

## Centering marginality in sanitation service delivery in India

Millions in India's rapidly expanding cities[1] grapple with inadequate sanitation infrastructure. Nearly half (49 per cent) of urban dwellers live in slums[2], deprived of essential amenities like proper housing, water, sanitation, and efficient disposal systems[3]. Despite the Government of India's ambitious Swacch Bharat Mission, the world's largest sanitation initiative launched to achieve an Open Defecation Free (ODF) India, substantial portion of the population still lacks access to basic sanitation services. Cities and towns are characterised by unsafe excreta disposal, inadequate faecal sludge management (FSM), and lack of adequate infrastructure for sewage and wastewater collection and treatment. The burden of managing the non-networked systems has largely been borne by the sanitation workers from socially disadvantaged groups.

According to data from the Ministry of Housing and Urban Affairs (MoHUA), around 40 per cent of the urban population is serviced with sewerage systems, while the remaining 60 per cent is still dependent on off the grid, sub-optimally regulated on-site sanitation systems. A large percentage of those not connected to the grid are people living in India's slums or those who migrate in search of livelihoods.

This policy brief examines the intersectionality between unsafe sanitation practices and marginalisations, particularly focussing on the class, caste, and gender dimensions of sanitation experiences in the Nanded Waghala City Municipal Corporation (NWCMC). It illustrates some forms of assertion of agency exhibited by communities, both subversive and collective, in demanding their sanitation rights. Additionally, it highlights the socio-technical challenges associated with transitions towards "Brown Gold," which involves the safe re(use) of human waste and wastewater to unlock its potential as a valuable resource. The findings and recommendations in this policy brief aim to address the multifaceted marginalisations that contribute to the inequitable access to sanitation services in the city. This policy brief delves deeper into this disconnect, exploring who the marginalized are in Nanded and how their daily lives are affected by limited access to sanitation, and the burden they carry to keep our growing cities clean.



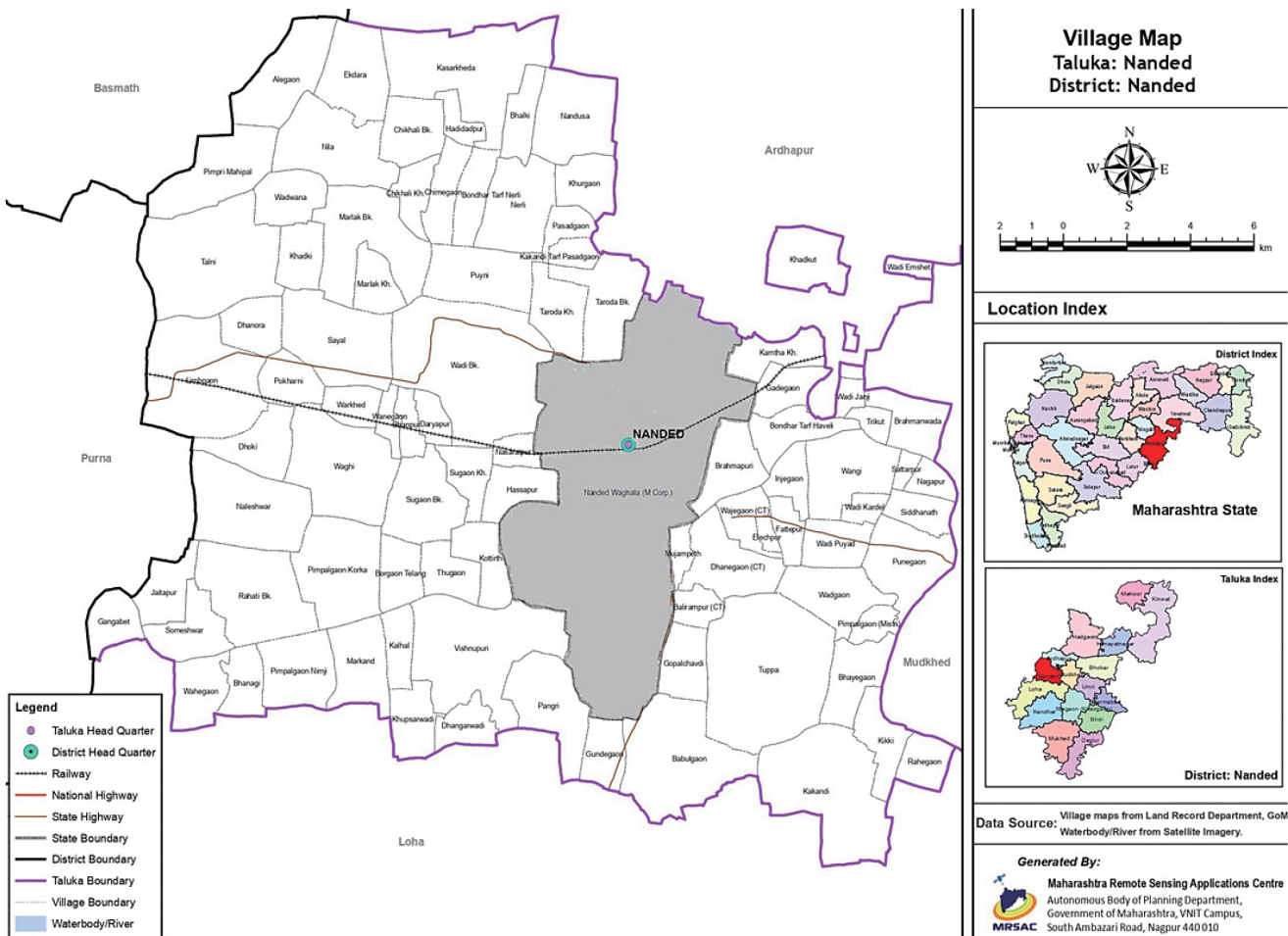
**Why Nanded?**

Nanded Waghala City Municipal Corporation (NWCMC) is the second-largest urban centre in the drought-prone Marathwada region of the western Indian state of Maharashtra. The city has a population of about 660,230 individuals, living in roughly 146,500 households. Additionally, the city sees a floating population of 30,000 people everyday, made up of mostly religious tourists and migrant workers. Nanded has 150 slum settlements housing approximately 23 per cent of its population. Census data reveals that 19 per cent of Nanded's city population belongs to Scheduled Castes (SC), and about two per cent are Scheduled Tribes (ST). Notably, Nanded has been a centre of Ambedkarite movement that mobilised the Dalit community and other disadvantaged groups, rallying for various issues including improved access to housing, water, and sanitation. In 2011, Nanded city saw strong gains in addressing its sanitation challenges with the introduction of the Community Led Total Sanitation (CLTS) programme. It is also one of the cities which has been officially granted the ODF+ and ODF++ status [4].

Despite being awarded this status in 2021, 55 percent of the city's excreta is not safely managed. This in turn has put the burden of managing this challenge on women, residents living in slums, migrants, and sanitation workers.

**Research Methods**

The analysis presented in this brief is informed by SOPPECOM's qualitative study conducted in 2021-2023. The study gathered data from 42 neighbourhoods where Nanded's highly regarded CLTS programme was implemented. The study also conducted deep-dive analysis in four neighbourhoods of Bhoigalli, Ganrajnagar, Lumbininagar, and Maltekdi. Research team conducted focus group discussions with men and women from the communities, and 46 key informant interviews with residents, migrants, sanitation workers, corporators, leaders of unions, leaders of the Ambedkarite movement, representatives of civil society groups, and government officials at the junior and senior level. This was supplemented with site observations and photo elicitation with migrant workers. The study is informed by critical feminist literature and anti-caste writings.



## Key Findings

### ***The successes of the CLTS programme were not institutionalised and were unevenly distributed in the city***

NWCMC's CLTS programme, which laid an emphasis on triggering behaviour change, was initiated in 2011 under the able leadership of Nipun Vinayak, the then Municipal Commissioner. Various initiatives were taken up to expand the reach and timely delivery of sanitation services in Nanded under this programme. It was taken up in various neighbourhoods in the city. However, after the untimely transfer of the Municipal Commissioner, the programme came to an almost complete halt after a year of its implementation.

- The study found that while 86 per cent of the neighbourhoods reported being on the sewerage grid, they complained of poorly managed sewer network.
- Toilets and sewage chambers were blocked, in nearly 45 per cent of the neighbourhoods studied making them unusable. The majority of these communities belonged to the Dalit or the Scheduled Castes and Other Backward Classes. The excreta from these neighbourhoods went into open drains and many a times returned in to homes.
- Some communities had restricted access to toilets, either individual, community, or public. Some of them had no option but to defecate in the open.
- It is important to understand that the sanitation crisis in Nanded city is related to inadequate infrastructure to manage the solid and liquid waste, rather than the resistance to the use of toilets. CLTS's inability to provide technical solutions to sanitation problems was an important reason it could not sustain its activities. CLTS's major limitation was that it hinged its efforts upon behaviour change of the already excluded and marginalised Dalit community.

### **Women's positive experience of the CLTS programme in Lumbininagar**

A major success of the CLTS programme was women's engagement in its activities. They kept track of garbage collection vehicles and held the government departments accountable with calls and follow-ups. The programme created new spaces for them to express their agency and advocate for sanitation services for their communities. They earned respect and learned the value of keeping their homes, toilets, and vastis clean. Some of them started a composting experiment and on one occasion were able to sell the compost prepared from the segregated degradable waste.

### **Nearly half of Nanded's sewage is not safely managed**

Nanded has 896 kms sewer coverage with three centralized Sewage Treatment Plants (STP) that receive wastewater from open drains and sewer lines. Government officials shared that around 57 per cent of the households in Nanded are linked to the open drain and storm sewer systems and only 38 per cent are directly connected to sewer lines.

Field observations and notes from the Nagrik Kruti Samiti, a local CSO, found that STPs in Nanded are not fully operational. The city treats merely about 33 million litres per day (MLD) of untreated wastewater and the remaining 53 per cent of the wastewater is discharged into the Godavari River.

Leaders from the local Citizens Committee expressed concerns, noting that STPs were not working efficiently. Field observations reveal instances of spillage from sewerage lines, clogged drains, and overflowing chambers in the neighbourhoods.

Several factors contribute to this issue:

- Garbage is often dumped into open drains that connect with sewer lines.
- Many drainage lines are old and dilapidated.
- Absence of gully traps allow debris to enter the system.
- The uphill topography in some areas prevent toilets from being connected to the sewer networks.

In response, economically better-off households opt for on-site sanitation solutions, such as septic tanks or ring tanks. However, households unable to afford these solutions continue to use ill-connected toilets, resulting in waste often over flowing back into their houses and vastis. While some households connect their toilet pipes to open drains, others, primarily those who live in the city's periphery, resort to open defecation.

### **Three out of four research sites have poor connection to the sewer systems**

Of the four research sites, **three neighbourhoods had sub-optimal sewer systems**. Although the fourth neighbourhood was partially connected to an older sewage system, but the areas that were not connected posed challenges for the entire vasti. In Lumbininagar, a vasti where CLTS initiatives were successful, residents complained that the **clogged network leads to sewage water overflow into houses**.

A women from Lumbini Nagar mentioned, "The water sometimes drains slowly in the toilet, which can be time-consuming. By afternoon, the chamber gets filled. Then, we use brooms and vessels to remove the water. We have to use sticks to clear the clogged water from the toilet. Another woman mentioned, "All the family members in our house sleep on the floor. During the rainy season, water from the toilet enters the house, causing a foul smell throughout the season. The water is drainage water, containing worms, larvae, and dirt." Most of the **sewer lines are clogged with garbage, debris, and other waste**. The challenge is that though new sewer lines are constructed, **budget constraints prevent toilets from being connected to the network**. Similarly, residents of Maltekdi neighbourhood, complain that the sewer line constructed near their vasti **does not have an appropriate outlet**.

The sewer line is clogged and eventually the wastewater comes into their houses. Despite repeated complaints, particularly from women, about the situation, **these concerns have not received any attention**.

### **Access to sanitation is negotiated by multiple markers of marginality**

There is a troubling correlation between residential segregation, caste, class, access to sanitation services, and the responsiveness of State institutions. Slum residents are at the bottom of the pyramid and face systematic marginalisation in accessing sanitation services. The study finds that underneath all this inequity is the interplay of caste and class with the experience of access and delivery of services.

### **Migrants in the city**

Interviews of migrants from various regions, including drought-prone areas and Northern India, primarily from the Dalit community or denotified and nomadic tribes were conducted as part of the study. These seasonal migrants relocate themselves during the lean agricultural season, from October to May.

- The large migrant population in Nanded is largely ignored in the city's sanitation service delivery.
- The ODF+ status that has been granted to Nanded city warrants that the administration must ensure mobile toilets and public taps to serve its floating population. Often the floating population has only been understood as tourists coming into the city, excluding migrants who stay in the city for longer durations.

### **Gender**

Unequal access to water and sanitation disproportionately burdens women. Many migrant women are compelled to limit bathing to just one or two times a week. Menstruating women face severe challenges and report bathing once in seven days, largely due to poor accessibility of toilets. In slum neighbourhoods, women are also responsible for collecting water for their households, cleaning soak pits, and clearing wastewater that sometimes overflows into their homes. Thus, the burden of keeping homes and communities clean is placed on women, even as they hold the shorter end of the stick in terms of the actual access to sanitation services.

### **Socio-economic and spatial inequality impacts poor sanitation outcomes**

The state of sanitation services and the caste and class groups that live in neighbourhoods are directly proportional. The “lower”-caste and “lower”-class neighbourhoods are worse-off in the coverage of sewer networks.

In the absence of formal infrastructure, many “lower” caste and class communities are compelled to opt for unsanitary, temporary, and often ecologically unsound solutions such as linking their toilet pipes to open drains, digging holes in the ground to improve the pressure of domestic water, or using motors to pull water. However, if nothing works going back to open defecation.

Communities are forced to invest their own money and efforts to manage their sanitation infrastructure. Communities that can barely afford a meal everyday are therefore forced to invest in sanitation infrastructure to tide over the crisis

Similarly, these neighbourhoods experience erratic water supply or low water pressure making water collection a time-consuming job for women of the households.

### **Historically marginalised castes and sanitation workers**

Sanitation work continues to be organised by caste. Dialogues with Government machinery point to a continuous lack of empathy and understanding towards the marginality experienced by the historically deprived castes employed as sanitation workers.

The absence of comprehensive sanitation plans, insufficient machinery, and sanitation infrastructure has increased dependence on manual scavengers and sanitation workers.

Insufficient recognition of sanitation workers has restricted their access to secure employment, employee benefits, health and safety measures, and decent working conditions.

Most sanitation workers are contractual workers, and often, their access to social or economic protection depends on their ability to organize collectively, struggle for their rights, or join a union.

Manual scavengers are invisible workers in the sanitation chains and do not receive any protective gear, training, or employment benefits.

In the hierarchy of sanitation workers, women are predominantly assigned lower paying roles and are under-represented in permanent sanitation jobs.

### **Nanded's Dalit community in Lumbininagar rallies to demand sanitation rights**

*Communities adopt both subversive forms of agency along with collective assertions to challenge their systemic exclusion. Subversive forms of agency are those where the communities make compromises to cope with the crisis. For eq. dumping of solid waste and waste water into open drains. Collective or assertive agency is when communities have come together, collectivized, and fought for their rights. These includes, rallies and protests for better housing conditions with sanitation facilities, or holding the corporation accountable for not collecting garbage or cleaning the chambers for example.*

*Collective assertions for better sanitation services by communities have managed to capture the attention of the city administration. Lumbininagar has a long history of community action since the early 1980s when residents mobilised to demand land rights. It also successfully petitioned for housing under the Dalit Vasti Sudhar Yojana (Dalit settlement development scheme) and later under the Basic Services for Urban Poor scheme for permanent housing structures.*

*Learning from these struggles, the community collectivised around its leaders to demand for better sanitation services. Women were at the forefront of these conversations with the sanitation department. Leaders adopted new-age techniques to draw attention to their problems such as the use of social media, photographing leaky pipes, or choked chambers, houses filled with wastewater, and tagging district administration in their posts. They also leveraged media attention to drive home their concerns. Communities protested on streets, filed petitions, and fought legal cases to improve their access to basic services.*

### ***Manual Scavenging continues to subsidise formal sanitation services***

Despite the presence of Prohibition of Employment as Manual Scavengers and their Rehabilitation Act, 2013, the current system of service delivery seems to increase the reliance on the efforts of these workers. While the use of machines and technologies is being encouraged in the new guidelines, it has encountered challenges in implementation. This is largely due to two reasons: the existing septic tank designs may not be suitable for machine cleaning, preventing the complete removal of waste materials. Second, delays in emptying tanks can lead to significant solidification of the sludge, making it difficult for machines to effectively clean them.

While the guidelines to manage faecal waste are detailed in terms of the technology to be used for management of faecal sludge management, they are silent on the system's dependence on sanitation workers. Manual scavengers continue to clean sewers, blocked latrines, overflowing chambers and septic tanks, and provide cheap labour for the maintenance of the sanitation system.

### ***Decentralised Liquid Sewage Treatment Plants are important in the city's effort to move towards "Brown Gold"***

The CSE reported in 2021 that due to poor infrastructure linking toilets to sewer lines, less than 50 per cent of the waste reaches the centralized STPs. The Nanded administration is envisaging the setting up of decentralized liquid sewage treatment plants on a public-private partnership model as a solution for the above problem. As of 2021, 22 locations for STPs had received approval, and 19 systems were operational[8]. Nanded has identified 53 potential locations for these installations. The treatment plants are a significant move in the transition towards treating faecal waste as "Brown Gold." One such treatment plant has already been installed where the treated water is being used to water a public garden in the city.

### ***Actionable Recommendations***

The concerns of the marginalized are closely connected with the sanitation infrastructure. The present non-functional infrastructure has thrown several of the communities off grid. To bring them back on to the grid requires a comprehensive and futuristic plan that factors in population growth, but also the other parameters of the city's growth. Following are the recommendations for policy makers.

#### ***Recognise and address the sanitation's complex and historical relationship with caste, class, and patriarchy***

The city's sanitation efforts suffer from misplaced prioritisation, focusing on building toilets while neglecting proper waste management. This creates a heavier burden for sanitation workers, especially women from disadvantaged backgrounds who disproportionately shoulder the additional workload.

#### ***Policy-makers must acknowledge the practice of manual scavenging***

Policymakers must first acknowledge the practice of manual scavenging and its deep ties with historical and caste based discrimination. This is an important first step to address the illegal use of manual scavengers and ensure they are provided adequate social and workplace protection.

A good way to do this is to give them the status of permanent staff and providing social security benefits such as registration under the Employment Security Insurance, pensions, maternity benefits etc.

#### ***Behaviour change efforts to encourage use of hygienic sanitation services must be accompanied by infrastructure support***

Nanded has been declared as an ODF, ODF+, and ODF++ city, but the infrastructure to manage the waste from newly constructed toilets is insufficient. The city also falls short in the technical support that is required to maintain its different grades of ODF status. Therefore, there is urgency for the corporation to adopt not only technical solutions to address the city's sanitation problems but also ensure that it represents needs and concerns of the population, including marginalized communities.

Co-creating comprehensive citywide plans to include the voices of marginalised communities is important for holistic and sustainable solutions. To this end, sensitising officials about the importance of including poor and socially disadvantaged groups in identifying solutions is critical for any programme's long-term success. Citizens thus need a platform to communicate their sanitation challenges with representatives of city administration.

### **The NWCMC must ensure that all the neighbourhoods are connected to sewer lines**

This is the most important socio-technical part of the sanitation puzzle in Nanded. The waste from vastis should be treated at centralized and decentralized STPs. An immediate first step is the cleaning of clogged lines and connecting open drains to sewer lines.

### **This government should incentivize the creation and safe use of Brown Gold from faecal sludge**

The policy framework should leverage the potential safe uses of Brown Gold for farmers, urban gardeners, and local entrepreneurs. Transitioning towards Brown Gold involvestackling many moving parts along the sanitation chain, including socio-

cultural, economic, political, environmental and technical elements. The administration will have to address many socio-technical barriers to safely convert wastewater and faecal sludge into this valuable resource. Along with technical know-how, the administration must provide communities other incentives to partake in this process.

Nanded needs a comprehensive and institution-alised policy framework to address its complex sanitation crisis. Urban planning itself needs an overhaul. Instead of reacting to problems as they arise, planning must focus on proactive considerations of expanding cities, needs of different communities, and the demands of rural populations living in peri-urban areas. Plans must account different users of the sanitation systems: migrants, sanitation workers, city-adjacent rural areas, and the city's diverse neighbourhoods. The current non-functional system has pushed many communities off the grid and increased dependence on the unlawful practice of manual scavenging. The success of programs like Swacch Bharat Mission, which aims to end open defecation in India, hinges on acknowledging the deep-rooted social inequities in India and their direct relationship with access to basic sanitation.

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[1] More than 30 per cent of India's population lives in urban areas (Bhagat, 2018)

[2] Source: Share of urban population living in slums India 2000-2020, Published by Manya Rathore, Jul 24, 2023 (<https://www.statista.com/statistics/1400274/india-slum-population-as-a-share-of-urban-population/>)

[3] 163 million Indians do not have access to safe drinking water, while 210 million people lack access to improved basic sanitation (Mattoo et al. 2020)

[4] Project Assessment Framework, CWAS, CEPT. Retrieved from [https://www.pas.org.in/web/ceptpas/knownyourcity?p\\_p\\_id=Knownyourcity\\_WAR\\_Portal&p\\_p\\_lifecycle=1&p\\_p\\_state=normal&p\\_p\\_mode=view&p\\_p\\_col\\_id=column-1&p\\_p\\_col\\_count=1&actionVal=getIntDashPSSanitation](https://www.pas.org.in/web/ceptpas/knownyourcity?p_p_id=Knownyourcity_WAR_Portal&p_p_lifecycle=1&p_p_state=normal&p_p_mode=view&p_p_col_id=column-1&p_p_col_count=1&actionVal=getIntDashPSSanitation).

[5] Government of India. 2011. Population Census. <https://www.censusindia.co.in/towns/nanded-waghala-population-nanded-maharashtra-802737>

[6] ODF is broadly defined as the termination of faecal oral transmission when all household and public/community institutions use safe technology for disposal of faeces. ODF+ certification is granted when the city does not have a single person defecating in the open and all its community and public toilets are functional and well managed

[7] Centre for Science and Environment. 2021. \*SFD Lite Report, Nanded\*, 1-3. Retrieved from [https://www.susana.org/\\_resources/documents/default/3-4414-7-1632730817.pdf](https://www.susana.org/_resources/documents/default/3-4414-7-1632730817.pdf) (accessed on September 10, 2021).

[8] Interview with Sagar Shah, CEO, Life First Concepts & Technologies Pvt. Ltd.

## POLICY BRIEF

Marginality and Agency: Findings from Nanded

SOPPECOM conducted this study as part of the project titled 'Towards Brown Gold: Reimagining Off-grid Sanitation in Rapidly Urbanizing Areas in Asia and Africa' with support from the Institute of Development Studies, UK. The Towards Brown Gold project is funded by UKRI Collective Fund: Global Challenges Research Fund (GCRF) [project code:ES/T008113/1].

**Research Team:** Seema Kulkarni, Pallavi Harshe, Prakash Ransing, Veena Jadhav, Anita Godbole

**Copy Editing and Design :** Shruti Patil

**Photo Credit :** Pallavi Harshe, Nihar Sapre



Society for Promoting Participative Ecosystem Management (SOPPECOM) is a non-profit, non-governmental organisation working in the area of Natural Resource Management (NRM) primarily in the rural areas. It is committed to the principles of sustainable and rational use of natural resources, equity and social justice in the distribution of benefits especially to the disadvantaged sections like dalits, landless, women, democratic and decentralised governance of these resources. As an organisation committed to these principles, SOPPECOM extends its support to grassroots groups working on NRM issues through training, resource literacy, participatory planning, research and policy advocacy.

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## SOPPECOM

16 Kalepark , Someshwarwadi Road,  
Pashan, Pune 411008.  
Phone - 020-25886542  
soppecom@gmail.com  
gender.soppecom@gmail.com



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