SUPREMO AMICUS

VOLUME 40 | February, 2026 Peer Reviewed | Refereed Journal

CRITICAL ANALYSIS ON THE RURAL SANITATION COVERAGE UNDER SWACCH BHARAT MISSION

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ABSTRACT

The Swachh Bharat mission, which was launched in the year 2014, is one of the most ambitious national level missions taken up by the Indian government for the transformation of sanitation at the rural level.[1] This research on the topic "Rural Sanitation Coverage under Swachh Bharat Mission (Grameen)", examines the progress made so far in the area of this mission, behavioural aspect which came in the society naturally, assessing the patterns of usage of the rural sanitation complexes, and the overall prolonged sustainability of the mission, scrutinising the data dashboards the Indian govt, reports on the solid and liquid waste management in the rural areas, and the recent studies on the rural regions to see how far has the policy established by the govt been successful and examining the gaps in the existing researches of scholars as well as the data provided by the ministries. The study here shows that the Swachh Bharat mission(SBM-G), has witnessed an increase in the construction as well as the usage of the rural sanitation complexes with a universal coverage. Many researches and studies that showcased that there is a notable decrease in the overall health of the rural masses which reduced the number of infant deaths due to increased sanitation coverage at the rural level. However, as per the qualitative analysis of the studies of the rural sanitation complexes, parliamentarians' assessment revealed that the construction of toilets doesn't really guarantee the usage of such complexes. Challenges are also faced such as water availability, minimum affords in maintaining the sanitation complexes, inconsistent faecal sludge management which still hampered the long term functioning of these facilities provided and funded by the government. Comprehensively, it is out there in the public that the mission of rural sanitation needs improvement in lieu of the maintenance of these complex and sustainable development of these rural sanitation complexes.

KEYWORDS: Swachh Bharat Mission Gramin Rural Sanitation Coverage Toilet Usage Behaviour Change SLWM and FSM Public Health Sustainabil

INTRODUCTION

The rural sanitation in India is one of the most extreme variations which covers the whole of the territory of the rural India where open defecation claims (ODF) was the most practiced but now as we have seen after the establishment of this policy, Swacch Bharat Mission-Grameen (SBM-G). Nevertheless, when the layers come off the policy unwraps its trends as long term troubles are downgraded with the driven reforms about the rural sanitation. Over the past few years in India, the rural sanitation was way too poor to be even talked about which put a strain on Indian society as well as health. The surveys conducted before the policy formation i.e., 2014, were unnerved close to almost 565 million people which is more than 60% of the rural population practiced the old way of open defecation[2]. This wasn't really the game of numbers but the culture practiced was ubiquitous. Caste systems made the inferior caste go for open defecation even though there were fewer toilets made. This open defecation often led to harassment and health concerns. TSC (2009-12) attempted subsidies

[1] *Government of India, Daily Data on Rural Sanitation Coverage under SBM-G, Data.gov.in.*

[2] *Ministry of jal shakti, swacch bharat mission(gramin): operational guidelines(govt of india),2014*

and awareness but failed with only partial coverage amid the weakened enforcements.

The escalating proof gave the blaring alarm to a national policy i.e., sanitation-related diseases have killed 200,000 children every year and decreased the growth anticipated and kept poverty in a loop. Joining SBM-Grameen in the year 2014 was an ambitious step by the Prime Minister Narendra Modi whose guidance is the legacy of Mahatma Gandhi. Talking about it by 2019, an Open Defecation Free (ODF) India (Phase II: 2020-2025) with environment friendly and waste management. Some of the criterias were individual household latrines (IHHLs) in every rural house, sanitary complexes for the whole community, and behavioral change through door to door campaigns, which was boosted by 1.4 lakh crore investment by the government.[3] There are official dashboards that are crammed with success. In the year 2014 the inclusive was 39% and in 2019 it went to 100% and more than 11 crore toilets have been built (SBM Dashboard; PIB, 2024). The research accredits SBM to the anticipation of 60,000-70,000 infant deaths and the reduction of rural impedance[4]. The critical analysis is herein though the one question whether we have coverage to usage? The deficit is independent and also found by individualistic probes, with 19% continuing to defecate openly in NARSS 2019-20, and tribal and underrepresented areas being the most lagging (ISEC WP-555; ResearchGate studies)[5]. There is not proper functioning of these sanitary complexes, which is shown in the Phase II data, and this makes the question of environment friendly with capitalizing lacunas and cultural inaction(SBM Village Status Report). This research will meticulously unburden the rural sanitation coverage as the part of SBM, digging through the government portal data and academic and scholarly articles to assess about out what actually works and what does not and why the real impact would need more than just sanitation complexes, it would need egalitarianism, imposition, and practices.

CRITICAL OVERVIEW OF THE SWACCH BHARAT GRAMEEN(SBM-G)

Swachh Bharat Mission Grameen (SBM-G), came into force in the year 2014, is India's most important rural sanitation reform aiming at abolishing open defecation and enhancing sanitation at the rural level. As per the official SBM dashboard and official site data.gov.in, rural toilet coverage stood up from 38% in 2014 to nearly 100% reported coverage by 2019, embarking a remarkable organisational enlargement across the states. Nonetheless, a critical reading of self sustaining data surveys such as NARSS 2019–20 and UNICEF's sanitation collision studies showcased that while toilet building numbers are majestic, sustained use of sanitary complexes across regions.

The core of SBM-G encompasses on eliminating open defecation, making it certain that ubiquitous ingress to toilets, ameliorating village cleanliness, and encouraging societal change. Construction of Individual Household Latrines (IHHLs) has been the main focus, with millions of toilets built under government subsidies. Studies (ResearchGate Raj Priya, 2023; Kulkarni, 2024) culmination improved easing and stateliness for rural menage but also noted concerns of less use due to water dearth and poor toilet layout.

A key element of SBM-G is Solid and Liquid Waste Management (SLWM), which aims to escalate the mission from sanitation complex construction to isolated sanitation. In spite of the fact that, SLWM coverage remains potholed. Technical Notes published by SBM (2022) showed that many rural areas lack an ascetic waste-treatment institution, predominant to unsafe faecal sludge getting rid of also reverberated in World Bank and Frontiers Environmental Studies examination. Village cleaning drives, including "Swachhata Hi Seva" and grassroots involvement in total sanitation approaches, have

[3] *Ministry of Jal Shakti, 10 Years of Swachh Bharat Mission (Grameen) (2023)*
[4] *Ministry of Jal Shakti, Swachh Bharat Mission (Grameen): Operational Guidelines (2014)*
[5] *ISEC, Working Paper No. 555: Sanitation Governance in Rural India*

contributed to widespread awareness. Yet there are immersion reports (WEDC, IDS) which show that behavioral substituting intercedes were often short spanned and heavily target-driven[6]. Ultimately, Community Sanitary Complexes (CSCs) underpin the houses without space for IHHLs, but few of the SBM data highlights that many CSCs suffer from poor maintenance,restricted water stockpile, and not clarified ownership accountabilities. Comprehensively, SBM-G has significantly expanded rural sanitation substructure, but condemnatory challenges endure in usage, ecological, sanitation services, and community-led maintenance, indispensable carry on with policy attention in the second phase of the policy implementation.

TRENDS IN RURAL SANITATION COVERAGE

Rural sanitation coverage in India has seen a considerable shift after the commencement of the Swachh Bharat Mission–Grameen (SBM-G) in 2014. Ritualistic data highlights that toilet coverage, which was around 38% before 2014, shot up during 2015–2019 due to rough toilet building campaigns, monetary inducements, and mass mustering. Many states such as Haryana, Himachal Pradesh, and Kerala announced near-universal toilet access initially in the mission, while rest of the states including Bihar, Uttar Pradesh, Odisha, and Jharkhand displayed slower but balanced furtherance. Unsettled by socio-economic and geographic restrictions. Many districts across the country were nominated as 100% Open Defecation Free (ODF) by 2019, though ensuing self-reliant surveys show variations in the solidity of these communications.[7]

The quick growth in substructure has also brought awareness amongst the masses to the tenacious bridge between use and constructing the toilets. Studies by UNICEF, NARSS, and self sufficient researchers enlightened that a segment of newly built toilets are either not much functional or lacked proper maintenance, specifically in water aridity and economically backward groups[8]. Habitual objectives for not using includes poor superstructure quality, lack of water supply, insufficient pit design, enhancing run through, and the preference for uncontrolled defecation due to well entrenched outward attitudinal norms.[9] In many parts of rural India, twin leach pit toilets are installed without bona fide technological guidance, escalating to design failures and unhygienic sludge management. Water shortage remains a castigate conclusive of functionality where menage without well founded connections of taps often finds difficulty in maintenance, giving partial or complete desertion in the end. Such tendency stipulates that while rural lustration coverage swells to a large extent, making sure user friendly long term usage, functional infrastructure, and behaviour change remains essential for carrying off long-term rural mass robustness consequences.[10]

EFFICACY OF SBM-G: EVALUATION OF WRITINGS

A considerable body of publications underlines that the Swachh Bharat Mission–Grameen (SBM-G) has been one of India's most aspiring public robustness and rural growth interceded, notably influencing cleanness access, deportment, and health results. Factual researches persistently show that rural toilet coverage enlarging consequentially after 2014, with diverse independent evaluation (UNICEF, World Bank, NARSS, ResearchGate studies) authenticating a serrated upgrade in rural toilet possession and accessibility[11]. Many neighborhoods accomplish near-universal entrances, putting up to large-scale depletion

[6] *Toilet Board Coalition, The Sanitation Economy in India*
[7] *Ministry of Jal Shakti, SLWM in Rural Areas: Technical Note*
[8] *Ministry of Jal Shakti, National Annual Rural Sanitation Survey (NARSS) 2019–20*
[9] *Government of India, Daily Data on Rural Sanitation Coverage under SBM-G, Data.gov.in*
[10] *Ministry of Jal Shakti, SBM-G State Dashboard*
[11] *Ministry of Jal Shakti, National Annual Rural Sanitation Survey (NARSS) 2019–20*

in open defecation. The well being collision of this advance is meticulously chronicled: studies in Business Standard and public health journals designated that SBM-G nip in the bud gauging 60,000–70,000 newborn deaths by bringing down subjection to faecal pollution[12]. Fact finding overseas in rural and tribal areas of India has also announced a notable end in diarrhoea, parasitic infections, and contaminated water diseases among children as hygiene deportment improved. Outwith health results, anecdotal studies emphasise advances in mobility, solitude, and safeguarding women and girls. Approaches to sanitary complexes have diminished occurrences of badgering, intensify menses sanitation regimes, and ameliorate the perception of certainty, mainly in the course of daybreak or nighttime defecation. [13]

INADEQUACY & CONSTRUCTIONAL LACUNAS IN THE SBM(GRAMIN)

In spite of the astonishing work bringing about less than Swachh Bharat Mission–Grameen (SBM-G), various regulatory lacunas and constructional apertures carry on to influence the policy's long-term viability. A major examination calling attention to covering government inspections, NARSS reports, UNICEF reports, and individualistic experimentation learnings has broad prominence on sanitary complexes formation dashboard rather than regular use and working of these toilets. The commencement stage of this SBM-G highlighted expeditious building of these toilets to accomplish "Open Defecation Free (ODF)"standing, that is in several instances guided to aerated describe and unfinished corroboration. Unconventional look-overs suchlike as NARSS 2018–19 and Comptroller and Auditor General (CAG) research have mentioned gaps in ODF documentations, unpredictability between dashboard data and on ground realities, and an absence of vigorous apparatus for regular re-confirmation. Frail observing work systems, dependency on self-describing, and non appearance of intermediary examination additionally putting it into incorrectness in spotlessness exposure and avail oneself of data. During the execution level, several organizational provocations persist. Water reservoir curtailment remains as the biggest railing to undergo usage of such toilets, to a large extent in regions where water scarcity is an issue of Rajasthan, Bundelkhand, and many parts of the Northeast. Further reports and village studies showed that many rural houses revert to open defecation when water availability ends. Weak contriving quality, use of sub-standard evidence, and inadequate safeguarding ideas have procured in non-functional or partly functional sanitary complexes in many areas of rural India[14]. Local governments, which are important while executing bodies, repeatedly lack the practical expertise, labour force, and monetary independence they need to ensure efficacious operation and maintenance. Additionally, funding for Solid and Liquid Waste Management (SLWM) remains deficient, fractured, and steadily depending on short-term vouchers.

This has guided to fragmentary trash handling systems, cram-fulling pits, meagre household sullage, and slightest evolution of faecal sludge treatment structure. All inclusive, the writings showcases that nisi SBM-G reinforces data affirmation apparatus, guarantees dependable water supply, ameliorates the construction and functional standard, invigorate village level governance dimensions, and ensures long-term funding for SLWM, the improvements accomplished in cleanliness coverage may countenance remarkable environment friendly probability.[15]

[12] *Business Standard, Swachh Bharat Mission Prevented 60,000–70,000 Infant Deaths: Study (2024)*
[13] *IWA Publishing, Justice and Sanitation Governance (2022)*
[14] *Raj Priya, Evolution of Sanitation in India: A Case Study of Swachh Bharat Mission (2014–2023) (ResearchGate, 2023)*
[15] *Ministry of Jal Shakti, SBM-G Dashboard: State-wise and District-wise Coverage Data.*

CHALLENGES REGARDING SUSTAINABILITY UNDER THE SBM(GRAMIN)

Guaranteeing the elongated sustainability of rural sanitation programmes under the Swachh Bharat Mission–Grameen (SBM-G) has been still a recurring issue, mainly in the post-ODF scenarios. Despite the fact that way too many sanitary complexes were built nearly around the year 2014-2023, many states resumed reporting scenes of decrement, where rural houses were slowly reverting back to open excretion. Researches by UNICEF, NARSS, and independent scholars encompasses that comportmental change isn't consistently fixed, and a faction of rural India often reinstating to open waste disposal during water scarcity still exists, periodical agricultural relocation, or when sanitary complexes have become maladjusted[16]. The truancy of brawny led to systems, integrated with a dwindle in indepth IEC undertaking post ODF announcement, has pursuits in attitudinal unpredictability. More off, jitted or unutilised sanitary complexes often required to poor building standard, lack of belfry, or damaged potholes pose an important environmental issue. Several rural areas also lack well ordered dredging kindness, moving forward to full trough that cast down usage, majorly in rural houses with twin-pit mechanisms that were besides improper construction or misunderstood in terms of the functioning and preservation.

Environmental sustainability dispensing another critical provocation. A key issue that comes out from applied studies is the disposal and charging of faecal waste. In many rural parts, faecal waste from septic tanks or pits is per say freehand removing or discharging into open fields, drains, and water bodies, leading to downstreaming defile and public health concerns. Likewise, liquid waste is poorly managed, particularly greywater shows in stagnant water pools, mosquito breeding, and pollution of exterior and groundwater sources. Solid Waste Management (SWM) arrangements also remain impoverished, with many Gram Panchayats lacking waste troupes centres, closeting mechanisms, or disposal infrastructure. As a result, plastic waste, menstrual waste, and household refuse often end up in open landfills or burned in the open, contributing to air and soil pollution. These environmental challenges demonstrate that sanitation sustainability is not only about access to toilets but also about building comprehensive waste management ecosystems that protect public health and the environment.

Even though the programme has been running for a decade now, there are still many research gaps that limit an understanding of its impact and long-term results. First, there is a large gap in longitudinal studies that have tracked how people have used toilets over a long period of time. Most of the evidence available, like the NARSS and SBM-G dashboard data, only show how many toilets were installed at one given time, but do not give any information on how long-lasting this change is (i.e. behaviour). Second, very little gender-disaggregated research has been published, even though sanitation has strong implications for women's dignity, menstrual hygiene, safety, and time use. The lack of such important data makes it difficult to direct policy to meet the needs of women regarding sanitation. Third, there are significant data gaps in existing datasets regarding the use and maintenance of toilets in tribal, hilly, and geographically remote areas[17]. The challenges faced by these communities, including scattered patterns of settlement, terrain constraints, and cultural traditions, warrant additional focused studies to assess the specific obstacles to maintaining the use of toilets and waste management practices. Another critical gap lies in the weak economic analysis of Faecal Sludge Management (FSM) systems. While the sanitation economy in India is estimated to be worth billions, very few studies examine the financial viability of desludging services, treatment plants, or community-level FSM enterprises. Without robust cost-benefit analysis, it becomes difficult for state governments and Panchayats to plan sustainable financing models.

[16] *UNICEF India, Behaviour Change Communication under SBM-G*

[17] *MDPI, Gendered Dimensions of Sanitation Governance (2023)*

Finally, the lack of independent third-party audits and field evaluations remains a recurring concern. Much of the available data is self-reported by implementing agencies, which may lead to overestimation of achievements. Independent audits, including randomised field verification and sample-based longitudinal surveys, are essential to accurately assess sanitation usage, environmental impacts, and sustainability outcomes. In summary, while SBM-G has transformed rural sanitation access, its long-term success hinges on addressing behavioural slippage, environmental risks, and major research gaps. Strengthening monitoring, expanding gender-focused studies, conducting rigorous economic analysis, and prioritising sustainability frameworks will be crucial for ensuring that India's sanitation gains remain resilient and inclusive.[18]

SUGGESTED RECOMMENDATIONS FOR THE POLICY

To ensure the long-term success of the Swachh Bharat Mission-Gramin (SBM-G), it is essential to adopt a multi-pronged approach that focuses on behaviour change, improved infrastructure, stronger governance, and sustained support. Behaviour change efforts should move beyond one-time Information, Education and Communication (IEC) campaigns and instead become a continuous, community-driven process. This can be achieved by involving local actors who have regular contact with the community, such as teachers, youth clubs, ASHA workers, Anganwadi workers, and Swachhagrahis.[19]

These individuals can play a key role in regularly engaging with households, promoting hygiene practices, explaining the use and benefits of twin-pit toilet technology, and encouraging the ownership and consistent use of sanitation facilities. Involving schools and forming youth councils at the village level can further help in nurturing a culture of sanitation among young people, ensuring that these practices are sustained across future generations.

For any improvements made to sanitation infrastructure, reliable and consistent access to a safe drinking water source will be essential since having access to water is one of the primary factors that determine whether or not households will utilize toilets. Therefore, when investing in sanitation infrastructure, it will be necessary to incorporate investments into water supply programs by improving coordination among current programs, including Swachh Bharat-Mission-Gramin (SBM), Jal Jeevan Mission, and other rural water supply programs, so that all households have access to a reliable water source[20]. By using a combined approach to provide households with sanitation services and a water supply to support those services, it will help to ensure that every household will have a functioning toilet. To support these investments, technology can also be used to support local solutions to address local problems, such as the development of low-flow flush toilets, environmental-friendly toilets, and cost-effective sludge treatment facilities to respond to issues related to scarcity of water and challenging geographical area.

Conclusion

The Swachh Bharat Mission–Grameen (SBM-G) demonstrates one of India's most determined rural health and rural growth steps, markedly enlarging sanitary complexes' coverage under rural India and boosting the national maneuver towards declining the old age practice of open defecation. The mission did succeed in marshaling large-scale clique involvement, brushing up household dignity specifically for women and bestowing remarkable health benefits such as reduction in water borne disease and infant mortality. Nevertheless, the studies by researchers shows that the expansion in the superstructure alone does not ensure

[18] *Parliamentary Standing Committee on Rural Development, Report on SBM-G Performance (2024)*
[19] *IJMER, Sanitation Usage and Sustainability Studies (2022)*
[20] Vision IAS, *Parliamentary Panel Report on SBM-G* (2025)

the succoured sanitation results. Tenacious lacunas including not in accord with the sanitary complex usage in rural areas, water shortage, weak verification systems, lesser faecal sludge management, and variable Gram Panchayat capacity continue to challenge long-term sustainability[21]. Behavioural change, though central to SBM-G's design, remains uneven due to short-lived communication efforts and deep-rooted socio-cultural barriers.

The analysis of literature and data highlights that future sanitation progress must prioritise post-ODF sustainability through well grounded water amalgamation, augmentation in focusing on frameworks, gender-sensitive perspective, and community ownership of these complexes. Bracing gram panchayats, investing in FSM infrastructure, and helping women-led and youth-led sanitation initiatives can create a self-sustaining ecosystem beyond the life of the programme. Additionally, more brutal longitudinal studies, field-based audits, and economic evaluations are needed to fill critical research gaps and guide evidence-based policy reforms.

The overall success of SBM-G's next phase will not only depend on providing universal access to toilets. Equally important will be developing a culture of consistent use, safe waste management and environmentally friendly sanitation practices in rural areas.[22] A transition from 'toilet construction' to 'service delivery and behaviour-change' is necessary for the benefits of SBM-G to translate into sustained public health and development outcomes for rural India.

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[21] *Vikaspedia, Role of Gram Panchayat under Swachh Bharat Mission*

[22] ISEC, *Working Paper No. 555: Sanitation Governance in Rural India.*