

Sanitation Economy and Dignity of the Sanitation Workers	1
Gram Panchayat: Beyond ODF	3
Sustaining Behavioural Change	5
Solid Waste Management : The Way Forward	7

Sanitation Economy and Dignity of the Sanitation Workers

Background -

- 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 is 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 USD 32 billion in 2017 and doubling to USD 62 billion by 2021.
- 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.

Government's initiatives towards sanitation -

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

1. The first major initiative towards sanitation was the **Swachh Bharat Mission (SBM)**. It is heartening for me to note that since the launch of the SBM, the Government has built 1007.98 lakh toilets in the rural areas, thereby enhancing percentage of individual households with Latrine (IHHL) coverage to 100 percent - a whopping jump of 61.3 percent between 2014 and 2019. During the same period, as many as 699 districts, 2,58,657 Gram Panchayats, and 5,99,963 villages self-declared themselves as ODF. As far as urban areas are concerned, between 2014 and 2019, 60 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. This is a tremendous achievement, given the fact that only 41% were practicing source segregation in 2014.
2. 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*

JaI) by 2024. 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.

3. Government's initiative to **curb single-use plastic** from 2 October, 2019 will help in significant reduction in littering as about 14 million tonnes of plastic are used annually in the country.

Dignity to the Sanitation Workers -

- A. **Legal Protection for Eliminating Manual Scavenging** - Sanitation workers are divided broadly into two categories - Safai Karamcharis and Manual Scavengers. In order to prohibit the 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 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 a fine up to Rs 2 lakh, or both.
- B. **Ensuring Minimum Wages, Safe Working Conditions and Pension Benefits** - For ensuring timely minimum wages, and timely payments of wages to all workers including the sanitary workers, Ministry of Labour and Employment has enacted the Code on Wages Bill, 2019. This bill also provides for higher wage premium for workers engaged in arduous and hazardous work in difficult circumstances. The Code on Occupational Safety, Health and Working Conditions, 2019 and 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 a safe and healthy work environment. 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 workers which will benefit the sanitation workers. The PM-SYM is a voluntary and contributory pension scheme, under which the subscriber shall receive minimum assured pension of Rs 3,000 per month after attaining the age of 60 years.
- 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. 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 and Empowerment acts as an apex corporation for the all-round socio-economic upliftment of the safai karamcharis. The NSKFDC is the Nodal Agency for implementation of the Self-Employment Scheme for Rehabilitation of Manual Scavengers (SRMS) scheme.

- D. **Protecting Sanitation Workers through Ayushman Bharat** - Ayushman Bharat - Pradhan Mantri Arogya Yojana (PMJAY) covers 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.

Way forward -

- We must focus on putting in place a robust monitoring mechanism to check the condition of sanitation at the district and Panchayat level.
- We must focus on circular economy for converting our waste into resources. The first step in this regard will be 100 percent achievements in terms of waste segregation, successful disposal, and streamlining waste infrastructure. We must focus on sustained behavioural changes through a trained workforce for curbing single-use plastics.
- 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.
- Prioritisation and faster identification of insanitary latrines and manual scavengers through a time-bound plan must be seriously and earnestly pursued.

Gram Panchayat: Beyond ODF

History of Sanitation Programme -

- Even during the 1970s and 80s, when national vaccine programmes were experiencing a relatively high rate of coverage, sanitation coverage was averaging growth rate of 1 percent annually. At that rate, it would take India until 2080 to achieve universal sanitation access, and that is assuming a no population growth.
- India signed the Constitution of the World Health Organisation (WHO) in 1946 in New York, which sought to grant the WHO the authority 'to promote, in cooperation with other specialised agencies where necessary, the improvement of nutrition, housing, sanitation, recreation, economic or working conditions and other aspects of environmental hygiene.
- India was also a signatory to the Human Right to Water and Sanitation since 2010 at the UN General Assembly.
- The current Sustainable Development Goals (SDGs) - in particular SDG 6, aims for universal water supply and sanitation.
- The Central Rural Sanitation Programme (CRSP), and its restructured successor, the Total Sanitation Campaign (TSC), were implemented in 1986 and 1999, respectively and were Central Government initiatives that relied upon State-level implementation to increase access to sanitation in rural areas.
- Another initiative, Nirmal Gram Puraskar, was launched in 2005 and returned with modest results, even though it propagated the inclusion of financial awards for high-performing gram panchayats.

- Following that, the Nirmal Bharat Abhiyan (NBA) in 2012 came with a much higher financial incentive of Rs 10,000 (compared to Rs 4,600 granted before) for every qualifying household, and leaned heavily on the MGNREGA.

Lessons that shaped Swachh Bharat -

- The confined focus on construction did not address the fact that even those who did not receive toilets often ended up still defecating in the open.
- Incorporating behavioural change communication (BCC) frameworks into social programmes allows implementers to message directly that influences one's sense of self-efficacy and agency to realise behaviour change.

The approach to SBM-G itself was structured to allow more freedom in execution and a few unique advances include -

1. Strong public and political willpower publicised by the Prime Minister over the past five years.
2. Adequate funding that paid necessary incentives to off-set high capital cost for 100 million households - approximately Rs 1,00,000 crores.
3. District-level flexibility in administering the necessary activities and campaigns to increase coverage.
4. Improving the ratio of financial investment in hardware with strong investment in software (i.e. behaviour change communication) with the community-level outcomes (like ODF status) - not single households in mind.
5. Utilising the Community Approaches to Sanitation (CAS) methodology, which evoked emotional reactions such as disgust to the practice of open defecation.
6. Women-headed households and Scheduled Castes and Tribes prioritised in the programme, with specific mention and attached incentives in the guidelines.

Issues -

- While the 73rd Amendment to the Constitution of India delineated drinking water and sanitation as the responsibility of Panchayati Raj Institution (PRIs) - including GPs - often it was the direct authorities which made the important interventions.
- Through the national Gram Panchayat Development Plans (GPDP) guidance of 2018, Ministry of Panchayati Raj has made efforts to ensure that GPDPs are appropriately convergent in reflecting how WASH investments and interventions can be mainstreamed into existing budgetary considerations.

Giving GPs the Central Role -

- In 2018, the Government revised the national GPDP guidelines to specifically state that 'sanitation, solid waste management, drinking water. . . need to be prioritised into the revised state level guidelines on GPDP'. This is echoed by the 2018 rural ODF-Sustainability Guidelines.
- A newly drafted 10-year Rural Sanitation Strategy, which lays down the steps to be taken till 2029 is intended to guide, central, state and local governments; policy makers,

implementers and all relevant stakeholders in the planning for and achievement of what happens beyond ODF i.e. what is called ODF Plus.

- This is necessary for India to sustain its achievement towards the Sustainable Development Goal (SDG) 6, especially SDG 6.2 which is, 'By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations'.

Sustaining Behavioural Change

Swachh Bharat Mission was launched on October 2, 2014. It succeeded in construction of over 10 crore toilets by 2nd October, 2019. Because of these enormous efforts, about 6 lakh villages in approximately 700 districts in the country were declared open defecation free.

Uniqueness -

A major differentiating feature of SBM from all the 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.

Addressing the concerns -

- The 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.
- 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.
- SBM focuses on collective behaviour change of the entire community. However, many villages are not homogenous and are fragmented along caste and religious lines. So, the collective behaviour change in a village becomes difficult when there are more conflicts.

Objective -

With this background, SBM 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 and Telecommunication (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.

Behavioural patterns -

- There is a strong relationship between having a separate kitchen and having a toilet.

- 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.
- The access to the toilet has a 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 economic condition of the household, 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.
- 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 percent.
- Apart from socio-economic infrastructural, and environmental aspects, the state-specific efforts on access and use of toilets came out as significant. The chances of open defecation are higher by 13 percent and having toilet for exclusive use is lower by 37 percent in Gujarat as compared to Bihar.

Recommendations -

- More emphasis may be given for information dissemination at the ground level.
- 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.
- Higher income of households with higher purchasing power for durable goods would lead to better living standards of living and thus sanitation practice.
- Emphasis on female literacy is imperative for better sanitation coverage.

Solid Waste Management : The Way Forward

Ministry of Environment, Forests and 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.

Legal Framework -

- Solid Waste Management Rules, 2016 delineate the responsibility of the different stakeholders including the MoEF&CC, Ministry of Housing and Urban Affairs, Central Pollution Control Board, State Pollution Control Boards, 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 -

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.
- 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).

Status of Solid Waste Management -

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.

SWM initiatives -

1. Initiatives taken by CPCB -

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

1. Guidelines on Legacy Waste;
2. Guidelines on Buffer Zone;

3. Guidelines for the Management of Sanitary Waste; and
4. Selection Criteria for Waste Processing Technologies.

2. Initiatives taken by States/UTs -

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.

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;
- Municipal bye-laws for levying spot fine for littering framed.

3. Setting up of Waste-to-Energy Plans -

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.

4. Development of Model Cities -

Model cities which include Pune, Indore 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.

5. Increased Judicial Intervention -

Some of the major orders issued by the NGT include -

- Every state and UT shall enforce and implement the Solid Waste Management Rules, 2016 in all respects and without any further delay.
- All the State Governments and UTs shall prepare an action plan in terms of the Rules of 2016 and the direction in this judgement, within four weeks from the date of pronouncement of the judgement.
- It shall be mandatory to segregate prior to incineration relatable 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.

Challenges -

1. Segregation of waste at source by waste generators;
2. Lack of infrastructure for collection and transportation of waste;
3. Availability of land for setting up of waste collection and transportation facilities;
4. Budgetary provisions for (ii and iii) above;
5. Techno-economically viable solutions for fresh and legacy Waste;
6. Management of legacy waste;
7. Rural areas not covered in most of the States/UTs; and
8. Enforcement issues.

Way forward -

1. Creating public awareness for involvement of different stakeholders for SWM.
2. Development of ULB-wise action plan for collection, segregation, transportation and processing of waste.
3. Emphasising on setting up of waste processing facilities rather than waste disposal facilities.
4. Giving filip to research and development activities with a focus on resource recovery from waste.
5. Capacity building in various regimes of SWM.
6. Laying down of an appropriate governance framework at State and District levels.
7. Clear allocation of responsibility to ULBs and waste generators for setting up of infrastructure and for involving informal sector in waste collection/segregation.
8. Adequate technical support to ULBs for processing technology and best practices in waste management.