed of.

Entrepreneur II buys a 5 ton truck and uses it to transport toilets and septic tanks and also fixes these. Total investment required to start and maintain an FSM business is ₹10 lakh, which can be sourced as loans from banks.

After a year, Entrepreneur II transforms his truck chassis to a tanker mounted sludge tanker (3,500 litre capacity) and water tank (1,000 litre capacity) starts FSM services after a year and transforms his truck chassis to a tanker mounted sludge tanker (3,500 litre) with water tank (1,000 litre), sludge pump, water pump, air compressor. Financial modelling indicates that it is possible for entrepreneur II to have a payback period of 30 months with a salary of ₹16,000 per month and subsequent earnings of ₹46,000 per month.

A multi-party agreement between the State govt, NGO, entrepreneur and the user can be executed to ensure commitment to sanitation and hygiene and the economic model.

The model is based on certain assumptions:

- Business includes FSM and provision of ferro-cement toilets (base only, not superstructure) and septic tanks.
- 1,200 households will be provided with a toilet and septic tank. This septic tank would get cleaned once in a year.
- Septic tanks of around 1,000 litre capacity.
- Cost of toilet + septic tank = ₹20,000. This includes cost of construction, cartage and profit.
- Four septic tanks are cleaned daily.
- Tanks are cleaned once a year.
- Rate of cleaning = ₹1,200.
- Radius of operation in rural areas= 25 km.
- Number of users per toilet = 8. Initially, one toilet can be shared between two families or two HH, which means that 2,400 families will be served. This also means that the maintenance cost drops 50 per cent, to ₹50 per HH.

Final Disposal of Septic Water and Sludge

The final wastewater generated can be diverted into a reed bed aerobic cleaning system.

At present, wastewater from septic tanks from the HHs is not linked to sewerage system and as a result, is allowed to spill over – not a healthy practice. This needs to be disposed in a scientific manner. The final wastewater generated can to be diverted into a reed bed aerobic cleaning system.

Till time, septic tanks are connected to a sewerage system these tanks need to be cleaned annually, if not sooner, instead of once in 3 years or before these start overflowing. If there is a piped water supply and flushing system, septic tanks will start overflowing with wastewater sooner rather than later. If there is no proper wastewater disposal system, it requires pumping and cleaning more frequently, additional business for the FSM service provider!

The sludge can be disposed of by composting with other appropriate waste material and used for agricultural and horticultural purposes.

Testing of Model

The above Model needs to be replicated in at least four different regions to understand the dynamics and challenges involved during implementation, so that corrections can be made for widespread replication. But it is a model that offers a total solution and options for livelihood development.

Source of Model: Ashok Khurana, Director General (ret'd), Central Public Works Department

Conclusion

In conclusion, the first step to managing waste is to reduce its generation and then find appropriate, affordable mechanisms for its reuse and recycling. The increasing coverage with toilets is beginning to pose serious challenges for its safe disposal. The need of the hour is to implement pilots, learn from these and then scale up. India can no longer afford pollution of water sources and unnecessary deaths due to this pollution. Already villagers are adopting mechanisms to dispose of the waste they generate, but the efforts need scale up and geometric progression.

(The author is Lead – WASH (Water, Sanitation & Hygiene), in IPE Global Limited, an international consulting organisation. She can be reached at dr.indira.khurana@gmail.com)

ENVIRONMENT AND SANITATION

Utsav Kumar Singh and Seema

The importance of proper sanitation to disaster preparedness can hardly be overstated, given the susceptibility of affected populations to waterborne diseases. Clearly, universal coverage must remain the core objective, at least at the level of basic offering of sanitation services and market-based alternatives as a supplement.

About 240 crores people in rural and urban areas today do not have access to adequate sanitation services. Within 20 years, it is expected that an additional 200 crores will live in towns and cities, mainly in developing countries, demanding sanitation. Still over 90 per cent of sewage in developing countries is discharged untreated, polluting rivers, lakes and coastal areas. Conventional sanitation concepts, based on flush toilets, a water wasting technology, are neither an ecological nor economical solution, in both industrialised and developing countries. The water-based sewage systems were designed and built on the premise that human excreta is a waste, suitable only for disposal and that the environment is capable of assimilating this waste. The lack of access to safe drinking water and sanitation is directly related to poverty, and, in many cases, to the inability of governments to finance satisfactory water and sanitation systems. Direct and indirect human costs of these failings are enormous, including widespread health problems, excessive use of labour (particularly for women, who are forced to travel long distances to obtain water), and severe limitations for economic development (Gleick, 1995). Improved water and sanitation facilities, on the other hand, bring valuable benefits for both social and economic development and poverty alleviation (WHO/UNICEF 2000).

On July 28, 2010, through Resolution 64/292, the United Nations General Assembly explicitly recognised the human right to water and sanitation and acknowledged that clean drinking water and sanitation are essential to the realisation of all human rights. The UNDP carried this with Sustainable Development Goals (SDGs). These goals are closely interlinked with environmental and social determinants of health. The environment directly influences health in many ways, including through harmful exposure, inadequate infrastructure, degraded ecosystems and poor working conditions; such as climate change and

household air pollution often disproportionately affect the poor and poorer countries.

The importance of proper sanitation to disaster preparedness can hardly be overstated, given the susceptibility of affected populations to waterborne diseases. Clearly, universal coverage must remain the core objective, at least at the level of basic offering of sanitation services and market-based alternatives as a supplement. This may prove a sustainable combination to rid the globe of the ruinous consequences of insanitary conditions. Out of the 133 diseases or disease groups listed in the Global Health Observatory (WHO, 2015), 101 had significant links with the environment. Limited access to environmental services and infrastructure, such as safe water and sanitation, impact more on women and girls, and may limit their access to education. Environmental and social impact lead to poorer health, and poor health further precipitates people into poverty through increased health-care expenditures, loss of shelter, lost income, or increased expenditure to compensate for inadequate services.

A holistic definition of sanitation includes safe drinking water, liquid and solid waste management, environmental cleanliness and personal hygiene. Failing to ensure any one of these can have direct



implication on the health of human beings. A big chunk of Indian population lives in rural areas, as per Census 2011 (72.18 per cent Indian lives in rural area as compared to 27.82 per cent in urban area). Rural India lags behind the national average on all socioeconomic parameters. This article analyses the challenges and Government efforts with various schemes made for environment and sanitation in rural India.

Water

Safe drinking-water is essential to sustain life – it is the basis for human health, survival, growth and development. Therefore, access to safe drinking-water is a basic human right. Recognition of this right contributes to the survival of human beings and disease prevention, because water is used not only for drinking, but also for many other purposes such as hygiene, food production, agriculture, cooking and industry. Unsafe water, blend ed with inadequate sanitation and hygiene, still contributes to some 8,42,000 deaths every year, representing 58 per cent of deaths caused by diarrhoea. About 3,61,000 of these deaths occur in children under five years (WHO, 2014). Safe water supply is essential not only for health, but also for people's livelihoods, economic growth and development.

Access to an improved water source refers to proportion of population using an improved drinking water source. The improved drinking water source includes piped water on premises (piped household water connection located inside the user's dwelling, plot or yard) and other improved drinking water sources (public taps or standpipes, tube well or boreholes, protected dug wells, protected springs and rain water collection (World Bank).

The UN's Sustainable Development Goals (SDGs) go beyond access to improved water supply (UN, 2016). The SDGs call for achieving universal and equitable access to safe and affordable drinking-water for all. They also call for water quality to be improved by reducing pollution, eliminating dumping and minimising release of hazardous chemicals and materials, halving the proportion of untreated wastewater, and at least doubling water recycling and safe

reuse globally. The availability of drinking water within the premises for rural India is 35 per cent while urban India touches 71.2 per cent. Status of drinking water source near premises is reported as 42.9 per cent in rural India. In terms of away from premises, the national rural figure is 22.1 percent while the urban figure is 8 per cent (Census 2011).

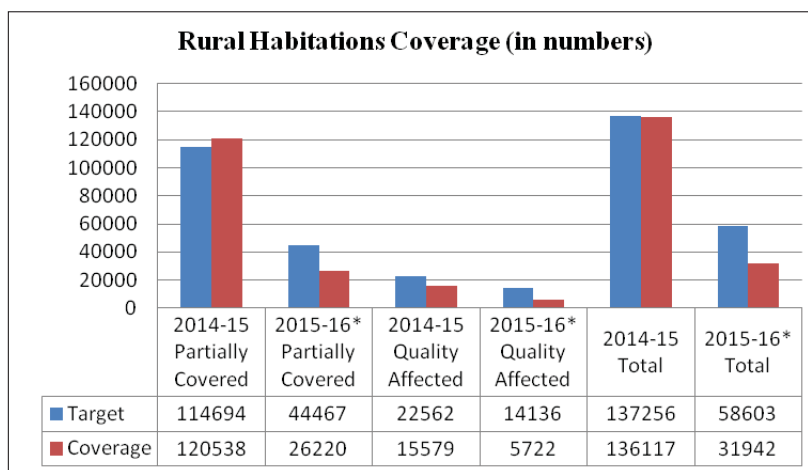
This Census data is a matter of concern for Government regarding rural India. Ministry of Drinking Water & Sanitation is nodal Ministry for overall policy, planning, funding and coordination of the flagship programmes of the Government for rural drinking water viz. the National Rural Drinking Water Programme and for Sanitation, the SBM(G) in the country. There are three programme divisions namely Water, Water Quality and Sanitation to carry out the functions of the Ministry.

The National Rural Drinking Water Programme (NRDWP)

In India, 'Rural drinking water supply' is State subject and also included in Eleventh Schedule of the Constitution among the subjects that may be entrusted to Panchayats by the States. Thus the participation of the Panchayati Raj Institutions in the rural drinking water supply sector is an important area of focus.

The National Rural Drinking Water Programme (NRDWP) is a centrally sponsored scheme aimed at providing adequate and safe drinking water to the rural population of the country. The NRDWP is a component of Bharat Nirman which focuses on the

Figure 1: Rural Habitations Coverage under NRDWP



*NRDWP achievement as on 31.01.2016

Source: Annual Report 2015-16, Ministry of Drinking Water and Sanitation.

creation of rural infrastructure. This has resulted in the provision of significant additional resources to the sector and for creating an environment for the development of infrastructure and capacities for the successful operation of drinking water supply schemes in rural areas.

Progress of NRDWP

Figure 1 depicts progress made under the NRDWP, for the year 2014-15, against the target coverage of 1,14,694 partially covered and 22,562 quality affected habitations, the achievement was coverage of 1,20,538 partially covered and 15,579 quality affected habitations. For the year 2015-16 (till January 2016), against the target coverage of 44,467 partially covered and 14,136 quality affected habitations, the achievement was coverage of 26,220 partially covered and 5,722 quality affected habitations.

While India has achieved its Millennium Development Goals (MDG) for drinking water and supply efforts, it shall continue to try achieving the universal coverage and access to adequate and potable drinking water with piped water supply to reduce the negative impact of non-potable water on health. In the 12th Five Year Plan, the focus of Ministry is on piped water supply in rural areas to reduce the burden of fetching water on women and children. Service levels in terms of water supply for the rural population should increase with this and it is targeted to increase the service level of supply of safe drinking water in rural areas to 55 lpcd (liter per capita per day) from present 40 lpcd. The 12th Five Year Plan has recommended new scheme for installation of 20,000 solar energy based dual pumps in remote rural areas of the country where electricity is not accessible. NITI Aayog has recommended Rs 1,000 crore as one-time additional Central assistance to all the States having arsenic and fluoride affected rural habitations.

Sanitation

As per estimate made by UNICEF/WHO, each US \$1 spent on sanitation brings a \$5.50 return by keeping people healthy and productive. The global economic gains from investing in sanitation and water are estimated at \$260 billion per year. On other hand, poor sanitation costs countries between 0.5 and 7.2 per cent of

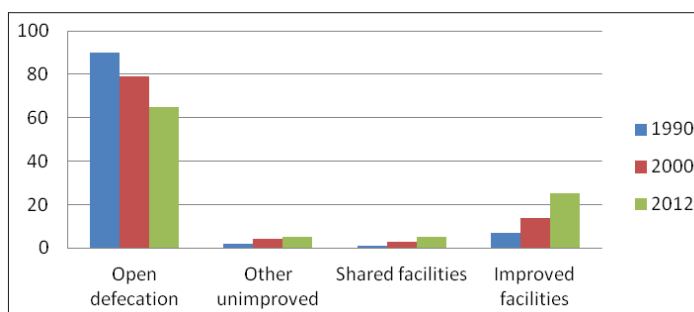
their GDP. In India, it costs \$53.8 billion (6.4 per cent of GDP).

As depicted in Figure 2, India has made slow progress in rural sanitation. The country started from a very low base at the beginning of the period of the Millennium Development Goals (MDGs). It is estimated that at least 90 per cent of the rural population was practising open defecation in 1990. Both the Indian Census and the World Health Organisation (WHO)-UNICEF Joint Monitoring Programme data indicates that in the last 10 to 12 years, the proportion of people with access to sanitation has almost doubled.

However, despite this progress, open defecation is still practiced by a large majority of India's rural inhabitants. National Sample Survey Report-2015 reveals that more than half of the rural population of the country still opts for open defecation. In the survey, 45.3 per cent rural households reported having a sanitary toilet, while in urban areas, the figure stands at 88.8 per cent. The lowest percentage of households having sanitary toilets was reported in Jharkhand (18.8 per cent), Chhattisgarh (21.2 per cent) and Odisha (26.3 per cent). The States with the highest numbers were Sikkim (98.2 per cent), Kerala (97.6 per cent) and Mizoram (96.2 per cent). For the poorest rural dwellers, in particular, little has changed over the last two decades, and open defecation is almost universal among this group. Still, approximately 60 crores Indians living in rural areas defecate in open.

The concept of sanitation was expanded to include personal hygiene, home sanitation, safe water, garbage disposal, excreta disposal and waste water disposal. With this broader concept of sanitation, Central Rural Programme was started in 1986 renamed as "Total Sanitation Programme" (TSC). With

Figure 2: Rural Sanitation Coverage in India



Source: WHO UNICEF Joint Monitoring Programme, 2014.

effect from 1999, to give fillip to TSC, the Government of India also launched Nirmal Gram Puraskar (NGP), by the success of NGP, TSC is renamed as “Nirmal Bharat Abhiyan”. On October 2, 2014, to accelerate the efforts to achieve universal sanitation coverage and to put focus on sanitation, the Prime Minister of India launched the Swachh Bharat Mission. The Mission Coordinator is Secretary, Ministry of Drinking Water and Sanitation (MDWS), with two Sub-Missions, the Swachh Bharat Mission (Gramin) and the Swachh Bharat Mission (Urban), which aims to achieve Swachh Bharat by 2019 as a fitting tribute to the 150th birth anniversary of Mahatma Gandhi. In rural areas, this shall mean improving the levels of cleanliness through Solid and Liquid Waste Management activities and making Gram Panchayats Open Defecation Free (ODF), clean and sanitised.

Swachh Bharat Mission (Gramin)

The Swachh Bharat Mission (Gramin) is the set of goals related to key achievements in rural sanitation by October 2, 2019. The purpose of this mission is to make rural India healthier by promoting cleanliness, hygiene and eliminating open defecation and to meet the vision of Swachh Bharat Mission. This can be achieved by motivating communities and Panchayati Raj Institutions to adopt sustainable sanitation practices and facilities through creating awareness and health education. Cost effective and appropriate technologies for ecologically safe and sustainable sanitation are encouraged to develop wherever required. Community managed sanitation systems focusing on scientific Solid and Liquid Waste Management systems for overall cleanliness in the rural areas are also being developed.

Swachhata Doots

No war can be won without soldiers. *Swachhata Doots* are the foot soldiers in the war against open inadequate sanitation. The army of ‘foot soldiers’ or ‘*Swachhata Doots*’ on sanitation could be developed and activated. These would be through using existing arrangements like Panchayati Raj Institutions, Co-operatives, ASHAs, Anganwadi workers, Women's Groups, Community-based organisations, Self Help Groups, water linemen/pump operators. etc. who are already working in GPs, or through *Swachhata Doots* engaged specifically for the purpose. These

Swachhata Doots/Sena, need to carry out multiple formalities and communication that needs to be completed in course of triggering demand and subsequent toilet construction. Identification of a beneficiary, assisting in Information, Education and Communication maintaining records and tracking progress are essential activities that are needed to be carried out at the Gram Panchayat level.

Conclusion

The idea of healthy sanitation infrastructure substantiates and supports the environment on which it is dependent and vice versa. The Government has prioritised to enhance both the capabilities to ensure better health and livelihood practices for the people and healthy sanitation practices promote both. The major focus has been to cut down the number of people practicing open defecation and ensure that maximum people adopt healthy sanitation facilities. Throughout the globe, there have been sincere attempts to create awareness and infrastructural base for systematic sanitation practices and India is not far behind. There has been several programmes that have been initiated as discussed above at federal levels and the main purpose is to reach out to the maximum possible numbers so that there is a healthy sanitation environment. The future of sanitation policies in India and other parts of the world will depend largely on how we are able to develop other interrelated aspects. A country with commendable sanitation facilities will constitute not only healthy environment but will also contribute to overall growth.

In both rural and urban sanitation settings, there is a need to chalk out more cost effective methods and increase efficiency in the utilisation of resources. A community-based approach at rural level especially can generate better health and environment yields.

The partnerships at all levels, especially the public-private-partnership model, assistance of NGO's and local bodies multiplied with strong political commitment can let India reach the envisaged goal of both healthy sanitation infrastructure and sustainable environment.

(Authors: Utsav Kumar Singh is ICSSR Doctoral Fellow at Department of African Studies in University of Delhi. Ms. Seema is Ph.D Scholar at Department of African Studies in University at Delhi. Authors can be reached at singh.utsav@gmail.com)

MAHILA MANDALS MOVE MANDI TOWARDS ODF PLUS

Sandeep Kadam

The basic concept of the campaign is to devote two hours per week on cleanliness activities. As per the campaign, all Mahila Mandals are required to undertake one activity per week related to sanitation. The work involves cleaning of public places — roads, schools, toilets in schools and anganwadis, water tanks and traditional water bodies, drains — and creating soak pits for disposal of liquid waste, garbage pits, vermicompost pits, etc.

Having been declared Open Defecation Free (ODF) in September 2015, Himachal Pradesh's Mandi district is now moving towards ODF plus. This involves effective management of solid and liquid waste; and adoption of zero waste principles that reduce waste and increase access to recycling and composting.

In this regard, the district administration has enlisted the support of women's groups (or *Mahila Mandals*) and Self-Help Groups.

Around 4,490 women's groups, numbering about 50,000 to 60,000 women, have been involved in a campaign called Mandi Vikas Abhiyan. Its thrust areas are Swachhta Abhiyaan (sanitation), Beti Bachao Beti Padhao (celebrating the girl child) and Disaster Management (considering how prone to floods, landslides, heavy snowfall and road accidents the district is). The activity-based model goes beyond lectures and identification of do's and don'ts.

The basic concept of the campaign is to devote two hours per week on cleanliness activities. As per the campaign, all Mahila Mandals are required to undertake one activity per week related to sanitation. The work involves cleaning of public places — roads, schools, toilets in schools and anganwadis, water tanks and traditional water bodies, drains — and creating soak pits for disposal of liquid waste, garbage pits, vermicompost pits, etc.

Women now undertake such activities on a regular basis, an indication of how the

district has moved on from construction of toilets to ensuring hygiene.

Mandi has also developed a concept called *Swachh Gram*. For a gram panchayat to be called a *Swachh Gram*, it has to comply with eight well laid-out criteria which include segregation of waste; disposal of biodegradable waste; disposal of non-biodegradable waste with the help of kabaadis; encouraging people to have dustbins in cars; and cleanliness of all toilets, among others.

Recently, Khaddar *panchayat* was declared Swachha Gram as it had satisfied all the stipulated criteria. In recognition, an incentive amounting to ₹ 5 lakh was provided to the *gram panchayat* from the development fund in order to motivate other *panchayats* to do likewise.

Significantly, ever since the commencement of the Mandi Vikas Abhiyaan, nearly two lakh cleaning activities have been undertaken, with 30,000 soak pits and 15,000 garbage pits getting



constructed. For all these activities, the district has not paid a single penny towards their costs. It was a phenomenal show of volunteerism, as people worked hard to dig pits and carry stones whenever necessary. Notably, many of them even painted and decorated their work, serving as a great source of inspiration.

The objective of all our initiatives was not to have clean roads and schools free of cost; it was to facilitate behaviour change.

While interacting with families there, it was found that neither the 50-60,000 women belonging to the *Mahila Mandals*, nor their families litter any more. They knew that if they littered, it was a member of their own family who would have to clean up. Consequently, they think twice or thrice before throwing garbage and that is the evidence of actual behaviour change – one great achievement of the campaign.

Nevertheless, the real outcome of the campaign is empowerment. The campaign has given women an opportunity for social congregation and social interaction outside their households. Initially, they faced huge resistance from their families and the society. But there are several inspiring stories of how they overcame the resistance.

Considering that in our society, cleaning of public places is not an honourable job, the women were often at the receiving end of some sarcastic comments and casteist remarks. Despite that, the women persisted and have now become heroes and champions. Recently, as many as five of the Swachhta champions were honoured by a Union Minister.

Further, in some places, the campaign had turned into a fight against some social malaises. Take the case of the Bungrail Chowk Panchayat where women started a fight against the ostracisation they



face during their menstrual cycle when they literally became untouchables and have to stay in cowsheds during the 3-4 day period. Women stated boldly that the practice was against personal hygiene.

In yet another instance, the Swachhta campaign became a war against the liquor menace. During their routine cleaning of public places, women found that the biggest component of garbage collected was liquor bottles. This led to women starting the *Daru-Bandi Abhiyan* (liquor ban) in the Sawamahu Gram Panchayat.

During the entire exercise, hundreds of women were part of a knowledge network to regularly share updates and best practices. They learnt how to use Internet and Whatsapp on their mobiles to communicate with the administration. This particular campaign was transformed from Abhiyan to Andolan. Swachhta has become a social movement because of the participation of women.

Another indication of women's empowerment was seen during the recent elections of Panchayati Raj Institutions when 146 women were elected at various levels from ward Panch to head of Zilla Parishad.

(The author is District Collector, Mandi, Himachal Pradesh)

Kurukshetra

FORTHCOMING ISSUE

November 2016 : Self-sufficiency in Oil Seeds and Pulses

SWACCH BHARAT ABHIYAN TO END OPEN DEFECATION IN RURAL INDIA

Dr Amrit Patel

A recent UNICEF report says 54 per cent people defecate in the open in India as against just 7 per cent each in Brazil and Bangladesh. Only 6 per cent rural children below five years in India use toilets and about 50 per cent of all Indians regularly wash their hands with soap after contact with excreta. Union Government's socio-economic census (2011) reveals that only 30.7 per cent rural households (HHs) have latrine facilities as against 81.4 per cent urban HHs.

The UN-WHO Joint Monitoring Programme for Drinking Water Supply and Sanitation (2010) describes sustainable improved sanitation as an "improved" sanitation facility that *hygienically separates human excreta from human contact*. These include facilities that flush or pour-flush into a piped sewer system, septic tanks, or pit latrines, as well as ventilated improved pit latrines and pit latrines with slab or composting toilets.

Inadequate access to sanitation impacts adversely on human health and dignity. Provision of sanitation alone has been estimated to lower the number of children suffering from diarrhoea use either one and under-five mortality rate 20 per cent. According to the WHO, India spent 0.2 per cent of GDP on sanitation as against Pakistan and Nepal spending 0.4 per cent and 0.8 per cent respectively of their GDP. For rural India, sanitation focuses on safe management of human excreta and associated hygiene behaviour. Rural India has been confronted with unimproved sanitation facilities that include open defecation in particular. Open defecation infringes on human safety and dignity. Rural India has been faced with deficit of sanitary toilets and unsafe disposal of human excreta. Human excreta is the principal source of over 50 types of infections and cause almost 80 per cent of diseases.

A recent UNICEF report says 54 per cent people defecate in the open in India as against just 7 per cent each in Brazil and Bangladesh. Only 6 per cent rural children below five years in India use toilets and about 50 per cent of all Indians regularly wash their hands

with soap after contact with excreta. The Union Government's Socio-Economic Census (2011) reveals that only 30.7 per cent rural households (HHs) have latrine facilities as against 81.4 per cent urban HHs. Of this, 63.2 per cent rural HHs have toilets with no drainage as against only 18.2 per cent urban HHs and just 2.2 per cent rural HHs have piped sewer system. In the context of the Government's launching Swachh Bharat Abhiyan from October 2, 2014. This article briefly reviews Government programmes and suggests strategic action plan to accomplish the targeted mission.

Central Rural Sanitation Programme (1968):

The Union Government in 1986 initiated a Central Rural Sanitation Programme, aimed at providing privacy and dignity to women. The programme envisaged provision of subsidies to encourage people to construct sanitation facilities. However, a Government study in 1996-97 revealed the immediate need to create awareness among rural people about sanitation rather than just incentivising them by way of subsidies for construction.



Total Sanitation Campaign (1999): The programme was restructured in 1999 as Total Sanitation Campaign (TSC), aimed at promoting local sanitary marts and a range of technological options. The TSC had specific objectives, viz. (i) massive awareness campaigns to educate people on the need for safe sanitation (ii) promote cost-effective and appropriate technologies (iii) expand sanitation coverage in rural areas; (iv) generate demand from people to get facilities rather than expect the Government to do it (demand-led promotion); (v) take the scheme beyond 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 extended the target year from 2012 to 2022 to achieve total sanitation. The NBA is a community-led and people-centred approach, *inter alia*, emphasising Information, Education and Communication, and management of solid and liquid waste. It emphasised on (i) expanding sanitation coverage in rural areas to achieve the vision of *Nirmal Bharat* by 2022 with all Gram Panchayats in the country attaining Nirmal

status; (ii) motivating communities and Panchayati Raj Institutions for sustainable sanitation facilities through awareness creation and health education; (iii) covering the schools not covered under *Sarva Shiksha Abhiyan* and Anganwadi Centres in rural areas with proper sanitation facilities and undertake proactive promotion of hygiene education and sanitary habits among students; (iv) encouraging appropriate cost-efficient technologies for ecologically safe and sustainable sanitation; (v) developing community managed environmental sanitation systems focusing on solid and liquid waste management for overall cleanliness in the rural areas.

Swachh Bharat Abhiyan (2014): The Swachh Bharat Abhiyan (SBA) launched by the Prime Minister on October 2, 2014 has the core objective to eradicate open defecation (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 SBA over one crore toilets have been built. However, the National Sample Survey Organisation (NSSO) revealed that not even half of these were being used and households were still continuing open defecation in fields. Disturbingly,

State-wise Percentage of Rural Households Accessing Toilet Facilities
(as per 2011 Census and as per NSSO during 2010 and 2012)

State	2010	2011	2012	State	2010	2011	2012	State	2010	2011	2012
Andhra Pradesh	32.2	34.08	45.7	Chhattisgarh	14.5	14.85	23.3	Arunachal Pradesh	52.7	55.75	87.4
Karnataka	28.4	31.85	29.2	Bihar	17.8	18.61	27.2	Tripura	81.5	84.59	98.6
Kerala	93.2	94.41	97.2	Jharkhand	07.6	08.33	09.5	Sikkim		85.14	
Tamil Nadu	23.2	26.13	33.6	Odisha	14.1	15.32	18.7	Delhi	76.3	86.50	100
Puducherry		40.41		West Bengal	46.7	48.70	60.3	Chandigarh		94.31	
Punjab	70.4	71.89	77.8	Gujarat	33.0	34.24	41.3	Andaman & Nicobar		61.08	
Haryana	56.1	57.71	74.8	Maharashtra	38.0	44.20	46.0	Dadra Nagar Haveli		29.28	
J&K	38.6	41.71	55.7	Goa	70.9	72.60	90.3	Daman & Diu		65.80	
Himachal Pradesh	66.6	67.45	74.3	Assam	59.6	61.54	86.3	Lakshadweep		98.34	
Rajasthan	19.8	20.13	27.0	Meghalaya	53.9	56.94	95.5				
Uttar Pradesh	21.8	22.87	24.7	Manipur	86.0	87.73	98.8				
Uttarakhand	54.1	54.96	80.3	Mizoram	84.6	87.10	99.8				
MP	13.1	13.58	21.10	Nagaland	69.2	97.69	100	All India	31.7	32.67	40.6

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 ground realities of the NSSO survey should essentially help the Government not just in sprouting toilets all over the countryside, but in putting them to their intended use.

Performance

Census of 2011 showed that 32.67 per cent of rural households have latrine facilities. The NBA aims at 100 per cent access to sanitation for all households by 2022. The number of households being provided toilets annually increased from 6.21 lakh in 2002-03 to 45 lakh in 2012-13. Up to March 2014, over 49 lakh toilets were provided. Factors attributed to poor performance include: (i) cultural and traditional reasons and lack of education contribute to this unhygienic practice (ii) most SCs, STs, BPL families and lower income groups generally 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 programmes; (iii) low sanitation coverage due to inadequate efforts to create awareness among rural households that can convince them to have toilet facilities and use them; (iv) lack of affordable sanitation technology and trained implementing agencies and (v) non-availability of choice of toilet designs and area specific technologies, inadequate supporting delivery systems and absence of trained masons, skilled workers and technical manpower.

CAG's Observations

The Comptroller and Auditor General of India (CAG) report, covering the period from 2009 to 2014, reveals that “the (sanitation) programme

which is running in mission mode for three decades has not succeeded in evoking the missionary zeal in various Government agencies, participating NGOs and corporates”. The audit found no proper bottom-up planning like Gram Panchayat plans being linked to district plans. Less than half the numbers of toilets targeted were constructed, and a third of those which saw the light of day were defunct. They were either incomplete, or poorly constructed, or badly maintained. In the years studied, not only did the Centre release less than half the funds it was supposed to, but as many as 16 States either did not release or did less than what was their share of funding. As the Government runs innumerable programmes whose tasks overlap, there was a plan for convergence. For example, the material cost for toilets in homes built under Indira Awas Yojana could come from the sanitation programme and the labor costs from the rural employment programme - but this did not happen. Finally, the programme was to be monitored through an online management information system, but not only was the data uploaded not verified, it was not cross-checked with the departments’ annual performance reports. A course correction is due. There may be some change from the past in a critical area - persuading people to actually use toilets. Brand ambassadors have been appointed to spread the message. The NSSO survey has revealed that some are using the new toilets as store rooms. There is every reason for the Government to institute a more detailed study, which discovers the reasons behind the reality and to share those results with the public. Again, money will not be a problem. The World Bank has approved a \$1.5 billion loan to focus on behavioral change to further the project. India’s ranking on Human Development Index (HDI rose by a notch in 2014 to 130th from 131 in 2013 and six positions up from 2009 to 2014, according to the 2015 edition of the Global Human Development report.

Need for Strategic Actions:

The programme for providing toilet facilities to all by 2019 under SBA needs to be implemented on a missionary zeal fully supported, *inter alia*, by following critical elements in accomplishing its strategy:

- A village-wide campaign is necessary to make rural people fully aware of the adverse effects of open defecation which is mainly responsible for infections and a number of diseases. A massive campaign by employing all available means of communication has to be launched to make all the people in a village including school children, youths and women fully aware of the fact that they should never go barefoot for open defecation; should always cover the human excreta with the soil after defecation so as to prevent flies sitting on excreta and, in turn, contaminating eatables as this is the main cause of diarrhoea, dysentery, cholera, etc. Rural sanitation as a part of health should find appropriate place as the compulsory subject in primary schools. The ultimate objective of the campaign should be to create demand for safe hygienic toilets and save women in particular from the agony and humiliation of open defecation.
- Safe sanitation and clean water make the population healthier. There is no difference between health and sanitation as both are directly co-related with each other. Recognising the outbreak of water-borne diseases like cholera, diarrhoea and cancer risks from arsenic in drinking water in several places, it is necessary to consider health, water supply and sanitation as one sector rather than separate.
- Experiences suggest that no uniform design of a toilet should be forced on user-beneficiaries. User of a toilet should be free to select 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 (MIGs) 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 SBA being a programme of national significance to promote defecation-free clean environment Government can consider interest-free bank loans to all beneficiaries



to motivate them to have toilets in their houses.

- NGOs should have proven and demonstrated expertise and infrastructure. They need to be trained to implement the programme. A comprehensive training programme, inter alia, comprises requisite information, education, communication, implementation and follow-up, etc.
- Implementation of programme will require significant efforts for social mobilisation on a large scale which will include people belonging to various groups. Elected representatives at grass root level have a critical role.
- It is necessary that by March 2018, every school should have toilet facilities. Individual donors, financial institutions, insurance companies, corporate houses, business community, private companies, NRIs, etc., can consider providing toilet facilities in schools to supplement Government efforts. The school administration and teachers have a role to teach students to keep toilets neat and clean and to monitor and ensure that students also do so. An environment should be created to ensure that students can feel

enlightened to accept responsibilities is turns to maintain the toilets clean under the close supervision of teachers.

- A major initiative is necessary to strengthen Panchayats across the country through *Gram Panchayat Sashaktikaran Abhiyan* and capacity building of Panchayats.
- Other measures include; (i) higher investment for rural sanitation; (ii) aggressive social marketing; (iii) strong behaviour change communication; (iv) village Planning; (v) strong alternate delivery system; (vi) social mobilisation and mass awareness at Panchayat level; (vi) development of strong partnership with implementing agencies, NGO, bilateral agencies and Panchayat; (vii) creation of adequate capacity of partners for better sanitation drive; (viii) trained masons and social mobilisation should work in tandem; (ix) BPL and APL families who don't have toilet accessibility should be targeted simultaneously; (x) incentives and awards; (xi) time frame for Panchayat and Block.
- India, as an emerging economy and targeting double digit annual growth will have to resolve the problem of open defecation and providing toilet facilities with piped sewer system for disposal of human waste from

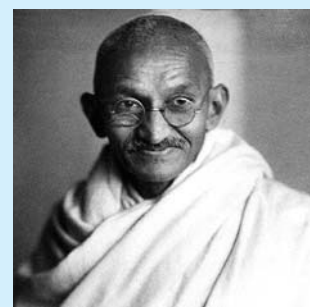
the long-term perspective. Indeed, neither the Government, nor local authorities or beneficiaries can bear the total capital costs and recurring operations and maintenance costs of sewerage system. For this purpose, vision 2022 may need to focus on sharing national and international experiences and best practices with developed countries; mobilising financial resources from international financial institutions, viz. World Bank, Asian Development Bank etc.; harnessing technical expertise, technologies and equipment from reputed international professional agencies; formulating perspective plan to be implemented in phases to cover all cities and villages progressively by 2022 in a mission mode with public-private-partnership; training users and youths in all respects of maintenance and follow up etc.

Conclusion

The thrust cannot be just to construct toilets, but to ensure their continued use keeping clean and maintaining properly which, of course, calls for behavioral change.

(Author is former Deputy General Manager of Bank of Baroda. He can be reached at dramritpatel@yahoo.com)

"During my wanderings, nothing has been so painful to me as to observe our insanitation throughout the length and breadth of the land. I do not believe in the use of force for carrying out reforms, but when I think of the time that must elapse before the ingrained habits of millions of people can be changed, I almost reconcile myself to compulsion in this most important matter of insanitation. Several diseases can be directly traced to insanitation. Hookworm, for instance, is such a direct result. Not a single human being who observes the elementary principles of sanitation need suffer from hookworm. The disease is not even due to poverty. The only reason is gross ignorance of the first principles of sanitation. Cleanliness is next to godliness. We can no more seek God's blessings with an unclean body than with an unclean mind. A clean body cannot reside in an unclean city."



Mahatma Gandhi
Young India,
Dated: November 19, 1925



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RURAL SANITATION: THE WAY FORWARD

Rishabh Krishna Saxena

Once the toilets are built, further scope for employment is generated regarding their cleaning and maintenance. It is true that this kind of sanitation work is looked down upon in our society but if it is carried out with the help of machines, young people will not hesitate in taking it up.

Statistics tell us that today rural India has over two crore toilets and in 70,000 villages no one defecates in the open. But a report of National Sample Survey Office (NSSO) says more than 50 per cent villagers still defecate in the open. This survey, which was conducted by NSSO in May-Jun 2015 to assess the impact of Government of India's *Swachh Bharat Mission* States that 52.1 per cent villagers still use open air toilets instead of confined loos.

Both statistics are correct but contradict each other. On the one hand our Government is getting more and more toilets constructed and its departments are declaring villages free from open air toilets, on the other villagers are not ready to use toilets. As per this survey about 45.3 per cent village households had toilets a year back. But other surveys and media reports suggest these are used sparingly. This is a serious problem and challenge for the Government which is trying to educate the villagers regarding it. But the economic or financial aspects of this issue are being held up while lack of sanitation has clear economic and financial implications.

In fact, this aspect needs to be stressed upon on a priority basis because lack of sanitation not only gives birth to diseases it causes severe financial loss as well. World Bank had issued a report in 2012 that estimated the financial cost to India for lack of sanitation at USD 53.8 billion. The amount equals 6.4 per cent of its GDP in 2006. On this parameter India is placed way below countries like Indonesia and Philippines who lose only 2.3 per cent and 1.5 per cent of GDP respectively on this count.

This loss begins early when children have to

suffer from diseases like diarrhea because of lack of sanitation and clean drinking water. UNICEF reports say that lakhs of children in India die every year because of diarrhea. The financial cost of this loss of workforce has to be borne ultimately by the country. Lack of sanitation is a major cause of malnutrition. Findings of the Rapid Survey of Children conducted by UNICEF in 2013-14 suggest that 29.5 per cent of children in India below five years are underweight with majority belonging to slum and rural areas.

It is not that villagers in India are averse to making toilets. *Monitor Deloitte* had conducted a survey in Bihar in 2014 wherein 84 per cent of the respondents wanted to build a toilet but lacked basic infrastructure and some did not have access to financial resources. Even as the Government is addressing the financial crunch issue other issues are surfacing. The NSSO survey does not reveal that the septic tanks or soak pits made under *Swachh Bharat Mission* are very small. Some media reports have quoted the villagers' complaining about the size of pits. If the whole family uses these toilets, these tanks would be choked and repeated cleaning would pose another set of problem.



The white paper issued by *Monitor Deloitte* on the State of cleanliness in India estimates sanitation market size at USD 2,500 crore out of which USD 600 to 900 crore is related to toilets alone. World Bank's 2012 report says this size is much bigger at USD 15,200 crore for infrastructure. Naturally the bulk of demand is from rural India which suffers from paucity of toilets nor is there any upkeep. According to World Bank there is a huge scope for small entrepreneurs in this sector.

Sanitation market can generate employment at the grassroots level. When we talk of building toilets in rural areas we naturally think of the companies which are constructing these but we tend to overlook the fact that these toilets have become a source of employment for construction workers to tile makers to plumbers et al. Several crore man-days of employment must have been generated in building these two crore toilets, bulk of which could have gone to the locals and boosted their incomes as well. If we are going to build toilets for those 52 per cent of our rural population which is still defecating in the open, the required enterprise or manpower can be sourced locally. The skills needed do not require any formal qualification so the task will create employment opportunities for local masons, plumbers, tile makers et al. in a big way.

This could be an opportunity for the Government as well to save the taxpayer's money. Toilets built by the Self Help Groups or local small entrepreneurs will be cheaper too. The example of Bangladesh is worth emulating which has almost freed itself from the curse of open air defecating in just 13 years. As per Government statistics 42 per cent of the population in Bangladesh used to defecate in the open in 2003 but today this percentage has fallen below one per cent. Though the task was not easy. In spite of being poorer than India, their Government worked in this direction with a strong will and up to 25 per cent of the budget allocated for rural development was spent on creating toilet facilities. This Government initiative created a huge market for sanitation. Very cheap prefabricated toilet units have been prepared costing between USD 12 to 60 and even this sum is subsidized thus making it affordable to everyone. Toilet building has become a cottage industry in Bangladesh.

India can easily follow this model. Our Government provides a subsidy of Rs. 12,000/- for construction of toilets while the beneficiary has to contribute the additional expenditure incurred. In rural areas where people are accustomed to defecating

in the open for centuries, this kind of investment appears to be illogical. So it is a question of mindset which the Government is rightfully trying to change through spreading awareness. But if local rural youth are trained to build toilets probably the expenditure required will be less than the amount of subsidy and this step will enhance the acceptability of toilets as well. It will give a fillip to Swachh Bharat Mission, save money for the Government and create employment.

Once the toilets are built, further scope for employment is generated regarding their cleaning and maintenance. It is true that this kind of sanitation work is looked down upon in our society but if it is carried out with the help of machines, young people will not hesitate in taking it up. The Government should use innovative methods to promote it as it would provide regular employment. Due to small size of septic tanks, use of toilets in rural areas is limited to only a few members of the family as they fear it would get filled to the capacity soon. Community toilets with bigger tanks as being made and maintained by Sulabh International could be an answer. Construction of community toilets will generate employment on two levels, once while these are being built and again at the maintenance stage which could be undertaken by Self Help Groups. Today over 70,000 people are gainfully employed at Sulabh toilets. If companies include maintenance of community toilets in their Social Corporate Responsibility agenda the problem would be over forever.

Dry toilets may be promoted in water scarcity areas such as Rajasthan. These toilets cost about the same amount as the normal ones. Cottage industry units may be trained to manufacture the components of these toilets which would be employment intensive. The excreta accumulated in these toilets can be used as compost. If done commercially with appropriate technology this activity will generate employment as well as biogas for fuel. Overall cleanliness in villages, absence of disease and high quality organic manure will be the by products.

But the Government or the corporate sector alone cannot shoulder the whole responsibility. People's participation is indispensable. In Meghalaya the practice of defecating in the open was quite common till 2009 which frequently invited outbreak of diseases. In 2010 the Meghalaya Government, in partnership with Water and Sanitation Programme, launched a demand based community programme which focused on spreading awareness about use of sanitary toilets among masses in community

gatherings. It made a deep impact. In a State which had negligible number of toilets till 2006 could boast of 71 per cent coverage by the end of 2013. Out of a total of 1,231 villages in Meghalaya, 768 were declared *Nirmal Gram* (clean village) in 2012-13 and the State occupied the top position in the country.

If we aim to replicate this success story on the national level the rural folk all over the country will have to participate. This programme can be funded through once controversial MGNREGA which is being revamped by the Modi Government. If sanitation, toilet construction and their maintenance are included in the agenda of MGNREGA, it can be a shot in the arm for Swachh Bharat Mission. There have been regular complaints regarding misuse of funds and quality of work accomplished but once it is linked to sanitation, toilet construction and their maintenance, the Government can achieve the goal of Swachh Bharat at least in rural India without incurring any additional expenditure.

The sanitation market is not limited to toilets. There is another important market opening up which is linked to the personal hygiene of women and provides ample employment opportunities. It belongs to sanitary pads with huge market potential. Owner of Jayshri Industries and Padma award winning entrepreneur Arunachalm Murugnantham of Tamil Nadu who has negligible formal education is a shining example. His machines for making sanitary pads are being operated by women in 1,300 villages across 23 States of India. Starting with a price tag of Rs. 75,000/- each machine provides employment to 10 women and pads made on these sell for hardly Rs. 2.50 each pack. A survey conducted by A C Nielson, commissioned by Government of India in 2011, tells that only 12 per cent of Indian women use sanitary pads. It says volumes about the size of the potential market which must be even bigger in rural areas where use of sanitary pads is almost negligible. In rural areas women either confine themselves to homes during period days or use unsafe alternatives. This is partly due to lack of awareness and partly due to high cost of branded pads. But Murugnantham's initiative shows that availability of cheaper pads will lead to greater use of these in rural areas. If Governments and NGOs promote and fund/subsidise such small manufacturing facilities, lots of women can be gainfully employed in this sector. Members of Women Self Help Groups engaged in production of homemade pickles, etc. can produce sanitary pads as well provided they have access to cheap machines and raw materials. If this

activity is promoted as a cottage industry and cheap microfinance is arranged, it will serve the dual purpose of ensuring rural cleanliness as well as providing supplementary employment.

True, the sanitation market is providing employment opportunities to the rural folk but non availability of capital is the major cause of concern for micro and small enterprises. Modi Government has taken several initiatives in this direction but accessing these is still a problem, particularly in rural areas. Consequently such enterprises depend on non institutional lenders which charge usurious rates of interest. If the situation remained like this, who would come forward to take advantage of the rural sanitation market. What could be the viable financial alternatives to create infrastructure for rural sanitation and sustain it?

Some innovative methods can be applied to ensure rural cleanliness and promote cottage industries involved with it. Majority of micro-finance companies operate in rural areas. It is estimated that they have lent about Rs. 40,000 crore in rural and semi urban areas. A sum of such magnitude could be utilized by the enterprises and groups working in sanitation sector. Some microfinance companies are lending exclusively to this sector. Guardian is lending in some districts of Tamil Nadu. Grameen Koot is working in Karnataka, Maharashtra and Tamil Nadu. But their corpus of Rs. 100 - 125 crore is grossly insufficient. The Government must intervene here. If only rural sanitation is included in the list of priority sector advances, banks and micro-finance companies will be forced to lend more funds for rural sanitation and the issue of fund shortage would be resolved. As most of rural households already have PMJDY accounts with the banks, lending to them should not be a problem.

Corporate sector can also be roped in. On our Prime Minister's appeal several companies are constructing toilets in millions of numbers but they should not stop there. They can continue funding to the enterprises engaged in rural sanitation. As per provisions of Companies Act 2013, every company has to spend a minimum of 2 per cent of its profits on CSR related works. This amount is estimated to be around Rs. 15,000 crore on all India basis. If a healthy portion of this amount is diverted in works related with rural sanitation we can witness a turnaround.

(Author is journalist & Joint News Editor in 'Business Standard'. He can be reached at rishabhkrishna@gmail.com)

SWACHHTA SOLDIERS

RACE TO WIN 'CLEAN VILLAGE AWARD'

A flurry of activity has engulfed Pughoboto and Tseminyu in Zunheboto District of Nagaland in anticipation of the second round of verification for the 'Clean Village Award'. Every village is doing its utmost, keen on winning the coveted award – cash prize of ₹5 lakhs.

"Zunheboto district comprises of 176 villages and the entire village community has to do their part to win the prize," says K Ghushito Sumi, Director, Water and Sanitation Support Office, Public Health Engineering Department and State Coordinator (SBM-G), Nagaland.



In the run up to the competition, each household should have its own locally made bamboo waste bins for collection of solid waste which should be disposed off at an assigned place outside the village area. Bio-degradable waste, on the other hand, should be dumped in a compost pit dug near the compound. Further, each house should have flowering plants and trees for shade, adding to the natural beauty.

Significantly, individual latrines as well as community toilets should be kept neat and tidy. The maintenance of village roads, footpaths and drainage will also be looked at during inspection. Further, if any village has stray animals wandering about, a fine will be imposed.

Over three rounds of verification, the villages are judged based on various criteria. The verification committee headed by Sub Divisional Officer (Civil) Er. Namang Chang as Convenor takes into account appearance, cleanliness, gardens and plantation, maintenance of public property, sanitation and draining; water supply and source; community initiative; care and management of livestock; and preservation of traditional practices and culture.

The very first clean village award went to Ghathashi village in 2015. This time around, the first round of verification was carried out in August and the second is currently on, while the final inspection for the cleanest village will be carried out around October before the award is presented at a grand cultural event called Thuwu-Ni Pughoboto (meaning Progress-Pughoboto) that is scheduled to be held during 13-14 November, coinciding with the Annual Sumi Festival called Ahuna. The event will showcase the cultural traditions of the region in terms of dance, music, games, costumes and food.

The award for the cleanest village is an encouragement to the entire community as it gives opportunity to healthy competition, Ghushito says. The winning village will set an example for neighbouring villages. Notably, women and children play a major role in cleanliness, both indoors and outdoors, also enhancing the beauty of the village through gardening and rearing flowers.

All 11 districts of the State are yet to be declared open defecation free. In Zunheboto, which is among the SBM Phase-I districts targeted to be declared ODF by 2016-7, there are still 13,991 households without toilets. Towards this, the district has decided to construct the balance toilets during this financial year.

Plans are also in the pipeline to put in place a system for solid and liquid waste management. "We plan to start the programme by year end," says Sumi.

Contd. from cover-II

currently technology savvy. Every citizen has a right to know about the status of the cleanliness mission in his city and the Government of India has provided a dedicated telephone number – 1969 for this purpose. We know that Mahatma Gandhi was born in 1869. In 1969, we celebrated his birth centenary and in 2019 we are going to celebrate the 150th birth anniversary of Mahatma Gandhi. By dialing this number 1-9-6-9 you will be able to know the progress of construction of toilets in your city and will also be able to submit an application for construction of a toilet. You must avail this facility.

It will not be sufficient to keep this Cleanliness Campaign confined to beliefs and habits. Imbibing cleanliness as a nature is not enough. In this age, just as cleanliness is related to health, connecting cleanliness to a revenue model is also equally necessary. Waste to wealth should also be one of its components. It is, therefore, imperative that we need to move towards 'Waste to Compost' along with the Cleanliness Mission. Solid waste should be processed and be converted into Compost and the government has initiated a policy intervention in this regard. Fertilizer companies have been asked to buy the Compost made out of waste. They should supply this to the farmers who are willing to adopt organic farming. This should also be supplied to those farmers who care about the health of their soil and are willing to improve its quality and also to those farmers whose soil quality has deteriorated because of over use of chemical fertilizers. And for this, Shriimaan Amitabh Bachchan Ji is making a significant contribution as a brand ambassador. I invite youngsters to set up new 'start ups' also in this 'Waste to Wealth' movement to develop the means and processes, to develop the suitable technology and accomplish mass production at an affordable cost.

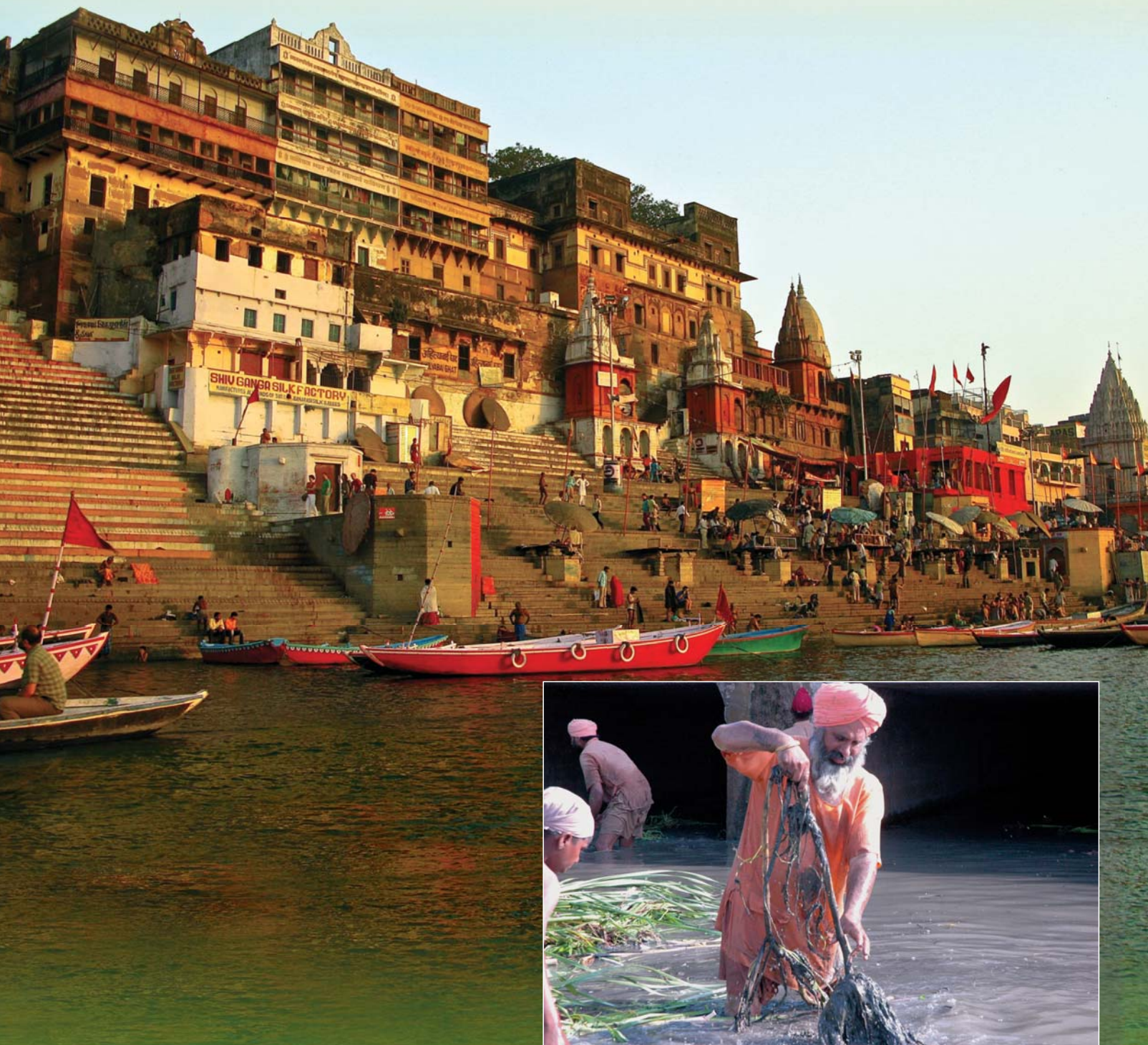
I recently read in a newspaper that students of Gujarat Technological University launched a Jagran Abhiyan (Awareness Campaign) to build toilets in 107 villages. They themselves put in physical labour and contributed significantly in constructing around 9,000 toilets. It might have come to your notice some time ago that under the leadership of Wing Commander Param Veer Singh, a team covered a distance of 2,800 kilometres by swimming in Ganga from Dev Prayag to Ganga Sagar to spread the message of cleanliness. Government of India has also chalked out an annual calendar for its departments. Each department is to focus exclusively on cleanliness for a period of 15 days.

You might have seen that a cleanliness survey campaign is also carried out these days. Earlier, the cleanliness status was presented before the countrymen after conducting a survey of 73 cities. Now, this survey will be conducted in about 500 cities with a population of more than 1 lakh. Each city will imbibe a sense of confidence that, well, we have lagged behind but we will surely perform better next time. In this manner an atmosphere of competition for cleanliness has been created. I expect that all of us citizens should contribute as much as we can in the cleanliness mission. 2nd October is the birth anniversary of Mahatma Gandhi and Lal Bahadur Shastri Ji. Swachhh Bharat Mission is completing two years on this day. I keep on urging everyone to buy some khadi items between Gandhi Jayanti to Diwali. This year also I request that each family should buy one or the other khadi item so that the poor may also be able to light an earthen lamp and celebrate Diwali. This year 2nd October is a Sunday so can we involve ourselves in the cleanliness mission in some way? You involve yourself physically for 2 hours, 4 hours with cleaning work and I request you to share your cleanliness drive photo on NarendraModiApp. If it is a video, then share the video. You will see that with our joint efforts, this movement will get a fresh boost, a new dynamism. Let us all remember Mahatma Gandhi and Lal Bahadur Shastri and take a pledge to do something for the country...

Excerpts from Mann Ki Baat, September 25, 2016.

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