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SANITATION FOR A HEALTHY SOCIETY

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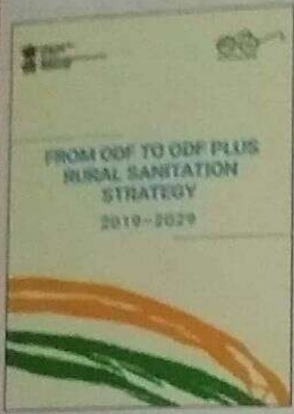
Sanitation Economy and Dignity of the Sanitation Workers
Santosh Kumar Gangwar

SPECIAL ARTICLE

The People's Policy
Parameswaran Iyer



10-year Rural Sanitation Strategy (2019-2029)



The Department of Drinking Water and Sanitation (DDWS), Ministry of Jal Shakti, Government of India launched the 10-year Rural Sanitation Strategy (2019-2029), which focuses on sustaining the sanitation behaviour change that has been achieved under the Swachh Bharat Mission-Gramin (SBM-G), ensuring that no one is left behind and increasing access to solid and liquid waste management.

This strategy has been prepared to guide local governments, policy makers, implementers and other relevant stakeholders in their planning for ODF Plus, where everyone uses a toilet and every village has access to solid and liquid waste management.

The strategy also speaks about potential collaborations with development partners, civil society, and inter-government partnerships. It also highlights innovative models for sanitation financing.

Railway Stations' Cleanliness Survey Report-2019

Minister of Railways and Commerce & Industry, Shri Piyush Goyal released the 'Stations' Cleanliness Survey Report' (Cleanliness Assessment of Non-suburban and Suburban Stations 2019) at a function in New Delhi Railway Station to mark the 150th Birth Anniversary of Mahatma Gandhi.

According to the report, seven railway stations in Rajasthan bagged the top 10 places in a cleanliness survey of a total of 720 stations. The stations are Jaipur, Durgapura, Gandhinagar, Jodhpur, Suratgarh, Udaipur and Ajmer. Anand Vihar Railway station was adjudged to be the cleanest station in Delhi ranking 26th in the overall list.

This ranking is based on different parameters, and the process also involved taking feedback from passengers and direct observation by third-party assessors. Green cover at stations was also considered as a factor for the ranking.

Indian Railways has celebrated Swachhata Pakhwada from 16 September to 2 October, 2019. It has also banned single-use plastic across its premises.

Swachh Survekshan 2020 League to Ensure Sustainability of Cleanliness in Urban India

The Ministry of Housing and Urban Affairs (MoHUA) has launched Swachh Survekshan 2020 League (SS League 2020) for a quarterly cleanliness assessment of cities and towns in India. It will be integrated with Swachh Survekshan 2020, the 5th edition of the annual cleanliness survey of urban India to be conducted between January-February 2020 under the aegis of Swachh Bharat Mission-Urban (SBM-U).

The SS League 2020 has been introduced with the objective of sustaining the on-ground performance of cities along with continuous monitoring of service level performance when it comes to cleanliness. It will be conducted in three quarters, i.e., April-June, July-September and October-December 2019 and will have a weightage of 2000 marks for each quarter to be evaluated on the basis of monthly updation of SBM-U online MIS by cities along with citizen validation on the 12 service level progress indicators through outbound calls. The performance of cities in SS League 2020 will be crucial to their ranking in Swachh Survekshan 2020 due to the 25% weightage of the quarterly assessment to be included in the annual survey in January 2020.

(Source: PI)



"The success of #SwachhBharatMission rests on a number of key elements including a focused communication strategy, behaviour change mechanisms adopted at the grassroots level and conscious effort to build a sense of ownership among communities." @swachhbharat



"Cycle plogging drives are a great way to save the environment and keep a healthy lifestyle. We should participate in such activities at least once and do our bit for a cleaner India." @SwachhBharatGov





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Let noble thoughts come to us from all sides
Rig Veda

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Sanitation Economy and Dignity of the Sanitation Workers

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Santosh Kumar Gangwar

"Everyone must be his own scavenger. Evacuation is as necessary as eating; and the best thing would be for everyone to dispose off his own waste. If this is impossible, each family should see to its own scavenging. I have felt for years, that there must be something radically wrong, where scavenging has been made the concern of a separate class in society. We have no historical record of the man who first assigned the lowest status to this essential sanitary service. Whoever he was, he by no means did us any good. We should, from our very childhood, have the idea impressed upon our minds that we are all scavengers, and the easiest way of doing so is, for everyone who has realised this, to commence bread labour as a scavenger. Scavenging, thus intelligently taken up, will help one to a true appreciation of the equality of man."

Mahatma Gandhi¹

Background: Emergence of Sanitation as an Economy

The sanitation sector has emerged as a big economy in India in recent years and the future potential is immense. Sanitation economy is not just about toilets but it also includes provision of clean drinking water, elimination of waste and converting them into useful resources and digitised sanitation system that optimises data for operating efficiencies, maintenance, consumer use, and health information insights.² Sanitation, in addition to an economy in itself, is also cross-cutting theme and has the potential to contribute in a big way to the growth and employment of many other sectors of Indian and global economy, most notably to sectors such as health, consumer goods and agriculture sector and new and renewable energy.

The major initiatives which have helped in propelling the sanitation economy of India are the ambitious schemes launched by our Government in the form of Swachh Bharat Mission (SBM) in 2014, Jal Shakti Abhiyan (JSA) and curbing single-use plastics in 2019. This aimed at providing basic sanitation to all Indians, ensuring piped water supply to all rural households and combating pollution, respectively. A recent report by the Toilet Board Coalition estimated the sanitation market opportunity in India alone to be at US\$ 32 billion in 2017 and

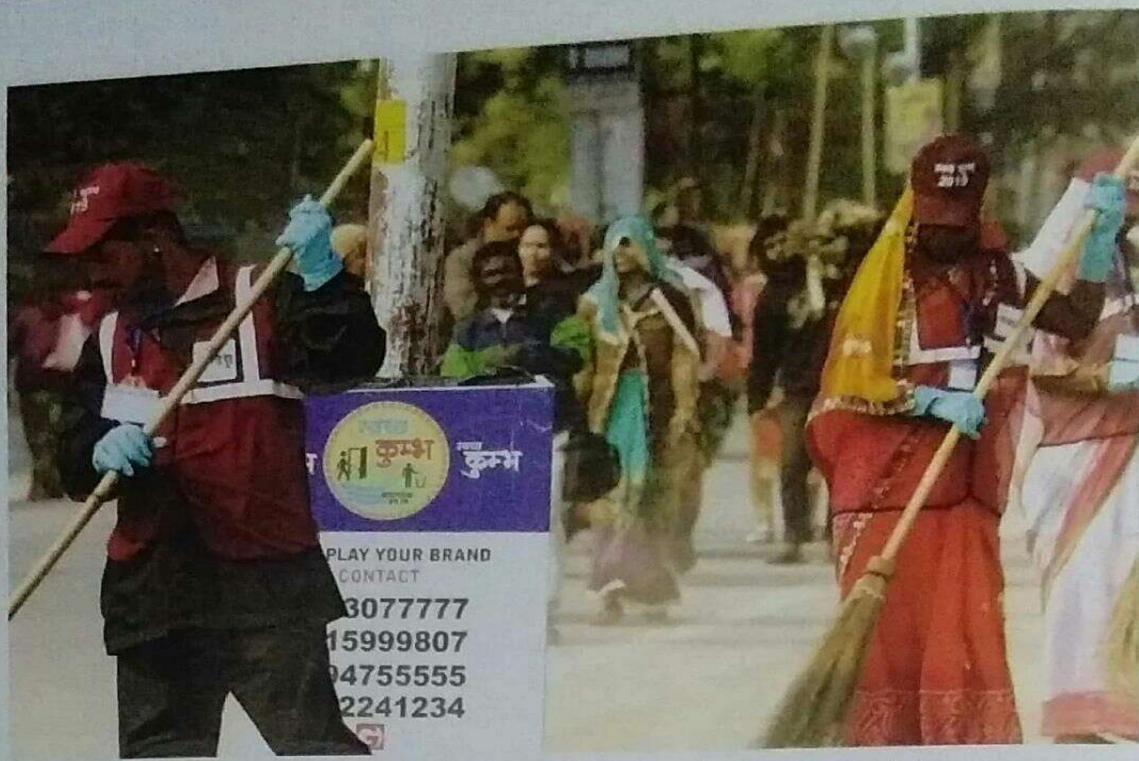
doubling to US\$ 62 billion by 2021 — within a short time span of four years. This speaks volumes about the phenomenal growth the economy is waiting to harness in near future.³

Our Government's path-breaking initiatives in the sanitation sector will not only provide a lot of business opportunity to the private sector but will also enable our Government to fulfil the vision of the Hon'ble Prime Minister in improving the quality of life and ease of living of the citizens. In addition to this, the sector holds immense potential in terms of generating large number of new job opportunities for our youth, thereby making economic growth truly inclusive and sustainable.

At the international level, India's pioneering steps in the field of sanitation have been lauded by various bilateral, multilateral, and plurilateral bodies, including the recently concluded 74th session of the United Nations General Assembly (UNGA) during 17-30 September, 2019, in New York. It is been touted that India's success in this sector would help in achieving the global Sustainable Development Goal (SDG) of providing access to adequate and equitable sanitation and hygiene for all and ending open defecation by 2030 (SDG 6; Target 6.2), an unfinished agenda since the time of the Millennium Development Goals (MDGs) that spanned from 2000 to 2015.

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Sanitation workers at Kumbh Mela in Prayagraj, Uttar Pradesh

Given this broad background, in the following sections, I intend to highlight two important aspects of sanitation— Our Government's strategy in the field of sanitation and its effectiveness and its resolve towards achieving a 'Clean India' as a part of building a 'New India' under the broad framework of 'Sankalp Se Siddhi (or Attainment through Resolve)' by 2022; further, our Government's initiatives to address India's foremost sanitation challenge of providing dignity to an estimated five million people who are engaged in sanitation works⁴ and finally, the 'Way Forward' for the future.

Government's Initiatives Towards Sanitation

The first building block of having a 'New India' by 2022 under the leadership of Hon'ble Prime Minister is the pledge towards a 'Clean India'. In this direction, three major schemes of our Government in the field of sanitation and their effectiveness are discussed here.

The first major initiative towards sanitation was the Swachh Bharat Mission (SBM) with an aim to accelerate sanitation coverage to achieve an Open Defecation Free (ODF) and Clean

India by 2 October, 2019. When the mission was launched five years ago by the Hon'ble Prime Minister, the challenge was quite daunting. Only 38.7 per cent of rural households had toilets and country-level data showed India having the largest number of people defecating in the open. Under such a challenging situation, the PM exhorted people to fulfil Mahatma Gandhi's vision of a Clean India by 2 October, 2019 so as to provide a befitting tribute to Bapu when we celebrate his 150th Birth Anniversary.

It is heartening for me to note that since the launch of the SBM, our Government has built 1007.98

lakh toilets in the rural areas, thereby enhancing percentage of individual households with Latrine (IHHL) coverage to 100%— a whopping jump of 61.3% between 2014 and 2019 (Figure 1). During the same period, as many as 699 districts, 2,58,657 Gram Panchayats, and 5,99,960 villages self-declared themselves as ODF.⁵ As far as urban areas are concerned, between 2014 and 2019, 66 lakh households and 5.5 lakh public and community toilets were constructed and 79,000 wards (86%) with 100% door-to-door collection of municipal solid waste were ensured, while 60% of them practice source segregation.⁶ This is a tremendous achievement, given the fact that only 41% were practising source segregation in 2014.

The statistics given above are by no means a small achievement and show that our Government not only sets goals but also achieves the set targets and outcomes within the stipulated timeframe. While declaring Rural India open defecation free on the occasion of Swachh Bharat Diwas programme in Ahmedabad on 2 October, 2019, the Prime Minister congratulated every countrymen, especially those living in villages, Sarpanchs, and all those who have

Figure 1 : Coverage Status of IHHL (in %)



Source : <http://sbm.gov.in/sbmreport/home.aspx>

worked for 'Swachhata'. He added that irrespective of age or social and economic status, everyone has contributed in this pledge of cleanliness, dignity, and respect. He said that the entire world is amazed that India has provided toilet facilities to more than 60 crore population in 60 months through public participation and volunteerism. The Prime Minister said that our Government is committed towards realising the visions of Mahatma Gandhi of building a clean, healthy, prosperous, and strong New India.

While in the first term of our Government (2014-2019), we focused on toilets, in the second term, our priority is on providing piped water, curbing single-use plastics, and ensuring garbage disposal to upscale the sanitation in the country to the next level. Undoubtedly, these new initiatives of our Government will further generate large number of direct and indirect jobs for our youth in coming five years.

A new Ministry of Jal Shakti was created in May 2019 by reorganising the existing ministries and departments. Within months of creating the Ministry, the Hon'ble Prime Minister announced during the Independence Day speech that the Government will launch Jal Jeevan Mission (JJM) to bring piped-water supply to all households (*Har Ghar Jal*) by 2024. He also urged the people to come forward and contribute to an intensive water conservation plan and build on citizen participation to accelerate water conservation across the country. Like the SBM, the JJM mission target is quite ambitious and challenging given the fact that of the 18 crore rural households, only 3 crore households have piped drinking water and people, especially women, make long trips to fetch water. However, the task is not impossible and we will achieve the target within the set timeframe with the participation of all the stakeholders including the State Governments. The JJM will

further boost the sanitation economy and generate new employment in the country, as the Government will spend more than Rs. 3.35 lakh crore in the coming years on this mission alone.

Lastly, our Government's initiative to curb single-use plastics from 2 October, 2019 will help in significant reduction in littering as about 14 million tonnes of plastic are used annually in the country. This will not only scale up the ongoing sanitation movement significantly but will also help in combating land and water pollution and improving health of our citizens.

Dignity to the Sanitation Workers

Sanitation workers are one of the major contributors to this vision. However, the workers involved in this occupation suffer from social stigma with respect to their work, especially the manual scavengers. Our Government has taken a number of steps to effect changes in the perception of the people towards the sanitation workers. In 2014, the Hon'ble Prime Minister himself initiated a campaign to urge the public to change the way we call sanitary workers as *Kudawala/Kacharawala* to *Safai Wala*. Further, during recently concluded *Kumbh Mela* in Uttar Pradesh's Prayagraj, the Prime Minister went on to the extent of washing the feet of the sanitation workers in recognising their efforts and contribution in keeping the *Mela* and its surroundings clean and hygienic, which was praised widely by the public. Recently, he

The first major initiative towards sanitation was the Swachh Bharat Mission (SBM) with an aim to accelerate sanitation coverage to achieve a clean and Open Defecation Free (ODF) India by 2 October, 2019.

sat with the rag pickers in Mathura and separated plastic items from a large heap of garbage. Lastly, the Prime Minister, many of my cabinet colleagues, and top Government officials have been seen with brooms, cleaning and sweeping various public places. Many called it symbolism, but for me it shows the conviction of our Government in recognising the importance and contribution of *Safai Karmcharis* and to send a strong message to the society about our Government's commitment towards improving the dignity of sanitation workers.

In addition to effecting the changes in the perception of people towards the sanitary workers, our Government has also taken a lot of steps to improve the dignity of the sanitary workers through legal protection and by implementing various policies and programmes for improving their income level and to provide them financial, pension, health, and housing benefits. I would like to briefly highlight some of the key initiatives taken by our Government for the betterment and welfare of the sanitation workers.

(a) Legal Protection for Eliminating Manual Scavenging

Sanitation workers are divided broadly into two categories: *Safai Karmcharis* and Manual Scavengers. A majority of them work as contract employees under extremely hazardous conditions with poor health and safety situations while cleaning latrines, sewer, septic tanks and railway tracks.

In order to prohibit employment of manual scavengers, the Government had enacted Prohibition of Employment as Manual Scavengers and their Rehabilitation Act, 2013 (MS Act, 2013) which came into effect from 6 December, 2013. The objectives of this Act are to (i) eliminate the insanitary latrines; (ii) prohibit (a) employment as manual scavengers and, (b) hazardous manual

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cleaning of sewer and septic tanks and, (iii) survey of manual scavengers and their rehabilitation within a time-bound manner. Any contravention of the provisions is punishable with imprisonment up to 2 years and fine up to Rs. 2 lakh, or both.

In 2014, the implementation of various provisions of the MS Act, 2013 got priority, and convergence between various line Ministries and their respective schemes were achieved for faster identification and elimination of insanitary latrines and for eradication of manual scavenging. As for instance, under Swachh Bharat Mission (Gramin), erstwhile Ministry of Drinking Water & Sanitation (now Jal Shakti) provides for an assistance of Rs. 12,000 for identification of insanitary latrines and their conversion. Similarly, Ministry of Urban Development (now MoHUA), under the Swachh Bharat Mission (Urban), provides a grant of Rs. 4,000 for conversion of insanitary latrine. Surveys have also been undertaken to identify manual scavengers.

(b) Ensuring Minimum Wages, Safe Working Conditions and Pension Benefits

For ensuring minimum wages and timely payment of wages to all workers including the sanitary workers, Ministry of Labour and Employment has enacted the Code on Wages Bill, 2019, which received assent of the President on 8 August, 2019. This bill also provides for higher wage premium for workers engaged in arduous and hazardous work in difficult circumstances and therefore will benefit millions of sanitation workers. This will raise their income level and restore their dignity. The code also prohibits gender discrimination in wages, recruitment, and conditions of work, which will benefit women sanitation workers.

Safety, health, welfare, and improved working conditions are of vital importance in the context of sanitation workers. Therefore, in

addition to the Code on Wages, 2019, we have also introduced in the Lok Sabha the Code on Occupational Safety, Health and Working Conditions, 2019 on 23 July, 2019, after amalgamation, simplification, and rationalisation of the relevant provisions of the 13 Central Labour Acts. The various enabling provisions of this Code will not only boost the well-being of the sanitation workers but will also ensure safe and healthy work environment.

Social security for all workers in general and sanitation workers in particular is another issue, which is on the top of the agenda of the Ministry. Efforts are currently underway to draft a Social Security Code, which will benefit not just the miniscule organised sector workers but will also include vast unorganised sector workers under its scope and ambit. As a large proportion of sanitation workers are in the unorganised sector, the provisions of the proposed Social Security Code will provide the sanitation workers their legal rights to social security.

In addition to the proposed Social Security Code, the Ministry has also introduced a pension scheme for unorganised workers namely *Pradhan Mantri Shram Yogi Maan-dhan* (PM-SYM) on 5 March, 2019 to ensure old-age protection for unorganised

Sanitation workers are one of the major contributors to the vision of combatting pollutions. However, the workers involved in this occupation suffer from social stigma, especially the manual scavengers. Our Government has taken a number of steps to effect changes in the perception of the people towards the sanitation workers.

workers, which will benefit sanitation workers. The scheme is currently operational in 36 States and UTs and has successfully enrolled 33,66,995 unorganised workers. The PM-SYM is a voluntary contributory pension scheme, under which the subscriber shall receive a minimum assured pension of Rs. 3000 per month after attaining the age of 60 years. The age-specific monthly premium to be paid by the subscribers under the scheme has been kept low and there is a provision of matching contribution by the Central Government. The scheme is very innovative and I would like to take this opportunity to urge all trade unions and other associations who work for the welfare and betterment of sanitation workers to spread awareness about the scheme, thereby helping these workers in enrolling in large numbers.

(c) Housing, Education, Financial Assistance and Skill Development Schemes

Under Indira Awas Yojana (IAY) of the Ministry of Rural Development, there is a provision for providing assistance for construction of new houses and upgradation of *kutcha* or dilapidated houses. Assistance of up to Rs. 75,000 is provided to the eligible households. A provision has been made under IAY for special coverage of identified manual scavengers for providing them housing facilities in rural areas, irrespective of their BPL status. The new Scheme of our Government, 'Housing for All' under the Ministry of Housing and Urban Poverty Alleviation aims at providing housing facility to the citizens.

Under the Scheme of 'Pre-Matric Scholarship to the Children of those engaged in Occupations involving cleaning and prone to health hazards', being implemented by the Ministry of Social Justice and Empowerment, the children of manual scavengers, tanners and flayers, waste pickers and those engaged in hazardous cleaning are also provided scholarship between



The Prime Minister helps women waste pickers segregate plastic from waste

Rs. 225 to Rs. 700 per month for a period of 10 months in a year for pursuing their studies up to class 10th.⁸

Further, the National Safai Karamcharis Finance and Development Corporation (NSKFDC), which was setup in 1997 as a wholly-owned Government of India Undertaking under the Ministry of Social Justice & Empowerment acts as an Apex Corporation for the all-round socio-economic upliftment of the safai karmcharis, scavengers and their dependents throughout India by creating alternate means of livelihoods to enable them live with dignity, honour, and pride along with the mainstream of the society. It provides financial assistance at concessional rates of interest to the State Channelizing Agencies (SCAs), Regional Rural Banks (RRBs), and Nationalised Banks for onward disbursement to the target group of NSKFDC. It also implements non-loan-based scheme in the

form of imparting skill development training to the eligible members of the target group through provision of 100 per cent grants so as to enhance their capability for taking up wage employment or to start their own businesses, thereby increasing their income levels. The details of such schemes are given in Table 1.

Apart from these, the NSKFDC is the Nodal Agency for implementation of the Self-Employment Scheme for Rehabilitation of Manual Scavengers (SRMS) scheme. The main benefit provisions and implementation progress of SRMS is summarised in Table 2.

(d) Protecting Sanitation Workers through Ayushman Bharat

Ayushman Bharat — Pradhan Mantri Jan Arogya Yojana (PMJAY) is another flagship initiative introduced in September 2018 under the visionary leadership of Hon'ble Prime Minister, which has immense potential to benefit

the sanitation workers and in restoring their dignity given the fact that a large proportion of them belong to poor and vulnerable families. The PMJAY will cover over 10.74 crore poor and deprived families (approximately 50 crore beneficiaries) providing coverage up to Rs. 5 lakh per family per year (on a family floater basis) for almost all secondary care and most of tertiary care hospitalisation, with no cap on family size. This will help sanitation workers in terms of reducing their out-of-pocket expenditure on health and will provide them flexibility to allocate their household resources towards other important family needs. Within a short span of one year, the PMJAY has issued 10,77,59,548 e-Cards, empanelled 18,284 hospitals and have provided benefits to 48,38,422 persons which speaks about the accelerated progress India is making towards achievement of Universal Health Coverage (UHC).

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Table 1. Schemes & Programmes of NSKFDC

Sl. No.	Name of the Scheme	Maximum Limit	Rate of Interest to		Repayment Period
			SCAs	Beneficiaries	
A Loan-based Schemes					
1.	Mahila Samridhi Yojana (MSY)	Upto Rs. 50000	1% p.a.	4% p.a.	3 Years**
2.	Mahila Adhikarita Yojana (MAY)	Upto Rs. 75000	2% p.a.	5% p.a.	5 Years**
3.	Micro Credit Finance (MCF)	Upto Rs. 50000	2% p.a.	5% p.a.	3 Years**
4.	General Term Loan (GTL)	Upto Rs. 15 Lakhs	3% p.a.	6% p.a.	10 Years**
5.	Swachhta Udyami Yojana — "Swachhta se Sampantta Ki Aur"				
a)	Scheme for 'Pay and Use' toilets	Upto Rs. 25 Lakhs	4% p.a.*		
b)	Scheme for procurement of sanitation-related vehicles	Upto Rs. 15 Lakhs	4% p.a.*		10 Years***
6.	Sanitary Marts Scheme	Upto Rs. 15 Lakhs	4% p.a.*		10 Years***
7.	Education Loan (EL) (Maximum course cost) - For study in India - For study abroad [The interest on Education Loan (for study in India) is reimbursable under the scheme of Ministry of Human Resource Development, Govt. of India to the beneficiaries whose family income is upto Rs. 4-50 Lakhs per annum]	Upto Rs. 10 Lakhs upto Rs. 20 Lakhs	1% p.a.	4% p.a.*	10 Years** 5 Years after co-termination of course with moratorium period of one year.
8.	Green Business Scheme	Upto Rs. 2 Lakhs	2%	4%	6 Years****

Note: *1% rebate for women beneficiaries and 0.5% rebate for timely repayment. # 0.5% rebate for female beneficiaries; ** After implementation period of 3 months and moratorium of 6 months; *** After implementation period of 6 months and moratorium of 6 months; **** Including moratorium period of 6 months. In case of manual scavenger, the subsidy maximum up to Rs. 3.25 lakhs is admissible under the Schemes of 'Pay and Use' Toilets Procurement of Sanitation related vehicles and Sanitary Mart.

B Non-loan based Schemes		
1.	Skill Development Training Programme	100% in the form of grant including stipend of Rs. 1500 per month/candidate for Safai Karmcharis and dependant and Rs. 3000 month/candidate for Manual Scavengers and dependants.
2.	Job Fair	Reimbursement of expenditure for holding job fairs upto Rs. 50,000 per job fair.
3.	Awareness Programme	Reimbursement of expenditure for organising awareness programme upto Rs. 30,000 awareness programme.
4.	Workshops	Reimbursement of expenditure upto Rs. 25,000 per workshop.

Way Forward

While much has been achieved in improving the sanitation situation in the country and in restoring the dignity of the sanitation workers, much is left to be achieved. As a way forward, I would like to highlight the following five important steps:

- The goal of making India clean is as important as the goal of keeping India clean. Therefore, maintaining ODF status is important so that villagers are not returning to the old practice

of open defecation. We must focus on putting in place a robust monitoring mechanism to check the condition of sanitation at the district and Panchayat level.

- Although we are ODF, but the country is not garbage and litter free. Therefore, we must focus on circular economy for converting our waste into resources. The first step in this regard will be 100 per cent achievements in terms of waste segregation, successful disposal, and streamlining waste

infrastructure. In addition, we must also focus on sustained behavioural changes through a trained workforce for curbing single-use plastics and thereby making India completely garbage and litter free.

- Despite a ban on manual scavenging, its existence is reported from time to time. Therefore, use of technology can play a key role in addressing this issue and all the stakeholders must encourage this to get rid of manual scavenging completely.

Source: NSKFDC

Table 2 : Benefit Provisions of SRMS and Implementations Progress up to 15/02/2017

S.N.	Benefit Provision	Implementation Progress
1.	One-time Cash Assistance (OTCA) of Rs. 40,000 to one identified manual scavenger per family.	OTCA released to 11,563 manual scavengers
2.	Skill development training upto a maximum period of two years with a stipend @ Rs. 3,000 per month	Skill development training assistance sanctioned to 13,390 manual scavengers and their dependents
3.	Loan for sustainable livelihood projects at concessional rates of interest with a capital subsidy upto a maximum of Rs. 3.25 Lakhs.	Self-employment Projects have been sanctioned for 1233 manual scavengers and their dependents.

Source: <http://socialjustice.nic.in>



Sanitation workers in action at Kumbh Mela 2019

- Prioritisation and faster identification of insanitary latrines and manual scavengers through a time-bound plan must be seriously and earnestly pursued so that effective rehabilitation of manual scavengers through various welfare and income generating scheme can be done at a much larger scale and in a mission mode.
- Last but not the least, I call upon the trade unions, employers' associations and other similar

associations/organisations to provide adequate voice to the issues of sanitation workers, their needs and requirements and to work with the Government hand in hand so that together we can strive hard to mainstream the sanitary workers and restoring their dignity. □

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The People's Policy

Parameswaran Iyer

The four Ps namely, Political leadership, Public financing, Partnerships and Peoples' participation provided the SBM-G its strategic focus and administrative disruption which led to efficient on-ground implementation. The Programme brought in a unique blend of young professionals and experienced but driven bureaucrats, and each person became committed to the goal.

As a grateful nation dedicated an open defecation free (ODF) country to Mahatma Gandhi this 2 October, 2019 on Bapu's 150th birth anniversary, it is timely to analyse how the Swachh Bharat Mission became the global benchmark for participatory and transformative development.

Mahatma Gandhi dreamt of an India where no one had to suffer the indignity of open defecation. There cannot be a better tribute to him than the transformation of the country, in the last five years, from being on the higher side of global open defecation to a torch-bearer for global sanitation.

The Prime Minister connected with and understood the needs of our people at the grassroots and brought about the sanitation revolution we know today through his inspirational leadership. The world recognises this, and the Global Goalkeepers Award that the PM was presented with during his recent visit to the US, more than reaffirms his decision to put sanitation at the front and centre of India's developmental agenda.

Five years on, Team Swachh Bharat Mission Gramin (SBM-G) has identified four key pillars of

India's sanitation revolution, which can, more or less, be applied to any large-scale transformation in the world. In a more detailed fashion, a recent compilation of essays titled 'The Swachh Bharat Revolution' by the Department of Drinking Water and Sanitation, Ministry of Jal Shakti, has also followed this 4Ps structure for the book, which chronicles the implementation journey of the flagship programme.

First is political leadership. Arguably, the biggest game-changer for the SBM-G was the Prime Minister investing his personal political capital in the mission. Inspired by his leadership and commitment, various Chief Ministers took up the cause, creating a domino-like effect, cascading leadership to the Chief

Secretary and in turn to Collectors, all the way down to Sarpanchs at the grassroots level. Leaders at all levels are prime catalysts for large-scale transformations.

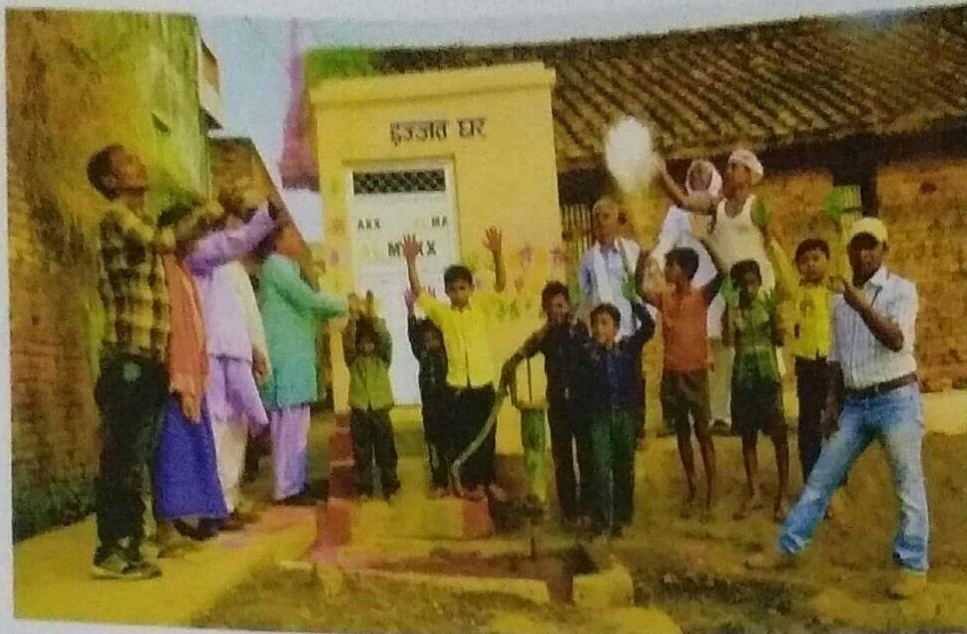
Second is public financing. Typically, no large-scale transformation can be an unfunded mandate. Over Rs. 1 lakh crore was committed to ensuring universal access to sanitation, thereby backing the political will with budgetary support. About 90 per cent of the 10 crore households which received toilets were from socially and economically weaker sections of society and they received financial incentives to build and use toilets.

Third is partnerships. The SBM-G partnered with implementers and influencers alike — national and international development agencies, media houses, civil society, celebrities, as well as all departments/ministries of the Government of India, who pledged an additional \$6 billion for sanitation in their respective sectors. This "all hands on deck" approach, making sanitation everyone's business, helped to mainstream it into the national consciousness.

And fourth is peoples' participation. The SBM-G trained over



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half a million *swachhagrahis*, grassroots motivators, who triggered behaviour change in every village of India. Ordinary people undertook extraordinary roles and inspired others to build and use toilets. Stories of sanitation champions emerged from every nook and corner of the country. A large-scale transformation can be truly successful if it captures the imagination of the people and becomes a people's movement or a *Jan Andolan*.

While these four pillars provided the SBM-G its strategic focus, administrative disruption led to efficient on-ground implementation, which has traditionally been the Achilles heel of large programmes in India. It started with the Prime Minister setting a target, a sunset clause for the Mission — 2 October, 2019. A sunset clause brought with it a sense of urgency and accountability. The deadline drove States to prioritise SBM-G and inspired Team SBM-G to imagine possibilities that they may not have done otherwise.

The next important step was building a team of people who believed that the goal is achievable. Younger people with fresh perspective and lesser administrative baggage believe anything is possible and focus on finding creative solutions. SBM-G brought in a unique blend of young

professionals and experienced but driven bureaucrats, and each person became committed to the goal.

It was also important to think scalability during the design process. The Department attempted to devise solutions which are easy to implement, like the on-site twin-pit toilet systems for rural India, as opposed to expensive networked sanitation solutions. By providing flexibility to States and implementers by design, the mission allowed them to tailor solutions to local contexts.

To build faith in the rest of the administrative system, it



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was important for the mission to demonstrate some quick wins. Low-coverage districts with the highest sanitation coverage—to become ODF on priority. This created a demonstration effect for others to learn from and created belief in the system. Nothing succeeds like success.

Continuous engagement with implementers made the mission agile. Team SBM-G visited each State multiple times and engaged directly with District Collectors through learning workshops, informal gatherings and WhatsApp groups, promoting healthy competition among implementers which spurred local innovation.

The SBM-G made sanitation glamorous by engaging extensively with the media, leveraging popular culture, and associating Bollywood stars, sportspersons and other influencers to promote the message of sanitation. And lastly, the mission kept the buzz alive throughout its lifecycle through regular, large-scale events with the Prime Minister at important milestones, helping sanitation stay on top of public recall.

But everything is not done and dusted. The Department of Drinking Water and Sanitation recently released the forward-looking 10-year Rural Sanitation Strategy to move from ODF to ODF Plus, focusing on sustaining the SBM-G gains, ensuring that no one is left behind, and ensuring access to solid and liquid waste management for all villages. The next ambitious goal announced by the Prime Minister on August 15 this year is to ensure piped water supply to all households by 2024. With the programme in mission mode for the next five years, this will be an additional shot in the arm for SBM-G's sustainability efforts.

Evidently, India has achieved what was unimaginable a few years ago, but the show must go on.

ODF Plus: Key interventions to be focused upon

- Sustained usage of Individual Household Latrines (IHHL)
- Ensuring no one is left behind and providing sanitation access to new households
- Sanitation coverage of public spaces (through public and community toilets)
- Implementation of Solid and Liquid Waste Management (SLWM) in rural areas including compost pits/decentralised waste treatment facilities
- Visible cleanliness, and solid and liquid waste management

complementary mandates for action to respective ministries and departments, with the ideal that they all coordinate regularly and involve the development partners, private sector, civil society organisations (CSOs), and academic institutions where applicable and effective.

While urban areas may be able to build and utilise larger faecal sludge treatment solutions, rural communities that fall outside of the radius of off-site door-to-treatment service will have to come up with locally sustainable options that function efficiently at the GP level. The same is true for other waste management and resource recycling efforts, including for wastewater management, solid waste management that include menstrual hygiene waste, and the outcomes such as useable compost and greywater for gardening and farming. In addition, given the respect and authority accorded to the role of the Pradhan/Sarpanch, the *swachhagrahis*, and other key players at the grassroots level, it is important to leverage their potential for making services relevant, effective and sustainable, while ensuring that community leaders remain accountable. Finally, with the launch of Jal Jeevan Mission, which aims to provide drinking water to all households by 2024, it is important to converge sanitation programming with upcoming water supply work to ensure that water sources remain

safe and uncontaminated and that sanitation services are sustained with water available. Convergence can be verbally advocated for by district and state leaders, but the real efforts will have to be led by GPs who have the authority and flexibility over how they want to converge and apply the available funding and tools provided to them under various programmes.

The Way Forward

To reinforce the framework laid out in the new strategy, the MoJS has already taken practical steps during this transition period between the prevailing SBM strategy and the advent of the new one that shifts the focus to ODF-Plus. Since September of this year, with technical support from UNICEF, it has been rolling out convergent water supply and sanitation trainings across rural India that directly target three high-level GP representatives including the Pradhan (leader) of each GP in the country. The aim is to reach nearly 2,58,000 GPs (approx. 7,74,000 individuals) in the next year, by utilising the training-of-trainers cascade model. The MoJS and UNICEF are collaborating on orienting master trainers at the State and district levels who will then interact with the GP representatives across all states.

The training focuses on the actions necessary to make the strategic framework a reality. The representatives are led through

sessions on everything from how to manage existing water resources and allocate necessary budgets through the GPDs to what waste management consists of and how to involve existing cadres of *swachhagrahis*, *raj* and *raon mistris* (men and women who are masons) and other local groups to promote the next steps of the sanitation cycle such as pit-emptying and waste management. Messaging on hygiene – hand washing with soap – is also highlighted given that this low-cost practice can drastically reduce the burden of diarrheal disease, if done so consistently.

We look forward to seeing the outcomes of this effort and how it will contribute to the next step of ambitions laid out by the Government of India. There are still many lessons to be learned, especially when it comes to addressing critical challenges, such as menstrual waste management, safe disposal of child faeces and retro-fitting of pit-toilet models to make them functional and sustainable. These issues and more can only be effectively addressed if GPs are firstly given the authority (*viz-a-viz* the 3 Fs) and there is buy-in and leadership from the GP leaders, because the power truly lies with them to make a lasting difference for their people. □

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Sustaining Behavioural Change

Saswata Narayan Biswas,
Indranil De and Gyanmudra

Swachh Bharat Mission focuses on collective behaviour change of the entire community. Construction of toilets by itself does not ensure that the rural population will use toilets on a regular basis. There are significant cultural and behavioural factors that act as barriers to the use of toilets. In most behaviour change programmes, it is observed that the adoptees, after a time interval, lapse back to their earlier habits defeating the very purpose of the programme.

With Swachh Bharat Mission (SBM), the country witnessed a silent revolution in the construction of toilets. The movement which was launched on 2 October, 2014 succeeded in construction of over 10 crore toilets by 2 October, 2019. Because of these enormous efforts, about 6 lakh villages in approximately 700 districts in the country were declared open defecation free.¹ A major differentiating feature of SBM from all other earlier programmes has been its demand-driven nature where the primary objective is to bring about behaviour change leading to the generation of demand for construction of toilets as well as to increase the use of toilets.

In most behaviour change programmes, it is observed that the adoptees, after a time interval, lapse back to their earlier habits defeating the very purpose of the programme. This study was partly intended to find out the use patterns of toilets once they are constructed and reasons for lapsing back or non-use of constructed toilets. Thus, construction of toilets by itself does not ensure that the rural

population will use toilets on a regular basis. There are significant cultural and behavioural factors that act as barriers to the use of toilets. Open defecation for many is a part of the early morning routine walk, checking on the crops, and socialising. (Neal, Vujcic, Burns, Wood, and Devine 2015:10). For women, who go out to the fields in the dusk for open defecation, it may be the only opportunity in the day to freely socialise with other women

without being supervised by elders in the family, particularly husband and in-laws.

Apart from the behavioural factors, it is found that the design of the toilet, availability of sanitation materials, access to water, and political or social leadership account for a higher demand for construction and use of toilets (O'Reilly, and Louis 2014). SBM focuses on collective behaviour change



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of the entire community. However, many villages are not homogenous and are fragmented along the caste and religious lines ... Collective behaviour change in a village is easier when the whole village is homogeneous but difficult when there are more conflicts (Gupta, Coffey, and Spears, 2016). Furthermore, caste-based notion of purity and pollution makes it difficult to construct pit latrine which requires emptying it in future. Thus, adoption of toilets is not always linked to the presence or absence of water or toilets but to 'social determinants' and social convention reinforced by traditional beliefs.

The challenge of behaviour change is often compounded by the diversity in Indian society, and therefore, would require more contextual understanding. As a matter of fact, without having local knowledge into the fold, the sanitation campaign will lead to fruitless activities. With this background, we tried to identify and analyse the principal drivers (social, physical, and behavioural) that motivate people to stop defecation in the open, the effective elements of Information, Education, Communication (IEC) for toilet construction and behaviour change, how socio-political fragmentation and political brokerage impact toilet construction and behaviour change. Additionally, we tried to identify the major supply-side bottlenecks and understand the role of access to water and changes in land use in affecting the willingness to construct toilets.

Background

We tried to capture the socio-cultural diversity across the country in our sample. Therefore, we selected three States (viz.; Bihar, Telangana, and Gujarat). These three States represent three different socio-cultural, linguistic, and economic backgrounds, which matched our criteria of diversity. Access to toilets was highest in Gujarat (85%),



followed by Telangana (61%) and Bihar (30%).² From each State, we selected two districts (best performing and worst performing); from each district, we took two Blocks (best performing and worst performing); and from each block, we selected two Gram Panchayats (best performing and worst performing). From each Gram Panchayat, one village was selected. The sample size was 1252 [Bihar (n=441), Gujarat (n=409), and Telangana (n=402)].

Behavioural Patterns

There is a strong relationship between having a separate kitchen and having a toilet. Hygienic kitchen as a separate place within the house is as important as having a toilet (Ravindra, and Smith, 2018). The majority of our sampled households in the three States did not have a separate kitchen (64.3%); whereas, access to toilets was a whopping 72%. Despite having access, in about 8% of the households all or some members were not using toilets. The predominant reason for toilet construction in the household is privacy and convenience followed by peer pressure, prestige in society, spouse pressure, and persuasion of Panchayat leaders, political leaders, health and social workers.

Our analysis of data suggested that access to the toilet has strong correspondence with the principal

source of drinking water. Villages having piped source of drinking water were more likely to have both access to toilet and use of toilets. Furthermore, the gender of the household head also impacts access to the toilet. A female-headed household is more likely to use toilets than male-headed household. Self-employed non-agricultural household is less likely to continue open defecation.

The quality of life of a household is an important factor concerning access to the toilet. Access to other basic services increases the chances of having access to the toilet. An exclusive toilet is more likely to be used if the household has access to a dedicated water facility. The chances of open defecation increase if the distance of drinking water source is more than 400 meters from the premises instead of having a drinking water source within the dwelling. Similarly, chances of having a toilet for exclusive use reduce by 10 per cent if the drinking water source is outside the dwelling but within premises instead of having a drinking water source within the dwelling. Bathroom facility plays an important role in access to the toilet. The chances of open defecation increase substantially if the households have no access to the bathroom. An attached bathroom increases the chances of toilet use by all members of the households. Insufficient availability of water at various times of the year has a negative implication on the usage of the toilet. Housing condition, which is an indicator of standard of living, has implications for toilet usage as well.

The economic condition of the households, captured by total expenses, has a positive impact on access and use of toilets. The chances of open defecation reduce substantially when the monthly household expenses cross Rs. 1000. Furthermore, one per cent increase in expenses on durable goods increases chances of using toilets by about 48 per cent. This implies that with the

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better economic condition and better living standards chances of building and using toilet increase.

Access to information regarding Government schemes and financial assistance for toilet construction are also contributing factors for construction and use of toilet, respectively. Awareness about Swachh Bharat Mission reduces the chances of open defecation by 10 per cent. Toilets constructed under the influence of the respondent (mainly head of the household) or the spouse are more likely to be used by all members of the households. The health and hygiene condition of the surroundings also impacts the construction and use of the toilet.

Apart from socio-economic, infrastructural, and environmental effects, the state-specific effects on access and use of toilets came out as significant. The chances of open defecation are higher by 13 per cent and having toilet for exclusive use is lower by 37 per cent in Gujarat as compared to Bihar. The chances of using the toilet are around 20 per cent lower for male and female above 15 years and older people in Gujarat as compared to Bihar. Chances of open defecation have been found to be higher by 30 per cent in Telangana as compared to Bihar.

The qualitative study with the help of Focus Group Discussions (FGDs), Participatory rural appraisal

(PRA), brainstorming with the help of sanitation-related photographs and un-structured interview brought some interesting findings. The households, despite being conscious of personal and social wellbeing, do not consider open defecation as a threat to their wellbeing. Demand for own house, religious places, fair or social gathering as a source of entertainment were high as compared to the construction of toilet. Non-acceptance of the toilet by few households in the village results in negative reactions by others; so those who are using also stop using it under some pretext or other. Different self-help group members reported that the toilet structure is not friendly for physically challenged. In large households, elderly persons were not comfortable in using toilets. PRA and FGD together revealed that the use of IEC was very low in the whole process of implementation of SBM (G). Different initiatives such as morning vigilance, whistle blowing, meetings, training, etc. have been taken to create awareness against open defecation. The communities have not been educated about the importance of proper sanitation system, need of toilets, proper disposal of faeces, and menstrual hygiene.

Socio-cultural norms about purity and pollution prevented people from having the toilet at home. Similarly, for many priorities are different. For example, in a village in Medak District in Telangana, the community

members contributed money for the construction of a religious place but do not want to spend money on construction of the toilet.

Recommendations

The present programme, while widely appreciated leaves a scope of the new adoptees to get back to their original behaviour. To prevent this, the programme may include the provision of more than one toilet for larger households. More emphasis may be given for information dissemination at the ground level. Health and social workers can play a larger role in influencing people.

Improvement of sanitation is linked with other indicators of living conditions. Hence, it is important to have a better infrastructure at the household level as well as public service. Better water supply service, housing, construction of the bathroom influence the access and use of the toilet. At the same time, higher income of households with higher purchasing power for durable goods would lead to better living standards of living and thus sanitation practice. Also, emphasis on female literacy is imperative for better sanitation coverage. □

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Sanitising the Country

Sudarshan Iyengar

The problem of sanitation and hygiene among rural populace in the country was felt seriously by Gandhiji and his team of volunteers when they began their work in Champaran. Sanitation was a difficult affair in the villages, a salutary commitment to sanitation was a given and contained core element of Gandhiji's concept of social reform.

Gandhiji, while travelling the length and breadth of India during first two years after returning from South Africa, had realised that sanitation and social hygiene was a huge and perhaps insurmountable problem. It was not the lack of knowledge alone but also the mind-set which prevented people from attending to the most vital problem affecting health and environs. In South Africa, Gandhiji admitted that Indians had problems with sanitation and hygiene as alleged by the British, although he successfully argued and protested that the main reason for discrimination was colour prejudice and threat of competition. However in his own country, the insanitation, dirt, filth along with taboo, stigma and exploitation attached with the scavenging community glared at him wherever he went. Gandhiji had already penned Hind Swaraj in 1909. In his scheme of Gram Swaraj and Hind Swaraj as self-rule, fighting for political freedom of the country could not have been a standalone proposition. Self-improvement was the key and he introduced the concept and action related to it. Later, it was conceptualised as Ashram

Observances and Constructive Work. Thus, sanitation and hygiene and removal of untouchability became two major constructive programmes.

Gandhiji at Champaran

The seriousness of the problem of sanitation and hygiene among rural populace in the country had become evident to Gandhiji and his team of volunteers when they began their work in Champaran. The first thing

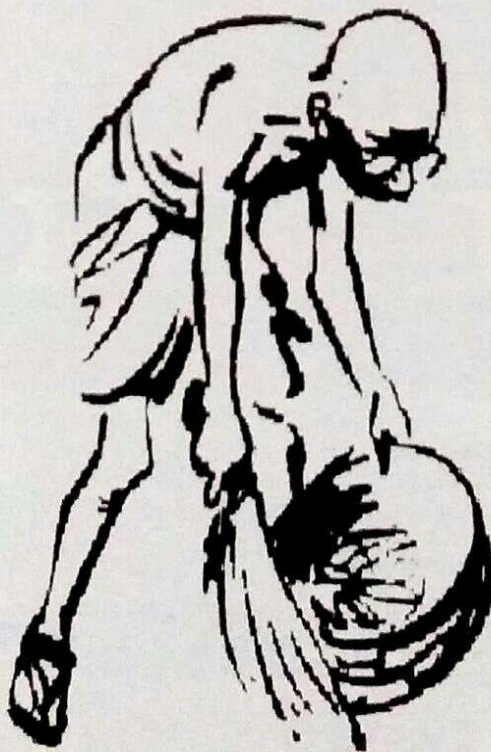
that hit Gandhiji was that work of a permanent nature was impossible without proper village education.

Sanitation was a difficult affair in the villages of Champaran. Gandhiji noted that even the landless labour families were not willing to do their own scavenging. Dr. Dev who had joined the Champaran team took up regular sweeping of roads and courtyards, cleaning the wells, filling up the water pools, etc. An atmosphere of self-reliance for village cleaning was built slowly.

Gandhiji's conviction about the need of education, training and practice for orientation and aptitude led him to teach sanitation and hygiene in Champaran and in Satyagraha Ashram schools. The women of the Champaran team were told that teachings of cleanliness, hygiene and good manners had priority over literary subjects. It may be noted that thenceforth sanitation and hygiene became indispensable and foundational work in all the political programmes and social reforms.

At the Ashrams

Lessons in sanitation practices had begun in Phoenix Ashram in South Africa for Gandhiji and



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all inmates. By the beginning of the twentieth century flush toilets were in fairly advanced stages and implications of faecal contaminations were well-known. However, adequate and assured water was critical requirement to promote and practice flush toilets connected with proper drains and disposal systems. In rural areas it was very difficult to accomplish. The challenge before Gandhiji at Phoenix was the right science and appropriate technology. Covering human excreta with adequate dry earth and safe disposal of the collected store became established practice among all models. In all experiments, the excreta was finally transferred to the farm and converted into organic fertiliser. Prabhudas Gandhi has noted that if one goes through the history of Gandhiji's Ashrams carefully, one would realise that experiments in toilets had a unique place. If someone could document the process minutely from beginning to end an authentic and classic manual on toilet making and use could be prepared.

For Gandhiji, sanitation and hygiene became an important agenda in India. Gandhiji's desire to remove the blot of untouchability from the Indian society for good compelled him to work on toilets and hygiene. He had not accepted the social tradition of the scavenging work to be done by a section of people who were condemned to do and further condemned for doing so.

A salutary commitment to sanitation was a given and contained core element of social reform.

The Ashram had special stress upon engaging no outside labour for this work. The members themselves attended to the whole of the sanitation in turns.

Inmates had to take care that the roads and paths were not spoilt by spitting or otherwise. Gandhiji would welcome the zealous, committed youth with nationalist fervour who

There is a Trinity of Evil –
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spinning-wheel.

desired to join Ashrams but would warn that she/ he would have to pass the test of cleaning the toilet bucket.

During his Stays in Ashram founded and supported by Jammalal Bajaj at Wardha, Mirabehn - Miss Slade informed him, when she went for a morning walk found people of the adjacent village Sindi defecated in open on the road. Gandhiji advised her to visit the village daily and clean the roads.

Sanitation and hygiene was on agenda in Sevagram Ashram too, which was Gandhiji's home from April 1936 to August 1946. In 'Rules of Sevagram Ashram', it was mentioned that ...Water must not be wasted. Boiled water is used for drinking purposes....We should not spit or clean the nose on the road, but only in an out of the way place where no one is likely to walk.

Nature's need must be attended to only at the appointed place.... The receptacle for the solid contents is, as it always be, different from that for liquid contents of the latrines. ...The night soil must be fully covered with dry earth so as not to attract flies and in such a way that nothing but dry earth is visible. One must carefully sit on the latrine seat so that seat does not get dirty. A lantern must be carried if it is dark. Everything that attracts flies should be properly covered.

In Public Meetings and Municipal Receptions

Gandhiji addressed many public gatherings, meetings, small groups, volunteers, women and inmates of the

Ashrams. Many municipalities gave him civic receptions. On most of these occasions he brought up the subject of sanitation and hygiene.

In almost every Congress major convention Gandhi in his speech touched upon the sanitation issue. For Gandhi, insanitation was an evil. He had said,

... There is a Trinity of Evil—insanitation, poverty and idleness—that you will have to be faced with and you will fight them with broom-sticks, quinine and castor oil and, if you will believe me, with the spinning-wheel.

Gandhi addressed in receptions and appreciations given to him by the towns and city municipalities and drew attention towards insanitation and appealed to improve the sanitation. He considered sanitation work as one of the most important works of the municipalities. When Congress wanted to participate in municipal elections; his advice was that the congress workers after becoming councillors should become quality sanitation workers.

He developed an admiration for the municipal administration in the West with regards to sanitation. Responding to a civic reception at Belgaum on December 21, 1924 he said,

The one thing which we can and must learn from the West is the science of municipal sanitation. By instinct and habit we are used to village life, where the need for corporate sanitation is not much felt. But as the Western civilization is materialistic and therefore tends towards the development of the cities to the neglect of villages, the peoples of the West have evolved a science of corporate sanitation and from which we have much to learn. Our narrow and tortuous lanes, our congested ill-ventilated houses, our criminal neglect of sources of drinking water require remedying. Every municipality can render the greatest service by insisting on people observing the laws of sanitation.

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In Periodicals

Gandhiji edited and contributed articles and notes to several periodicals. He wrote about sanitation and hygiene related issues frequently in Navajivan and Young India and later in Harijan. Insanitation in the villages and urban settlements in the country weighed heavily on his mind. During the Kheda Satyagraha; he wrote about the condition of home, pond and fields in regard to sanitation and hygiene in Navajivan. His agony was that the farmer and his family lived in such insanitary and unhygienic conditions out of ignorance and lack of concern.

Gandhiji was more decent in using an expression 'open evacuation' in place of open defecation that is used in the national and international reports in present times. He pointed out in the article that not using latrines and open evacuation practice was the cause for many diseases. The old, children, sick and weak persons in the family and in the hamlets could not go out for evacuation and hence turned the courtyard, lanes or houses into latrines, dirtying the place and poisoning the air. He then recommended that people should build simple toilets or should have system of containers where method

of covering the excreta with dry earth should be practiced with diligence.

Gandhiji continued to write about sanitation and hygiene at every opportunity. Although he never agreed, but was able to understand that the destitute, poor, and people of condemned class had come to accept insanitation as part of their lives. In Gandhiji's words, the problem of sanitation and hygiene was at 'corporate' level. He also noted that Indians were indeed good at keeping the house and the courtyard clean of dirt, insects and reptiles; but would not hesitate to shove all into the neighbour's yard! We the people have not got rid of this character even to this day.

On an evening in January 1935 Prof. Winsor of St. Stephen's College Delhi called on Gandhiji with a dozen of students. While replying to question of helping village people with medical aid, Gandhiji said that they should be teaching sanitation, and hygiene as prevention and after-care were more important and relevant. Distributing a thousand malaria pills was good but not congratulatory. Lessons of prevention by filling up cesspools, draining the waste water, dredging of wells and cleaning up tanks would earn high appreciation.

When asked for his guidance about teaching in the school for Harijans, Gandhiji reiterated his unmistakable priority for lessons in sanitation and hygiene. He said, let me assure you that education in three R's (Reduce, Reuse, Recycle) is as nothing compared to a sound grounding in the elements of hygiene and sanitation... Literary training by itself is not of much account.

Take care of the essentials I have told you. Remember that unlettered persons have found no difficulty in ruling over large States. Teach them the three R's by all means, but don't make a fetish of them.

Gandhiji continued to tell students and workers about the importance of sanitation work and advised them to take it up as the first task. From 1946 to January 1948 he intensified his emphasis on education for sanitation and hygiene. Railway and ship travel according to him offered best chances of public education on sanitation and hygiene.

Sanitation and hygiene was very much on Gandhiji's mind because what he was seeing in the refugee camps disturbed him deeply soon after independence. On 13 October, 1947 he told that he attached great importance to this problem of cleanliness and status of sanitation in refugee camps. He told that although Indians had some experience in organising fairs, religious gatherings and Congress sessions and conferences, but as a population we were not accustomed to camp life. Indians lacked sense of social hygiene leading to dangerous levels of insanitation with attendant risk of outbreak of infectious and contagious diseases.

On 29 January, 1948, a day before he was martyred, he drafted the Constitution for the proposed Lok Sevak Sangh. Later it came to be known as Gandhiji's Last Will and Testament. In this document the sixth function of a sevak was drafted as under.

He shall educate the village folk in sanitation and hygiene and take all measures for prevention of ill health and disease among them.

Sanitation and hygiene was and had remained a priority for Gandhiji all his life and it appeared in his last. □

(Excerpts from the book, 'In the Footsteps of Mahatma... Gandhi and Sanitation', Publications Division, 2016).



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Solid Waste Management: The Way Forward

Divya Sinha

The main objective of an efficient Solid Waste Management (SWM) system is to maximise resource recovery and energy generation from waste in the processing facility and minimise waste disposal in landfills, which weighs heavily on our ever-shrinking land resources and also is a potential source of air, soil, and water contamination. The responsibility of the waste generator lies essentially in proper segregation of the waste which is the core requirement of effective solid waste management.

Solid Waste Management is a major problem in India, where urbanisation, industrialisation, and economic growth have resulted in increased municipal solid waste (MSW) generation. The burgeoning population and the improvement in living standards of the people have only compounded this problem. Ministry of Environment, Forests & Climate Change (MoEF&CC) notified MSW (Management and Handling) Rules, 2000 and the revamped Solid Waste Management Rules in 2016 to ensure proper solid waste management in India. Various initiatives are being taken in different parts of the country, however, a lot still remains to be done to comprehensively address the issue related to Solid Waste Management.

This article reflects upon the legal framework, key components, status, initiatives taken, challenges faced, and the way forward for effective solid waste management in the country.

Legal Framework

Solid Waste Management Rules, 2016 delineate the responsibility of the different stakeholders including

the MoEF&CC, Ministry of Housing and Urban Affairs, (MoHUA), Central Pollution Control Board (CPCB), State Pollution Control Boards (SPCBs), State Urban Departments, Urban Local bodies, Gram Panchayats, as well as the waste generators. Whereas MoHUA, State Urban Departments and Local Bodies have mainly been entrusted with the responsibility of development of infrastructure related to waste management, MoEF&CC, CPCB, SPCB, and Pollution Control Committee (PCC) have been entrusted with the responsibility of monitoring the enforcement of the Rules. The responsibility of the waste generator lies essentially in proper segregation of the waste which is the core requirement of effective solid waste management. The Rules demarcate the requirements of the key components of the solid waste management system besides fixing the timeline for achieving the same.

SWM- Key Components

The key components of SWM system include the following:

Stage 1: Segregation of waste by waste generator into dry and wet waste;

Stage 2: Door-to-door collection of waste and transportation of segregated waste;

Stage 3: Setting up of material recovery facilities for dry waste to recover recyclables like plastic, paper, metal, glass, etc.;

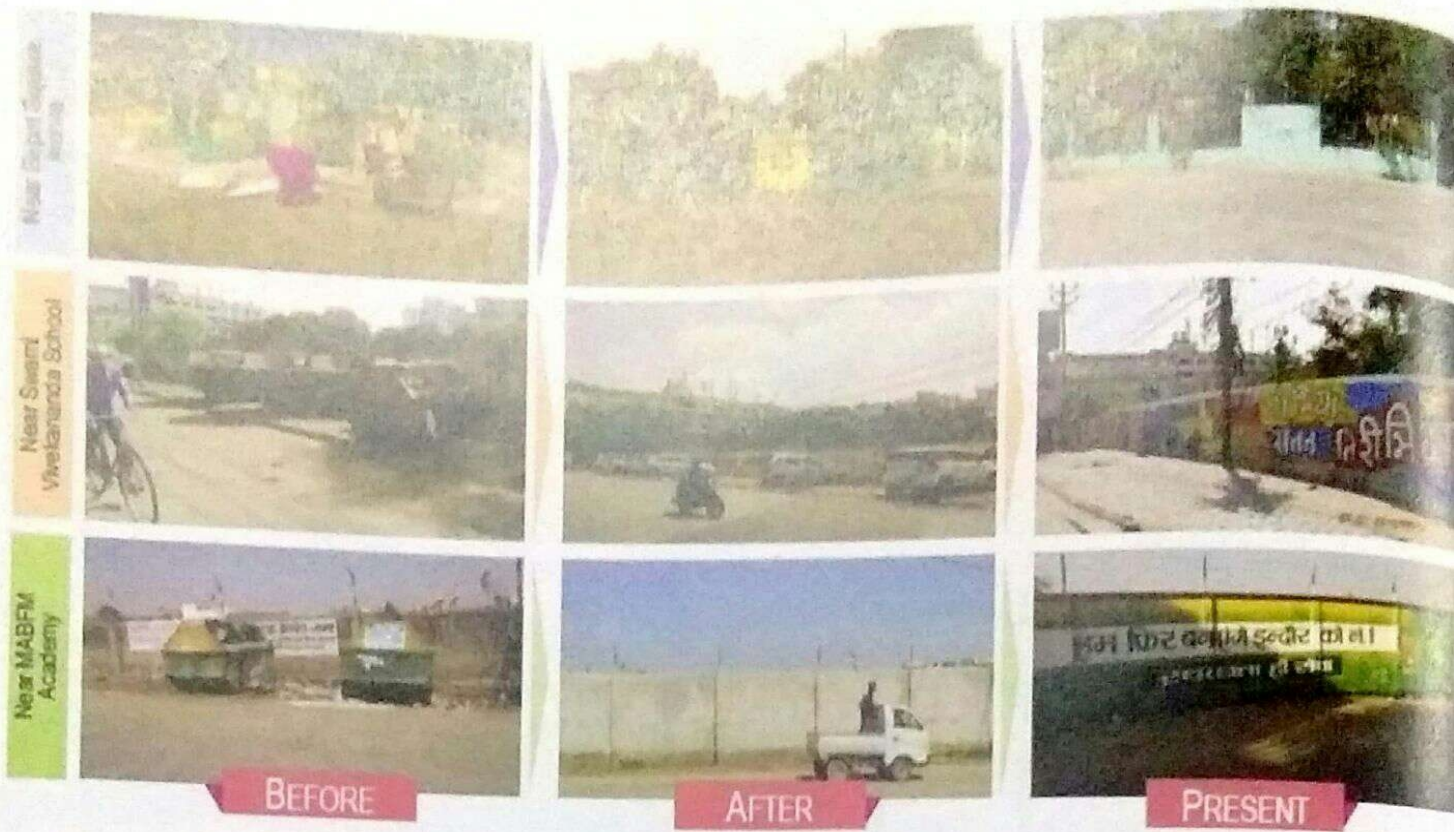
Stage 4: Setting up of waste processing facilities, viz., compost, biomethanation and waste-to-energy plants for resource recovery and energy generation; and

Stage 5: Setting up of waste disposal facilities – Landfills.

The main objective of an efficient SWM system is to maximise resource recovery and energy generation from waste in the processing facility (Stage 4) and minimise waste disposal in landfills, which weighs heavily on our ever-shrinking land resources and also is a potential source of air, soil, and water contamination. The primary requirement of all waste processing facilities (Stage 4) is segregation of waste into wet and dry waste. If the waste is not being collected, segregated, and transported properly, recycling of waste is not feasible and the waste ends up at landfills (Stage 5). Also, the waste processing plants are

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Depiction of Bin-free Waste Management Initiative in Indore, Madhya Pradesh

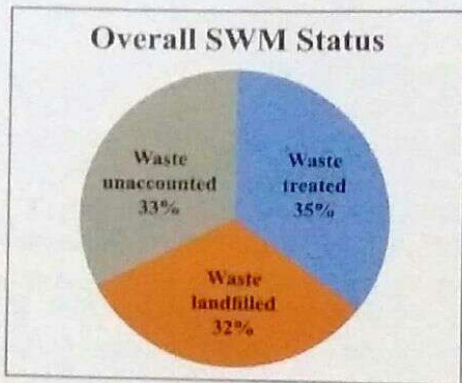
not able to function at optimum level if they have to process mixed waste including C&D (Construction & Demolition) waste. The segregation, collection, and transportation scheme is to be further synchronised to meet the requirement of the waste processing facilities catering to the area (See Table).

Status of Solid Waste Management

The overall solid waste generated in the country has been estimated to be 1,52,076 Tons per day (TPD) as per the Annual Report 2018-19 submitted by the SPCBs/PCCs. Of this, 1,49,748 TPD of waste is collected which is 98.5% of the total waste generated. However, only 55,759 TPD (35%) of waste is treated, and 50,161 TPD (33%) of waste is landfilled and 46,156 TPD of waste which is one-third of the total waste generated in the country remains unaccounted.

An overview of SWM status in the country is given as:

- Source segregation initiated in 24 States/UTs;



- Operational in 22 States/UTs;
- 25 States/UTs procured land for waste SWM facilities;
- Waste processing facilities set up – 2028; Waste processing operational – 160; and
- Landfill sites identified – 1161/ Operational – 37.

The unaccounted waste is littered on streets or lands up in dumpsites. There are presently 3,159 dumpsites in the country which are a major source of groundwater contamination and air pollution.

Also, they have issues related to fires, stability, and depreciated aesthetics. Recently, with National Green Tribunal's (NGT) intervention, biomining (a method for stabilisation of waste so as to minimise its adverse environmental impact) of these dumpsites, has been initiated in 11 States.

SWM Initiatives

(i) Initiatives taken by CPCB

CPCB has prepared the following guidelines which are uploaded on its website:

- Guidelines on Legacy Waste;
- Guidelines on Buffer Zone;
- Guidelines for Management of Sanitary Waste; and
- Selection Criteria for Waste Processing Technologies.

Further, CPCB has issued directions to concerned authorities for SWM Rules compliance and imposed environmental compensation on defaulting Authorities.

Table

Collection of waste	Through door-to-door collection by Urban Local Bodies (ULBs)	Source segregation mandatory for waste processing
Waste treatment	Composting	Take off of compost
		Odour issues and leachate generation potential
	Biomethanation	End product take off; Homogenous waste required
Landfill	Incineration	Emissions: Acid gases, dioxins, and furans
		Inadequate capacity; O&M issues; Land issues

(ii) Initiatives taken by States/ Union Territories

Some of the States and UTs such as Chhattisgarh, Madhya Pradesh, Daman & Diu, and Goa have achieved maximum compliance with respect to provisions of SWM Rules, whereas a lot needs to be done in case of the remaining States/UTs. Initiatives taken by Chhattisgarh State are as follows:

- Door-to-door collection, waste segregation, and transportation in covered vehicles completed in all ULBs;
- Land for waste processing facilities identified in all 168 ULBs;
- No sanitary landfills planned- 166 ULBs have Solid and Liquid Resource Management (SLRM) centres and 2 ULBs have Compost/Refuse-derived fuel (RDF) facilities;
- SLRMs planned for Gram Panchayats;
- Bioremediation/capping completed in 160 ULBs/Remaining 8 to be covered by 2021; and
- Municipal bye-laws for levying spot fine for littering framed.

(iii) Setting up of Waste-to-Energy Plants: Four waste-to-energy plants have been set-up in the country of which three plants are in Delhi. Electricity generated by these plants is purchased by the power

regulators and is fed to the national grid. Several other such plants are in the pipeline in different parts of the country.

(iv) Development of Model Cities: Model cities which include Pune (Maharashtra), Indore (Madhya Pradesh), and Ambikapur (Chhattisgarh) have been developed which have implemented efficient methods for collection, segregation, and waste processing facilities. They have also implemented efficient

methods for remediation of dumpsites and reclaimed land from the same.

(v) Increased Judicial Intervention

After the enactment of the NGT Act 2010, in past few years we have seen increasing judicial intervention in ensuring compliance with the provisions of SWM Rules by the various stakeholders, specifically the State authorities. Some of the major Orders issued by the NGT include:

(a) Vide order dated 22-12-16 in OA 199/2014, Almitra H. Patel and Anr. Vs. Union of India and Ors., NGT directed as follows:

- Every State and Union Territory shall enforce and implement the Solid Waste Management Rules, 2016 in all respects and without any further delay.
- All the State Governments and Union Territories shall prepare an action plan in terms of the Rules of 2016 and the directions in this judgment, within four weeks from the date of pronouncement of the judgment.



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- It shall be mandatory to segregate prior to incineration relating to the quantum of the waste.
- It shall be mandatory to provide for a buffer zone around plants and landfill sites.
- It will be obligatory on the part of the State, local authorities to create a market for consumption of RDF.
- The landfill sites shall be subjected to bio stabilisation within six months from the date of pronouncement of the order.
- There shall be complete prohibition on open burning of waste on lands, including at landfill sites.

(b) NGT vide order dated 5.3.19 in OA 606/2018 directed Chief Secretaries of all States/Union Territory for the following:

- Steps for compliance of Rules 22 and 24 of SWM be now taken within six weeks to the extent not yet taken. Similar 23 steps be taken with regard to Bio-Medical Waste Management Rules and Plastic Waste Management Rules.
- At least three major cities and as many major towns as possible in the State and at least three Panchayats in every District may be notified on the website within two weeks from today (22-12-16)... as model cities/towns/villages which will be made fully compliant within next six months (from 22-12-16).
- The remaining cities, towns and Village Panchayats of the State may be made fully compliant in respect of environmental norms within one year.
- A quarterly report be furnished by the Chief Secretary, every three months. First such report shall be furnished by July 10, 2019.
- The Chief Secretary may personally monitor the progress,

It is the waste is not properly collected, segregated, and transported properly, recycling of waste is not feasible and the waste ends up at landfills. The segregation, collection, and transportation scheme is to be further synchronised to meet the requirement of the waste processing facilities.

at least once in a month, with all the District Magistrates.

- The District Magistrates or other officers may be imparted requisite training.
- The District Magistrates may monitor the status of compliance of environmental norms, at least once in two weeks.
- Performance audit of functioning of all regulatory bodies may be conducted and remedial measures be taken, within six months.

(c) Vide Order dated July 17.7.19 in OA No. 519/2019 with Original Application No. 386/2019, Hon'ble NGT has ordered Biomining of all three dumpsites in Delhi namely Ghazipur, Bhalsawa, and Okhla.

Challenges

The various challenges faced in implementation of SWM Rules include the following:

- Segregation of waste at source by waste generators;
- Lack of infrastructure for collection and transportation of waste;
- Availability of land for setting up of waste collection and transportation facilities;
- Budgetary provisions for (ii & iii) above;

- Techno-economically viable solutions for fresh & legacy Waste;
- Management of legacy waste;
- Rural areas not covered in most of the States/UTs; and
- Enforcement issues.

Way Forward

As availability of land, lack of infrastructure, and availability of financial resources serve as a major impediment for SWM, focus of the SWM is to maximise resource recovery from waste so as to facilitate availability of these resources for efficient SWM. The major steps in this direction would include:

- Creating public awareness for involvement of different stakeholders for SWM;
- Development of ULB-wise action plan for collection, segregation, transportation and processing of waste. Inputs from model cities like Indore, Ambikapur, and Pune may be taken for development and implementation of these plans;
- Emphasising on setting up of waste processing facilities rather than waste disposal facilities as in the case of Chhattisgarh;
- Giving fillip to research & development activities with focus on resource recovery from waste;
- Capacity building in various regimes of SWM;
- Laying down of an appropriate governance framework at State and district levels;
- Clear allocation of responsibility to ULBs and waste generators for setting up of infrastructure and for involving informal sector in waste collection/segregation; and
- Adequate technical support to ULBs for processing technology and best practices in waste management. □

Swachh Bharat: A Chapter of Success

Akshay Rout

Countless inspiring stories of individuals/groups/institutions from across the country have fuelled the momentum of SBM over these years, each competing with the other in uniqueness and innovation.

It was history in the making on 2 October, 2019 evening at Sabarmati riverfront in Ahmedabad when the Prime Minister dedicated the Open Defecation Free (ODF) rural India as a tribute to the greatest sanitation champion ever, Mahatma Gandhi, on his 150th birth anniversary. The ODF declaration by each of the 699 districts of India symbolises the inspiring and intense five-year journey of Swachh Bharat Mission (SBM) – Gramin, starting October 2014, when India’s sanitation coverage stood at merely 39% and hence was a seemingly impossible task for a new Mission. The glorious achievement also established SBM as the world’s largest behaviour-change programme by positively influencing safe sanitation practices of about 60 crore people.

The clarion call given by the Prime Minister on 15th August, 2014 for starting a *Jan Andolan* to achieve the vision of a Clean India and providing safe sanitation access for all set the context and galvanised the entire country. The poignancy in the matter was brought out by the fact that the Prime Minister invoked the citizens’ conscience by linking the predicament to the issue of dignity of ordinary women. India

then accounted for over 50% of the global open defecation burden and had a mammoth task set out for itself considering its geographical vastness, diversity, and regional challenges. The UN Sustainable Development Goal (SDG) 6 for meeting universal sanitation coverage by target year 2030 almost depended on what

India could or could not do. Against all odds, SBM emerged as a global leader by achieving the SDG 6 target by over a decade in advance. The SBM journey of only 5 years bewilders everyone by the fact that over 10 crore Individual Household Latrines (IHHLs) have been constructed, and all 6 lakh villages,



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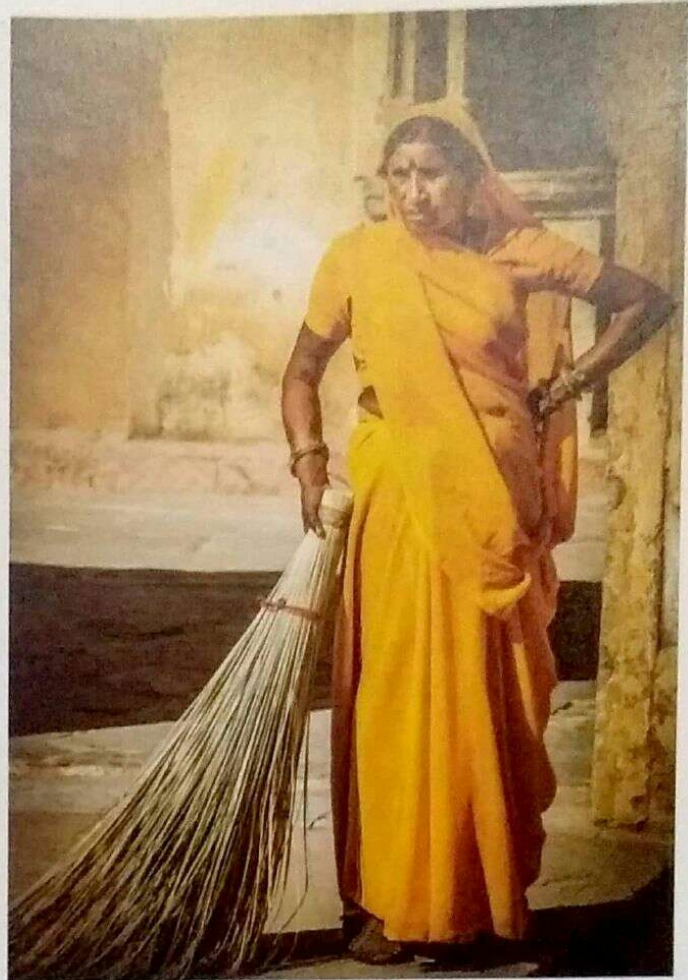
699 districts and 35 states/UTs have declared themselves ODF.

Countless inspiring stories of individuals/groups/institutions from across the country have fuelled the momentum of SBM over these years, each competing with the other in uniqueness and innovation. Some of the notable stories are worth mentioning. Lavanya, a 15-year-old school girl, staged a 48-hour hunger protest to demand a toilet in her home. Her insistence and unique protest caused a small revolution of its kind in her village, in Tumakuru, Karnataka, resulting in not just a toilet being built at her home with assistance of the Gram Panchayat but also in inspiring other households in the village. Lavanya went on to become Swachhata ambassador in her district playing a crucial role in making it ODF. Her achievement was praised by the Prime Minister in one of his monthly radio addresses Mann Ki Baat.

The 104-year-old Kunwar Bai from Kotabharri village in Chhattisgarh's Dhamtari district sold her goats for constructing toilet at her home. For her inspiring efforts, the Prime Minister felicitated her in the most touching manner. Rakkhi, 87-year-old woman from Badali village in Udhampur district of Jammu and Kashmir, took it upon herself to construct a toilet in her village all by herself, as she could not afford to hire a mason. Amina Khatoon, an underprivileged woman from Bihar, went around to collect money to construct a toilet at her home setting a rare example. Moved by her commitment, a mason and a labourer helped her and refused to take any money from her. Similarly, 65-year-old mason Dileep Singh Malviya was praised by the Prime Minister again in his radio address for constructing over 100 toilets without charging any money in Bhojpura village of Madhya Pradesh and for being a part of the galaxy of Swachhata Champions.

SBM stands out with women being at the centre of all interventions and also leading the march in many cases and reclaiming dignity and empowerment in the process. Women in rural hinterland not only ventured out for discussing sanitation and convincing rest of the folks, they moved a step ahead by staking claim in men-dominated masonry work. They took up the name of 'Rani Mistris' by constructing toilets, now affectionately called 'Izzat Ghar' or Dignity Home in many parts of the country. Children and youth volunteered in a big way by inculcating Swachhata in behaviour and volunteered for Swachhata Shramdaan in mobilisation campaigns. School children have been the visible change agents at many places with their demand cries of "Mujhe Shauchalay Chahiye" triggering a sense of urgency among parents and school management alike. Children have also performed the morning *nigrani* work with aplomb when they accosted the stray defecator with whistle and torchlight and get them back to toilets.

The success story of Swachh Bharat Mission is not complete without underline mention of the Information, Education and Communication (IEC) interventions which constituted the heart of the programme. About 4.5 lakh *Swachhagrahis* led the inter-personal communication across households in the villages holding forth the community-level narratives on



sanitation and the need for Swachhata. Mass media campaigns like *Darwaza Band* and *Shaucha Singh* captured the imagination and thought process of the common people. Campaigns like 'Swachhata Hi Seva', 'Satyagraha Se Swachhagraha', 'Chalo Champaran' and 'Swachh Shakti' stand out as great examples of social mobilisation for the cause of sanitation.

One distinct part of Swachh Bharat Mission is in converting the task to everyone's business, the fact that the Prime Minister has never been tired of emphasising. There have been a series of special projects over the last few years: Namami Gange, Swachh Iconic Places, Swachhata Pakhwada, Swachhata Action Plan etc., in which all parts of the Government and the civil society including the corporates have joined in making definite contributions to the overall situation of sanitation. It has been an inspirational sight to see young collegians roughing it out in

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the villages during summer breaks as Swachh Bharat interns for improving sanitation in the local areas, both by Shramdaan and by raising awareness.

The significant gains achieved under SBM over these years are not confined to what is seen and experienced as sanitation facilities and practices. Impact studies by various eminent institutions/organisations clearly highlight various benefits across health, financial, and environment parameters linked to SBM achievements. The latest Environmental Impact study by UNICEF found that in terms of faecal contamination, non-ODF villages were 11.25 times more likely to have their groundwater sources and 1.13 times more likely to have their soil contaminated and 1.48 times more likely to have their food contaminated and 2.68 times more likely to have their household drinking water to be contaminated. A WHO 2018 study had estimated that over 3 lakh lives will be saved by 2019 when India turns ODF. The Bill and Melinda Gates Foundation (BMGF) in a study conducted in 2017 reported that non-ODF areas have around 44% higher cases of diarrhoea among children. Another UNICEF study earlier in 2017 suggested that in an ODF village, each family saves over Rs. 50,000 per year on account of avoidable medical costs, time savings, and lives saved. IMF 2017-18 Gender Equality study indicated approximately 10% reduction in time spent by women in household and child care and 1.5% increase in women participation in the workforce. Broadly, the studies are pointers to a new dawn of quality in life ushered in by the new sanitation regime post SBM. While complimenting the provision of toilet access to 60 crore population in a record time of 60 months, the Prime Minister in his address at the Swachh Bharat Divas on 2 October, 2019 underlined the fact that the sanitation initiative is particularly directed to the welfare of the poor and the

Impact studies by various eminent institutions/organisations clearly highlight several benefits across health, financial, and environment parameters linked to SBM achievements. A WHO 2018 study had estimated that over 3 lakh lives will be saved by 2019 when India turns ODF.

marginalised. The task now is not to lose it, rather to build on it.

The case of Peddapalli district in Telangana, which was recently conferred the top honours for cleanliness, points to the multi-dimensional nature of the sanitation task. The district is free of any open sewerage or drainage besides having constructed a large number of segregated community toilets in addition to household toilets for all. Sanitation committees in the villages are responsible for maintenance of these community toilets and they also ensure that water drains are free of plastic and other garbage. The district has been practising Swachh Shukravar (Clean Friday) when all government employees, irrespective of rank and grade, join the villagers in the morning to clean up, build sanitation facilities and plant trees. This Peddapalli model can act as an example for the villages in the rest of the country.

Sensing the importance of Quality & Sustainability (Q&S) in the years to follow, the Department of Drinking Water and Sanitation (DDWS), Ministry of Jal Shakti, has launched the 10-year Rural Sanitation Strategy (2019-2029), which focuses on sustaining the sanitation behaviour change that has been achieved under the Swachh Bharat Mission-Gramin. This strategy has been prepared in consultation with the State Governments and other stakeholders, and it lays down a framework to guide

local Governments, policy makers, implementers, and other relevant stakeholders in their planning for ODF Plus, where everyone uses a toilet and every village has access to Solid and Liquid Waste Management. There is special focus on capacity building and IEC consolidation and grey water and black water management. One of the critical factors in ensuring sustainability of regular toilet usage is availability of water. The Ministry of Jal Shakti has launched the ambitious scheme of Jal Jeevan Mission (JJM) to bring piped-water supply to every household by 2024 and this initiative should be of great help in sustaining sanitation.

Addressing Sarpanchs and Swachhagrahis near Babu's Ashram at Sabarmati on his 150th birth anniversary, the Prime Minister credited ordinary villagers of India for dedicated participation in what has become one of the iconic sanitation and behaviour change movements of the world. But at the same time, he also reminded everyone about the task to preserve and take forward the Swachh Bharat achievements. He was quick to place before the nation a specific sanitation and environmental agenda to get the country free of Single-Use Plastic (SUP) by 2022. So, the next step, again time bound and in mission mode, is very much on the table. The *Jan Andolan* will be ceaseless.

More recently, after picking up plastic and other litters during morning walk at a beach in Mamallapuram in the midst of an important international engagement, the Prime Minister tweeted, "Let us ensure our public places are clean and tidy! Let us also ensure we remain fit and healthy." These remarks show the seriousness and the initiative on the part of the political leadership that holistically links sanitation, health, and fitness of a 130-crore population and also underline the long road one has to travel to the destination of *Sampurna Swachhata*.



Delhi Metro: Sanitation in Public Places

Anuj Dayal

Over 30 lakh footfall, on an average, every day would bring enormous challenges in terms of sanitation and hygiene for any public-transport system. Delhi Metro Rail Corporation (DMRC) is continuously working towards developing a sustainable model to maintain world-class public hygiene and sanitation across its premises. The article discusses its success story and evolution highlighting the efforts made in last two decades.

The Delhi Metro today operates on a network of 377 kilometres and 274 Metro stations (including the Noida – Greater Noida Metro corridor). The scale of the operations can be gauged from the fact that more than 30 lakh people avail the services every single day for more than 18 hours. Over 320 trains traverse these distances carrying people to their chosen destinations.

With such massive scale of operations involving millions of people, public sanitation becomes an important operational challenge. The functioning of the Delhi Metro is primarily divided into two verticals: the Project wing and Operations & Maintenance wing. While the Project wing takes care of the construction activities of the Delhi Metro, the Operations & Maintenance wing is responsible for the operations and upkeep of the Metro services on a day-to-day basis.

All the stations of the Delhi Metro network have been provided with toilets for passenger use. From Phase 2 onwards, toilets have been included in the station plan itself. In Phase 3, toilets are available in the paid

areas of all stations. Housekeeping is also accorded the highest priority and mechanised cleaning is carried out both inside the trains and at the stations. At all construction sites, toilets are provided for the use of the workers. Regular cleanliness drives are organised at the sites to ensure a hygienic working environment.

Project Wing

DMRC's construction activities are an integral part of its overall functioning. Since 1998, DMRC has been engaged in construction of Metro almost continuously. While in 2005, Phase I of the Delhi Metro with 65 kilometres was completed, in 2011, the second phase comprising of 125 kilometres was operationalised. In 2018, the third phase of the Delhi Metro consisting of 160 kilometres of new lines was completed.

With construction sites dotted all across the National Capital Region (NCR), thousands of construction workers have been engaged in the Metro construction work over the last two decades. Compliance to labour laws and amenities prescribed by the Government are strictly adhered to and regular inspections are conducted



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to ensure the same. DMRC conducts orientation workshops for contractors so that these aspects are adequately taken care of.

Since so many workers and officials are engaged in the construction work, sanitation becomes an important requirement. In India, it is often seen that construction sites do not make provisions for toilets because of which workers have to use open spaces nearby which causes nuisance and is also unhygienic. DMRC has taken the necessary measures to curb this menace. It is mandatory for contractors to provide toilets for workers within the sites. The toilets are properly maintained with continuous availability of water.

Regular inspections are conducted to ensure the same.

Along with the above, the workers are also sensitised about the importance of maintaining hygiene. Through various activities such as workshops, street plays, distribution of leaflets etc., they are made aware about the importance of maintaining hygiene. For example, at the beginning of the mosquito-breeding season around June-July every year, leaflets are distributed and banners are installed at sites to raise awareness about the importance of keeping the sites free of stagnant water.

Also, attractive graffiti and artwork are painted on the barricades around the construction sites to raise

awareness about construction site safety, health, and hygiene-related issues. As a result of these initiatives and continuous vigil, there have been no complaints pertaining to public sanitation at construction sites since the commencement of work in 1998.

Operation and Maintenance Wing

As an urban transit provider, Delhi Metro acknowledges the importance of providing safe, clean, and hygienic sanitation facilities to its commuters while they are in the premises of DMRC's network. This is evident from the facilities provided by DMRC across its network. In a rare feat, DMRC provided toilet facility at all of its 274 stations across Delhi-NCR. This is perhaps the highest number of toilets provided by any urban transport system in the world. In all the stations under the Phase 3 project, toilets have been opened in the paid area of the stations so that commuters can use the facilities quite near to the platforms from where they board the metro. The stations built prior to Phase 3 project have been provided with toilets based on the availability of space.

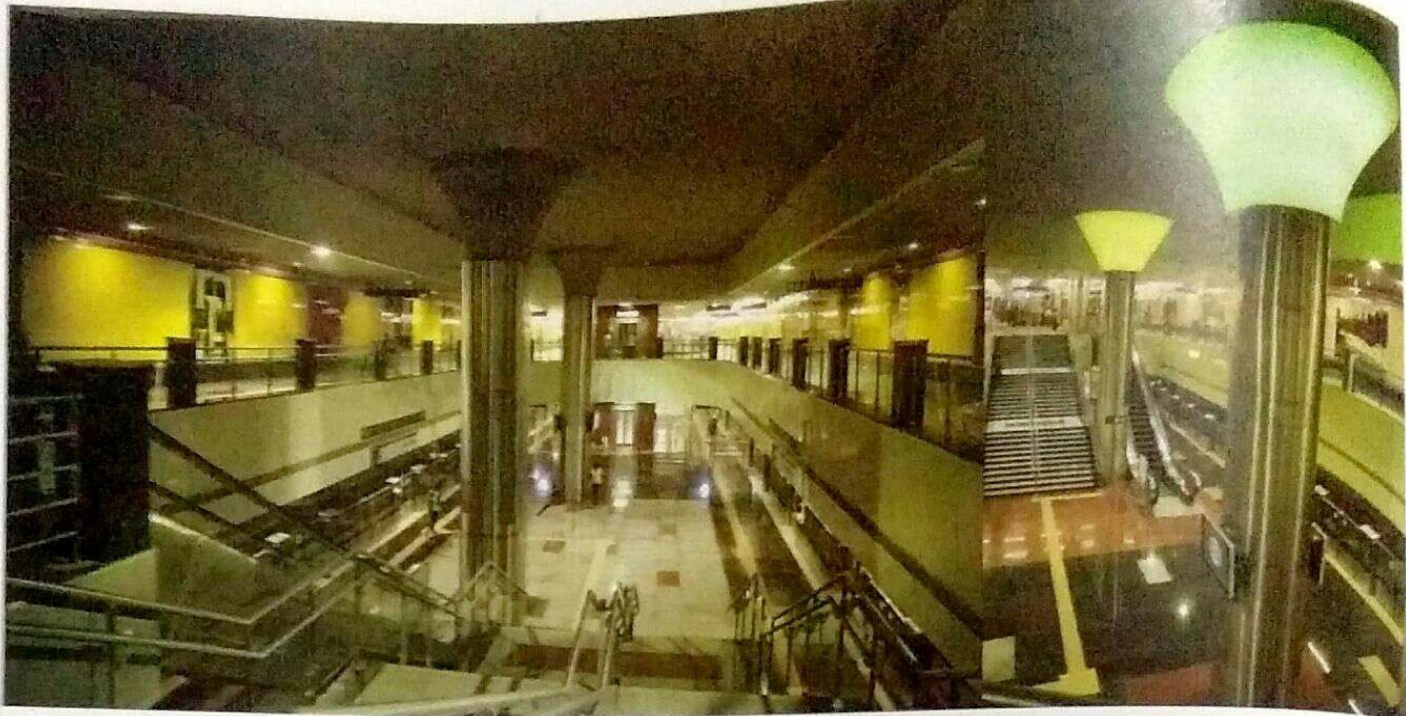
The toilets are built inside the station buildings, making them easily accessible for commuters. While constructing the facilities, Delhi Metro has also ensured that they are easily accessible for the elders, children, and physically-challenged commuters as well. DMRC followed the guidelines and space standards for barrier-free built environment for them. The charges for using toilet facility are kept nominal to ensure affordability.

Building toilets is only a part of the job. Merely building the facilities without a proper maintenance plan would fail the whole purpose. Hence, DMRC roped in the NGOs like Sulabh International and M/s Civic International to maintain the facilities. This helped us maintain the toilets and ensure functionality of the facilities with adequate water supply. Further,



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Delhi Metro also installed additional public toilet utilities outside some of the station premises. These facilities are open for use by even those who do not travel by metro. The DMRC staff washrooms in the station buildings are also open for commuters in case of urgent requirement.

Keeping the Metro premises clean and dirt-free is another crucial aspect of public sanitation. Delhi Metro accords highest priority to cleanliness in its premises. It is one of the cleanest transport systems in the world. Over a period of time, Delhi Metro has adopted improvised cleaning and housekeeping practices at metro stations to ensure world-class cleanliness standards. To ensure the same, DMRC conducts specialised training programmes for all its station managers.

For this mechanised cleaning and housekeeping work, DMRC has introduced a number of new equipment and machines which keep the entire system clean and hygienic round the clock. All the team leaders and supervisors of the cleaning teams deputed at the stations, maintenance depots etc. have been trained and certified by specialised agencies.

In addition to this, DMRC also organises orientation programmes and workshops for all its station managers, train maintenance depot in-charges, and other officials from Operations Department to understand the nuances of these cleaning and housekeeping techniques.

It is ensured that the requisite machinery, reagents, chemicals, and housekeeping staff are mobilised and their minimum wages including timely payment of EPF and ESI contribution are made directly by making payment through bank account. The following are the highlights of the housekeeping practices applied at DMRC network:

1. Mechanised cleaning operations by deployment of machinery: In addition to upgrading existing machinery some new machines like electrically-operated scrubber drier, back pack vacuum cleaners etc. have been provided;
2. Dust-free sweeping and cleaning operations;
3. Disposal of waste and garbage in bio-degradable disposal bags in a hygienic manner; and
4. Using eco-friendly cleaning chemicals and reagents for cleaning operations.

Apart from the above mentioned initiatives, DMRC also provides drinking water at stations at nominal price, charging only for the recyclable paper cup if users do not bring their own containers/bottles. DMRC installed RO plants at some of the stations which purify the internal water supply, recycling it to provide pure drinking water through its Smart Water ATMs. To maintain them, DMRC collaborated with private firms.

Delhi Metro also makes it a point to adopt environment-friendly practices in its project execution and operation. In line with the Government of India's recent initiatives, DMRC imposed ban on single-use plastic across its network. We are also committed to adopting greener technologies to arrest the process of climate change. DMRC has developed several projects to demonstrate savings in CO₂ emissions from its activities. All the upcoming Metro stations under the Delhi Metro as part of its third phase are designed and being constructed as 'green buildings' with specific provisions for the conservation of energy as well as better CO₂ saving, water saving and waste management arrangements.

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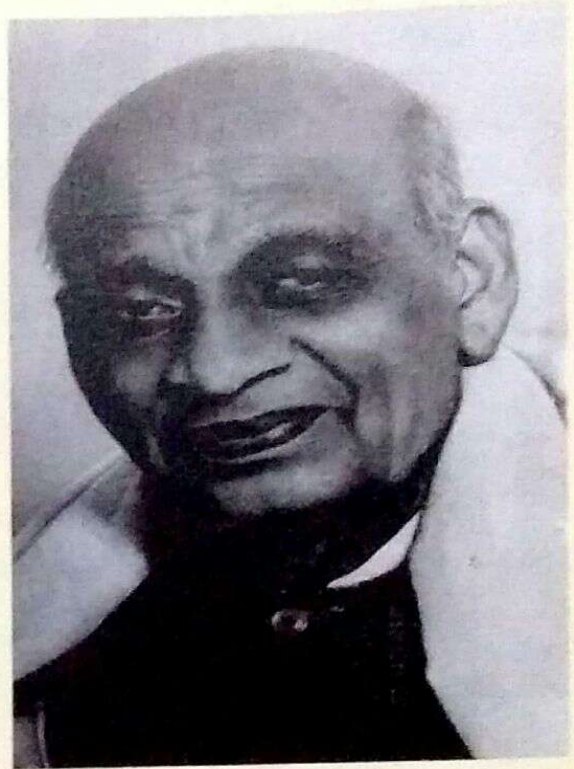
Sardar Patel National Unity Award

For Notable and Inspiring Contribution to the Unity and Integrity of India



Obverse

Reverse



Government of India has instituted the highest civilian award in the field of contribution to the unity and integrity of India, in the name of Sardar Vallabhbhai Patel. A notification instituting the Sardar Patel National Unity Award was issued by Ministry of Home Affairs on 20th September, 2019.

The Award seeks to recognise notable and inspiring contributions to promote the cause of national unity and integrity and to reinforce the value of a strong and united India. The award will be announced on the occasion of the National Unity Day, i.e. the birth anniversary of Sardar Patel on 31st October.

The Award shall be conferred by the President by a *Sanad* under his hand and seal and presented by him in a presentation ceremony along with the Padma award presentation ceremony held in Rashtrapati Bhawan.

An Award Committee includes the Cabinet Secretary, Principal Secretary to the Prime Minister, Secretary to the President, Home Secretary as Members and three-four eminent persons selected by the Prime Minister.

The Award would consist of a medal and a citation. No monetary grant or cash award would be attached to this Award. Not more than three Awards would be given in a year. It would not be conferred posthumously except in very rare and highly deserving cases.

The nominations would be invited every year. The applications would need to be filed online on the website www.nationalunityawards.mha.gov.in specifically designed by Ministry of Home Affairs. All citizens, without distinction of religion, race caste, gender, place of birth, age or occupation, and any institution/organisation would be eligible for the Award.

Any Indian national or institution or organisation based in India would be able to nominate an individual for consideration for this Award. Individuals may also nominate themselves. State Governments, UT Administrations and Ministries of Government of India may also send nominations. □

(Source: PIB)

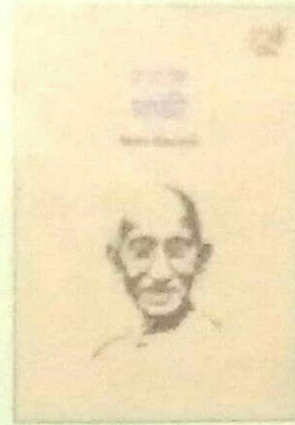
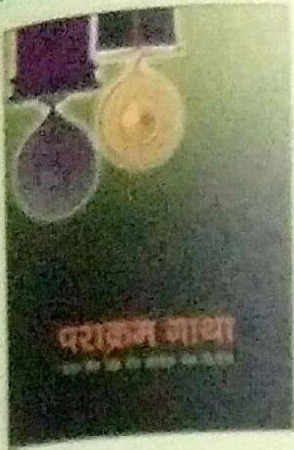
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Publications Division wins 9 awards in various categories of Book Publishing

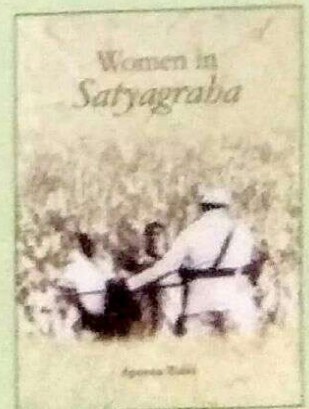
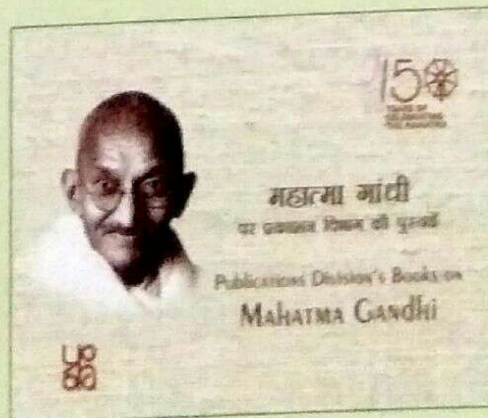
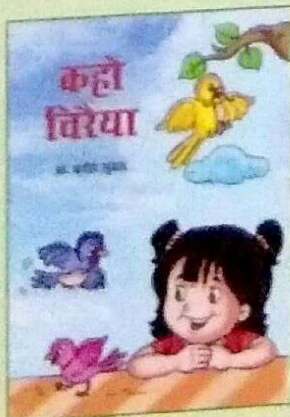
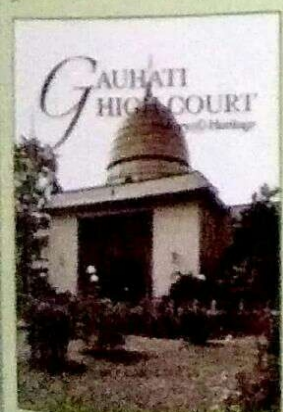
Publications Division has bagged nine awards in different categories, related to books and journals on 28 September 2019. These awards were announced by the Federation of Indian Publishers (FIP), the leading body of Indian publishers. In previous years too, DPD had bagged awards in various categories – 8 awards in 2018 and 11 awards in 2017 respectively.

This year, Publications Division won four 1st prizes in the categories of General paperback books (for *Parakram Gatha*), Cover jackets (for *Loktantra Ke Swar* - compilation of Hon'ble President's speeches), Hindi Art Book/Coffee Table Books (for *Mahatma Gandhi: Chitramay Jeevan Gatha*), and Journals and House Magazines (for *Kuruksheetra*- Hindi- July 2018).

Besides, Publications Division received four 2nd prizes in the categories of Art/Coffee Table Books (for *Gauhati High Court- History and Heritage*), Children's literature in two age-group categories (for *Kaho Chiraiya* and *Saral Panchtantra, Part 1*) and Catalogues & Brochures (for *Catalogue on the books on Mahatma Gandhi*). Publications Division also bagged Certificate of Merit for its book, *Women in Satyagraha*, for adolescent readers.

Earlier, Publications Division also bagged first prize for display of Hindi books in the 25th Delhi Book Fair organised by FIP. The Fair was held during 11-15 September 2019, where Publications Division has displayed over thousand books on sale.

Publications Division is continuously upgrading its publications with enriched content and innovative designing to catch readers' attention in competitive market, with various private and public sector publishers.



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AI-enabled mobile application for Swachh Bharat Mission

The Ministry of Housing and Urban Affairs (MoHUA), along with the Swachh Survekshan-2020 Toolkit- "SBM Water Plus Protocol and Swachh Nagar"- has launched an integrated waste management app and Artificial Intelligence enabled mSBM App. The Swachh Survekshan 2020 Toolkit contains the detailed survey methodology and component indicators with scores to help cities to prepare themselves for the survey.

AI-enabled mSBM App, a Mobile App developed by the National Informatics Centre (NIC), not only facilitates the applicants of Individual Household Latrine (IHHL) under SBM-U to know the status of their application in real-time after uploading the photograph but also helps them upload the correct photo. The App also helps the respective ULB nodal officer to verify and approve the application thereby significantly reducing the processing time for the applicants.

The Ministry every year redesigns the Swachh Survekshan innovatively to ensure that the process becomes more and more robust, with focus on sustaining the changed behaviours.



Prohibition of Electronic Cigarettes

In a major health and wellness initiative for the country, the Union Cabinet approved the Promulgation of the Prohibition of Electronic Cigarettes (production, manufacture, import, export, transport, sale, distribution, storage and advertisement) Ordinance, 2019. Electronic-cigarettes are battery-operated devices that produce aerosol by heating a solution containing nicotine, which is the addictive substance in combustible cigarettes. These include all forms of Electronic Nicotine Delivery Systems, Heat-Not-Burn Products, e-Hookah and similar devices. Their use has increased exponentially in developed countries, especially among youth and children. Upon promulgation of the Ordinance, any production, manufacturing, import, export, transport, sale (including online sale), distribution or advertisement (including online advertisement) of e-cigarettes shall be a cognizable offence, punishable with an imprisonment of up to one year or fine up to Rs. 1 lakh or both for the first offence and imprisonment of up to three years and fine up to Rs. 5 lakh for a subsequent offence. Storage of electronic-cigarettes shall also be punishable, with an imprisonment up to 6 months or fine up to Rs. 50,000 or both. The owners of existing stocks of e-cigarettes on the date of commencement of the Ordinance will have to suo moto declare and deposit these stocks with the nearest police station.

(Source: PIB)

Water Heroes - Share Your Stories Contest

The "Water Heroes - Share Your Stories" Contest is launched by Department of Water Resources, River Development & Ganga Rejuvenation; Ministry of Jal Shakti, Government of India with the objective of promoting value of water in general and for supporting country-wide efforts on water conservation and sustainable development of water resources.



The participant will have to post their Success Stories in the field of water conservation which will comprise of a Write-up (up to 300 words), pictures and a video of one to five minutes duration depicting their efforts/significant contributions/best practices used in different parts of the country in field of water conservation, water utilisation or water resources development and management. The participants will share their stories, pictures along with the link of their Youtube Video on the MyGov portal. In addition to MyGov Portal, the entries may also be submitted to waterheroes.cgwb@gmail.com

All selected entries will be awarded a cash prize of Rs. 10,000 each. The Contest shall run for duration of 10 months. Each month, a maximum of 10 entries shall be selected for the cash prize.

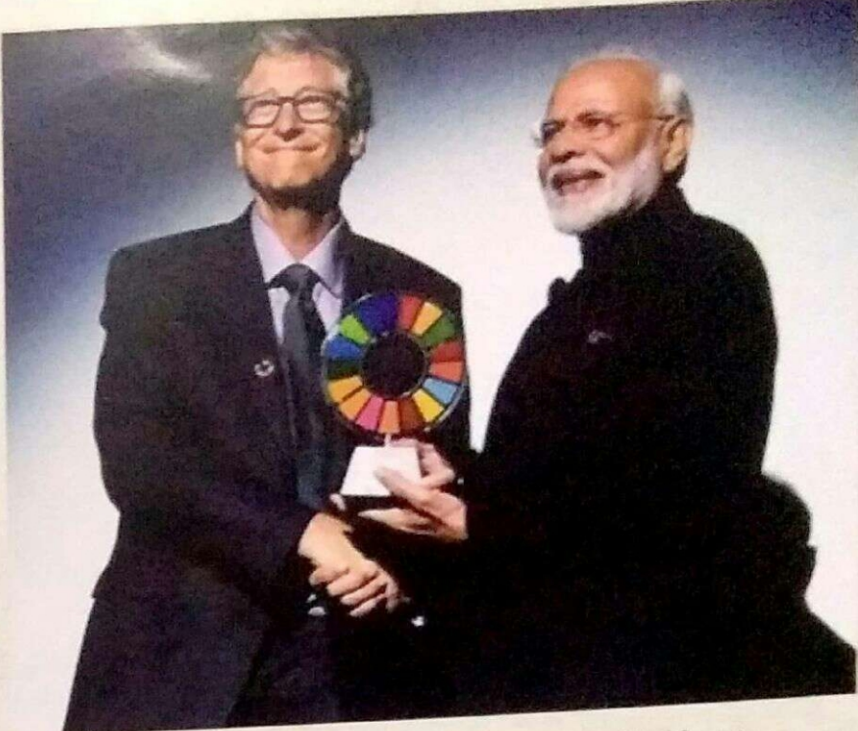
The last date of submission is 30.06.2020.

Source: <https://www.mygov.in/task/water-heroes-share-your-stories-contest/>

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PM receives 'Global Goalkeeper Award' for Swachh Bharat Abhiyan

The Prime Minister, Shri Narendra Modi received the 'Global Goalkeeper' Award by Bill and Melinda Gates Foundation for Swachh Bharat Abhiyan on 24 September, 2019. The award ceremony took place on the sidelines of the United Nations General Assembly (UNGA) session in New York.



After receiving the award the Prime Minister said, "The success of the Swachh Bharat Mission is due to the people of India. They made this their own movement and ensured the desired results were attained." He dedicated the award to those Indians who transformed the Swachh Bharat Abhiyan into a mass movement. Terming it as a significant moment personally to receive the award on the 150th birth anniversary of Mahatma Gandhi, he said that Swachh Bharat Abhiyan is proof that when 130 crore Indians take a pledge, any challenge can be overcome. He added that India is making remarkable progress in fulfilling Mahatma Gandhi's dream of a Swachh Bharat.

Speaking on improving global sanitation coverage, Prime Minister said that India is ready to share its expertise and experiences with other nations, so that there can be collective effort towards increasing sanitation coverage.

(Source: PIB)



"... Let us ensure our public places are clean and tidy! Let us also ensure we remain fit and healthy." @narendramodi (After plogging at a beach in Mamallapuram, Tamil Nadu.)



"Congratulations to Abhijit Banerjee on being conferred the 2019 Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel. He has made notable contributions in the field of poverty alleviation. I also congratulate Esther Duflo and Michael Kremer for winning the prestigious Nobel." @narendramodi

Interactive Dashboards on Swachh Bharat



Check interactive dashboards on Swachh Bharat – Urban and Swachh Bharat – Gramin, respectively to get the latest sanitation figures at: <http://sbm.gov.in/sbmreport/home.aspx> & <https://sbm.gov.in/sbmdashboard/>

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