

Sewage Work in India: Occupational Health, Caste, and Labour Governance

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Abstract: Sewage labour in India is among the most dangerous and least protected forms of labour, despite its critical importance to maintain human life and public health. This paper discusses sewage work in the context of two related issues: occupational health and fragmented labour governance. It argues that the dangers of sewer and septic tank cleaning cannot be reduced to technical failure, lack of safety equipment, or individual negligence. Instead, these risks are to be interpreted within a larger social organisation of labour in which sewage work is treated as necessary, but the workers who do it are low-status, poorly protected, and socially devalued. In this system, worker safety is shared among the state, contractors, subcontractors and informal labour arrangements, and accountability is weak and unclear. The paper shows that sewage work is an institutionally neglected occupation organised around bodily risk, caste-based devaluation, and weak labour protection. It also contends that manual scavenging and dangerous sanitation labour continue not due to the lack of law or policy in India, but because of the lack of enforcement, fragmented accountability, and the continued social acceptance of caste-marked degrading labour. The paper concludes that sewage work in India needs to be addressed not only as a sanitation issue, but also as a question of labour justice, public health, social equality, and institutional accountability.

Keywords: Sewage work, Sanitation labour, occupational health, Labour governance, Manual scavenging, Caste, Stigma.

INTRODUCTION

Indian sanitation is often addressed in terms of toilets, sewage, cleanliness, and infrastructure. However, sanitation systems do not work in isolation. Sewers are clogged, septic tanks overflow, drains collapse, and waste piles up. These systems rely on workers who empty, clean, and repair them, and who enter areas that most people avoid. This is why sanitation is not only an issue of infrastructure but also of labour. Sanitation workers are defined as providers of an “essential public service” (World Bank, ILO, WaterAid, & WHO, 2019, p. 1). The term ‘sanitation worker’ refers to individuals involved in sanitation services, including both dry and wet waste management. Only a subset of these workers, specifically those who handle human waste, are classified as manual scavengers (Dubey & Murphy, 2021). Sanitation workers are employed to clean, maintain, and operate sanitation systems. Kumar (2024) argues that sanitation workers comprise various categories, including sewage workers. Reports indicate that five million people in India are engaged in sanitation work, of which two million partake in ‘high-risk’ activities, such as cleaning sewers (Garg, 2019). They

are also noted as among the most unrecognised and unacknowledged workers in society, who daily face the risk of infection, injury, stigmatisation, and even death in their work. The same report indicates that the key issues sanitation workers face are concentrated in four main areas: occupational and environmental risks, ineffective legal protection, financial insecurity, and stigma and discrimination (World Bank et al., 2019, p. 7). This paradox is the starting point of this paper. If sanitation is central to public health and urban life, why are the workers who sustain it still so poorly protected?

This paper argues that the continued vulnerability of sewage workers is shaped by the intersection of occupational danger and labour governance. Sewage work is dangerous, exposing workers to toxic gases, infections, respiratory stress, skin disease, and chronic physical strain. Tiwari’s (2008) review of the conditions of sewage and sanitation workers in India identifies exposure to methane and hydrogen sulphide, skin disorders, respiratory impairment, and musculoskeletal problems as significant occupational hazards of this labour (pp. 112–115). Similarly, Oza *et al.* (2022) demonstrate that sewage

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workers are at higher risk of gastrointestinal and respiratory diseases, as well as broader musculoskeletal and social-health burdens. Moreover, sewage work is dangerous not only because of health risks but also because the labour is poorly formalised and monitored. Despite the establishment of legal prohibitions in the 1993¹ and 2013² Acts, research has shown that the hazardous practice of human excreta handling continues due to weak enforcement, legal loopholes, and state indifference. Koonan (2021) argues that the continuation of manual scavenging is not only a failure of the law but also a tendency of the state to be indifferent and non-implementing, whereas Teltumbde (2014) argues that sanitation reform cannot be successful without addressing the underlying issue of caste. Human Rights Watch (2014) also shows that the practice is perpetuated by discrimination, coercion, and exit barriers, particularly affecting Dalit communities.

The widespread persistence of sewage work across India makes it difficult to view it as an isolated or temporary issue. Caste is the key to the understanding of sewage work in India since the handling of human waste has traditionally been linked to Dalit communities through inherited and degrading forms of labour. Karamchedu (2025) argues that manual scavenging is not simply sanitation work but a caste occupation forced onto Dalit bodies, in which work with human waste becomes linked to social worth and human dignity (pp. 9). This is also reflected in the fact that Dalits make up only 16 per cent of the Indian population but constitute 97 per cent of manual scavengers, which indicates that this labour is not randomly distributed but is heavily influenced by caste hierarchy (Karamchedu, 2025, p. 2). Dubey and Murphy also demonstrate that manual scavenging persists due to the joint operation of caste and class, which keeps workers trapped in degrading, insecure, and poorly protected labour (Dubey & Murphy, 2021, pp. 1–3). Thus, sewage work should be perceived not only as a dangerous labour but also as a caste-marked labour, where the occupational risk is already normalised because the workers who do it are already socially devalued.

These statistics clearly show that excreta-related labour in India is still very much rooted in caste hierarchy. Other scholarship also indicates that the extent of unsafe sanitation labour is broader than the official acknowledgement usually recognises. Shankar and Swaroop (2021) argue that manual scavenging is not a leftover of the past, but rather an everyday crime perpetuated by daily social and institutional apathy. This paper, therefore, examines sewage work as a broader problem for analysis. It is a matter of public health, since workers are exposed to dangerous and even deadly diseases. It is a matter of labour regulation, since workers are not equally safeguarded by contracts, safety

standards, and compensation mechanisms. Additionally, it raises the question of social inequality, as sewage labourers are still heavily influenced by caste, stigma, and unequal recognition. Consequently, this discussion goes beyond a narrow focus on sanitation to explore sewage work through two interconnected themes: occupational health and fragmented labour governance.

Analytical Approach: From Occupational Risk to Institutional Neglect

This paper examines sewage work in India using the related concepts of occupational health risk and fragmented labour governance. The significance of these ideas is that sewage work cannot be perceived as a problem of unsafe working conditions or of caste. It is a type of labour in which bodily injury, caste-based stigma, and institutional neglect converge. Occupational health risks help us understand how sewage workers are exposed to toxic gases, infections, injuries, skin diseases, respiratory problems, and long-term physical damage. Simultaneously, fragmented labour governance helps explain why these risks persist despite laws, safety regulations, assertions of mechanisation, and official policies against manual scavenging.

In this paper, occupational health risk is understood not only in the narrow medical sense of disease or injury, but as the continuous production of harm through the everyday organisation of work. Sewage workers are not in danger only in case of sudden accidents or fatal incidents. Rather, risk is built into the labour process itself. Workers are constantly exposed to toxic gases like methane and hydrogen sulphide, contaminated water, sharp waste, infections, and unsafe physical conditions. Empirical research, such as Tiwari (2008) and Oza et al. (2022), demonstrates that sanitation workers are at high risk of respiratory illness, gastrointestinal disease, skin problems, musculoskeletal pain, and mental and social health burdens. Nevertheless, the health hazards of sewage work are never strictly physical. They are also influenced by social status, labour arrangements and lack of institutional protection. According to the report by the World Bank (2019), sanitation workers are not only exposed to occupational and environmental risks but also lack strong legal protection, financial security, and social stigma. The devaluation of this work in society is not a coincidence. It is associated with the concepts of purity and pollution, where work with human waste is treated as dirty, degrading, and appropriate to specific caste groups.

The second major concept used in this paper is fragmented labour governance. This concept can explain why, even in the face of a law prohibiting manual and hazardous sewage work, such work continues. Fragmented labour governance is a state of affairs in which responsibility is shared among several actors, such

¹ 1993 Act known as The Employment of Manual Scavengers and Construction of Dry Latrines (Prohibition) Act, 1993

² 2013 Act Known as The Prohibition of Employment as Manual Scavengers and Their Rehabilitation Act, 2013

as municipal bodies, contractors, subcontractors, supervisors, and informal intermediaries. Consequently, no single institution is held completely responsible for the safety, wages, injuries, deaths or compensation of workers. The risk is directly faced by the worker, and the responsibility is distributed throughout the system. This disintegration is particularly apparent in the contractualisation of sanitation labour. Sewage work can be seen as part of a formal municipal service, but workers who actually do the most dangerous work are often employed through contractors, temporary arrangements or informal networks. Roy's (2005) argument about urban informality is useful here, since informality is not necessarily outside the state; in fact, it is often created and managed by the very practices of the state. In the same way, Harvey's (2005) discussion of neoliberal restructuring helps us understand how contractualisation enables institutions to focus on flexibility, cost-cutting, and administrative distance at the expense of workers' rights and safety. Under this setup, state and municipal agencies still rely on sewage workers, yet they can disassociate themselves from direct responsibility in the event of injuries or deaths.

James Scott's (1998) idea of state simplification is also relevant here. State systems tend to simplify the complex social realities into administrative categories, rules, reports and schemes. Policy documents can reveal machines, safety measures, contracts and welfare schemes, but the reality of what workers are doing on a daily basis is often concealed. Manual accounting, unhealthy cleaning, wage delays, the use of protective equipment, and allocation of dirty work on caste basis are often pushed beyond official sight. Taken together, these concepts constitute the analytical foundation of the paper. Occupational health risks show that sewage work harms workers by exposing them to hazardous conditions on a regular basis. Caste and stigma are the reasons why this work is socially devalued and historically related to specific communities. Fragmented labour governance is a reason why such work remains despite being legally prohibited, driven by mechanisation, and presented as a reform. Consequently, the sewage work in India has to be interpreted not merely as a dangerous work, but rather as a sort of caste-marked, institutionally fragmented, and socially degraded labour. The working of urban life needs it, but the people who do it are left vulnerable to harm, invisibility, and denial. This is what makes the continued existence of manual scavenging not only a failure of sanitation infrastructure, but also a failure of labour governance, caste justice, and institutional accountability.

Occupational Health and the Normalisation of Risk

The first argument of this paper is that sewage work in India should be understood as a labour process in which risk is not exceptional but routine. The issue of occupational hazards in this labour is typically brought to the fore only when a worker dies in a sewer or a septic tank. Although these deaths are the most extreme form

of violence, the problem is narrowed by focusing on fatal incidents. It approaches danger as an accident that happens suddenly rather than as the result of daily working conditions. The focus, therefore, should not remain only on the moment of death but also on how the labour process itself repeatedly subjects the bodies of workers to unsafe, toxic and degrading conditions. Tiwari's study is important here because it shows that sewage and sanitation workers are exposed not only to sudden fatal risks but also to a wide range of chronic occupational harms. These are exposure to toxic gases, respiratory disease, skin disease, infections, cardiovascular strain, and musculoskeletal disorders (Tiwari, 2008, pp. 112–115). Similarly, Oza *et al.*, (2022) show that sanitation workers face higher risks of gastroenteritis and respiratory diseases, along with broader musculoskeletal and mental or social health impacts. These studies make one thing clear, that sewage work is not dangerous just because something has gone wrong; it is dangerous even when it is being done as normal work.

This is why the language of accident is inadequate for understanding the everyday reality of sewage workers. An accident implies something abrupt, unexpected, and distinct. However, the dangers of sewage workers are not only frequent, predictable, and inherent in the organisation of work itself. Daily labour involves workers entering or working in toxic spaces, handling contaminated waste, and being exposed to harmful conditions. The risk is not external to the work; it is internal to the work process. In this sense, occupational risk is not a system failure that occurs occasionally. It is among the means by which the system operates. The report by the World Bank, ILO, WaterAid, and WHO (2019) is helpful because it identifies the vulnerability of sanitation workers across four interconnected dimensions: occupational and environmental risks, weak legal protection, financial insecurity, and stigma and discrimination (p. 7). This framing is analytically significant in that it demonstrates that health risk cannot be isolated from the broader circumstances under which the work is carried out. Not only are sewage workers exposed to toxic gases and contaminated waste, but they are also often denied proper protective equipment, regular training, insurance, medical care, and institutional support. Thus, occupational health risk is not only environmental or technical. It is socially and institutionally produced. This is made more evident when we introduce labour-process thinking. It is not merely that sewage is poisonous. The more profound problem is that workers are constantly made to face poisonous conditions in a labour system where such exposure is treated as normal, manageable and even expected. That is, the worker's body becomes the tool by which the city disposes of its waste. The sewage worker takes the risk that the urban system is not willing to get rid of. This is what makes the normalisation of risk a sociological problem: the danger is familiar, but it is perpetuated because the labouring

body exposed to it is socially devalued. This is further reinforced by Noronha, Singh, and Malik (2018), who demonstrate the relationship between occupational risk and insecure labour arrangements. It observes that in India, sanitation workers are mostly informal or contractual, many do not have employment benefits or job security, 77 per cent do not have a formal contract, and 72 per cent do not have social security. These statistics indicate that risk is not created solely at the worksite but also via the employment structure. A worker who has no formal contract, insurance, or social security is more likely to accept unsafe work, less able to refuse dangerous work, and less covered in the event of injury or illness. Vulnerability is further aggravated by low wages, insecure employment, and low social status. Public-health research indicates the type of injuries and illnesses sewage workers experience. This raises a deeper question: why are such harms allowed to continue, and why do they not produce stronger public outrage? The solution is in the social organisation of caste, stigma, and labour inequality. The threat of sewage work is real, but it becomes normalised because it is linked to workers whose labour has traditionally been treated as impure, replaceable, and less worthy of protection. Thus, occupational health in sewage work is not just about disease, injury, or safety equipment. It is also about how society exposes some bodies to danger and impurity so that other people can live comfortably, cleanly, and safely.

Fragmented Labour Governance and Weak Accountability

The second major argument of this paper is that sewage work in India remains dangerous not only because of the hazardous nature of the task, but also because it is organised through a fragmented system of labour governance. In this system, responsibility is shared among several actors, while risk is concentrated on the worker. The organisation of sanitation work may involve municipal bodies, contractors, subcontractors, supervisors, and informal labour networks, but when injury, illness, wage delay, or death occurs, accountability may often be unclear. This is why fragmented labour governance is key to explaining why manual scavenging and dangerous sewer work persist in India. Roy's (2005) work on urban informality is useful here. Roy claims that informality is not merely outside the formal system; it is one of the means by which urban life is governed. This argument helps us to comprehend sanitation labour in India. Although sanitation is formally introduced as a public service, the labour that supports it is often relegated to contractual, outsourced, temporary, or informal employment. Thus, in this case, the service appears formal, yet the worker is safeguarded informally.

The sewage worker is engaged in a vital public service, but is not necessarily provided with the security, documentation, benefits, or protection of formal public employment. This disintegration is particularly evident

in the outsourcing of sanitation labour. The employment relationship becomes blurred when sanitation work is outsourced to contractors and subcontractors. The municipality may claim that the worker is hired by the contractor. The contractor can consider the worker as temporary or replaceable. Supervisors may be interested only in completing the work. The worker in this chain is directly exposed to hazardous conditions, but responsibility for wages, safety equipment, insurance, medical care, and compensation is fragmented. As a result, the worker bears the entire risk, and institutions share it in such a way that no one is fully accountable. This argument is supported by the World Bank report (2019), which identifies the absence of legal protection for an invisible workforce as a key problem in sanitation labour. It further observes that current efforts are usually ad hoc and fragmented, rather than systematic (World Bank et al., 2019, pp. ix–x). This is significant as it demonstrates that vulnerability is not merely a natural characteristic of sewage work. It is created by the manner in which the work is institutionally organised. Unsafe work is not only practised because sewers are hazardous, but also because the governance system permits dangerous work to be performed without strong and enforceable accountability.

This fragmentation of labour governance becomes even more critical in cases of injury and death. According to Noronha, Singh, and Malik (2018), 620 deaths of sanitation workers had been reported by 2019, but only 445 cases had received full compensation, and 58 had received partial compensation. It also notes that the government relies on newspaper reports and civil society organisations to monitor such deaths, instead of having a robust and independent system to record deaths caused by sewer and septic tank entry. This reliance reveals not just an administrative weakness, but a deeper sociological issue: sewage workers are visible when their labour is needed, yet they become invisible when it comes to matters of protection, documentation, or compensation. This lack of visibility is central to the argument presented. The worker is acknowledged as a physical body capable of cleaning sewers, clearing drains, and restoring sanitation; however, the same worker is often overlooked as a rights-bearing citizen who deserves to be formally registered, safeguarded, insured, and compensated. A system that fails to properly count its injured and dead workers renders labour only partially legible. It recognises the work when it is useful, but fails to recognise the worker when accountability is required.

Koonan (2021) claims that the persistence of manual scavenging is not merely due to a lack of law, but also to the state's apathy and weak enforcement. Human Rights Watch (2014) also demonstrates that legal prohibition is not enough to break the structures that still assign degrading and dangerous work to specific communities. It also stresses that rehabilitation should be transformative and not symbolic. These arguments help

demonstrate that fragmented labour governance is not merely a managerial issue. It is a process by which unequal and caste-marked labour persists even after formal legal abolition. The paradox is evident. Sanitation is a necessary public service, but sanitation labour is flexible, cheap, and disposable labour. City officials need sewers and drains to be cleaned. Contractors require the work to be completed cheaply and quickly. People desire overflowing sewage and blocked drains to be cleared at once. The contract, safety, health, insurance, dignity, and aftercare of the worker are relegated to the background. In this process, governance does not simply fail to protect the worker; it creates a structure where protection can always be deferred, denied, or displaced.

Thus, fragmented labour governance should be perceived as one of the primary means by which risk is created and sustained. It describes why sewage workers are needed but not secure, visible but not well documented, central to the functioning of the city but peripheral to institutional protection. It is not just that workers require improved welfare following injury or death. The more fundamental problem is that accountability should be embedded in the labour process itself. Unless the chain of responsibility is made transparent at the point of work, who employs the worker, who provides safety equipment, who monitors working conditions, who records injuries, and who compensates harm, hazardous sewage work will remain under the banner of administrative fragmentation. Thus, for this paper, fragmented labour governance is not a background condition. It is a key reason why manual scavenging and dangerous sewage work persist in India. It demonstrates that risk is not only created by the sewer, but also by the manner in which sanitation labour is managed. The threat is physical, yet the creation of that threat is institutional. Until the public systems are redesigned to rely on sanitation workers without accepting full responsibility to their safety and dignity, manual scavenging will persist not only as a violation of law, but also as a failure of labour justice, caste justice, and democratic accountability.

CONCLUSION

In conclusion, this paper demonstrates that the continued existence of sewage work and manual scavenging in India is not merely the consequence of ineffective technology, inadequate safety measures, or bureaucratic delays. It is created within an even more profound social structure in which risky labour becomes acceptable when carried out by already marginalised groups. The issue, however, lies not just in the fact that sewage workers are exposed to hazardous conditions, but also in the fact that this exposure has become normalised within the daily operations of urban life. Furthermore, the discussion reveals that sanitation cannot be addressed without addressing caste, labour, and governance. The language of cleanliness, development and public health is the way the modern city presents itself, but the labour that supports this cleanliness is hidden, insecure and

socially devalued. This paradox is at the heart of the politics of sewage work. A city can seem clean on the surface, but this cleanliness is often constructed on the invisibility and vulnerability of the people who manage its waste.

The paper also contends that even with legal abolition, manual scavenging cannot be abolished unless the social and institutional factors that sustain the caste-based labour are not abolished and transformed. Laws, schemes, compensation policies, and mechanisation programs are limited by the fact that workers often remain in precarious employment, influenced by caste regarding who performs the most degrading jobs. In this context, manual scavenging may not survive in its traditional, visible form, but rather through new modes of contractual labour, denial, misclassification, and weak accountability. A meaningful response, therefore, must move beyond treating sewage workers only as beneficiaries of welfare or victims of accidents. They should be identified as workers with rights, citizens with dignity. This involves not merely providing better equipment or payment after injury or death, but reorganisation of the sanitation labour itself. Responsibility should be assumed before the worker enters the sewer, not after the worker has been injured. Therefore, the continued existence of manual scavenging is indicative of a greater failure of Indian democracy to address the nexus between caste, labour and the state. It cannot be ended by technological advancement alone, but only by a change in how society values sanitation work and how institutions take responsibility for those who do it. Ultimately, the promise of dignity, equality, and safe working conditions can only be realised when sewage workers are no longer treated as socially marginal labourers but are recognised as central to questions of labour justice, human dignity, and social equality.

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