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# Sanitation work: Realizing equity and inclusion in WASH

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Recognition of the human right to water, sanitation and hygiene (WASH), and equity and inclusion concerns around gender, disability and age have led to crucial change in WASH programmes and policy, responding to commonly hidden issues such as menstrual hygiene, inclusive facilities for people with disabilities, and affordable services for residents of informal settlements. Despite progress toward realizing the rights of end users “to” sanitation, this crucial body of work has overlooked the rights of an unseen, diverse population working “in” these services, including those who handle human waste. There are increasing calls within and beyond WASH for sanitation workers - marginalized by their informal and hazardous roles, and intersections of caste, religion and gender - to realize their rights to safe working conditions and social security. Yet, sanitation work has received little attention from equity and inclusion WASH scholars, despite the pressing need to challenge dominant technical, health-centric framings of sanitation that can overlook workers’ lived realities. We argue for an intersectional, interdisciplinary approach to support sanitation workers to realize rights to fair living and working conditions, including inclusive WASH infrastructure at work. We draw on the limited literature available to highlight gaps in, and show the importance of the sub-sector of equity and inclusion to engage further with the lived realities of sanitation workers. Increased collaboration between sanitation workers, activists, and allies working on inclusion, labor rights, fecal sludge and solid waste management is paramount to realize sanitation workers’ rights and to truly provide “inclusive” sanitation for all by 2030.

## KEYWORDS

sanitation work, intersectionality, equity and inclusion, WASH, caste, gender

## Introduction

In recent decades, scholars, activists and practitioners have been paying greater attention to how water, sanitation and hygiene (WASH) infrastructure and services are accessed and used differently, according to who you are (including intersections of caste, class, religion, gender, disability, and age), where you live, and what you do (your occupation). It is the latter, however, that has received less attention to date within equity and inclusion scholarship, and the WASH sector more broadly. What happens, when your occupation is central to the delivery of sanitation services, yet your health,

safety and well-being, and access to these services yourself are overlooked by employers and government agencies? This is the reality for millions of sanitation workers across the world<sup>1</sup>. Sanitation workers tirelessly handle, remove and sort human waste so that the living environment for others might be “clean.” Frequently hailing from marginalized, low-income, class, caste backgrounds or religious minorities, the priorities and concerns of sanitary workers, especially those involved in hazardous removal of human waste, remain not only overlooked, but - in the words of Bhasha Singh (2014) - intentionally *unseen* by decision makers, and wider society. This paradox between visibility (in public spaces) and invisibility (in discourse, policy and practice) was epitomized by the COVID-19 pandemic, with sanitary workers hailed as “frontline heroes,” yet not provided with adequate wages, job security or protections (Salve, 2020; Prater and Springate, 2021; Swaroop and Lee, 2021; WaterAid, 2021; Alam et al., 2022; Saldanha et al., 2022) - challenges that cut across the so-called global North and South.

Recognition of the human right to WASH and ongoing equity, diversity and inclusion concerns around the need to deliver safe, accessible, affordable and sustainable infrastructure and services to, for and with a range of users, has led to a lively field of research and advocacy in WASH on people with disabilities (Jones and Reed, 2005), menstruating adolescent girls (Sommer and Sahin, 2013), including those with disabilities (Wilbur et al., 2022), people who experience incontinence (Rosato-Scott et al., 2020), transgender and non-binary users (Boyce et al., 2019), and perimenopausal women (Bhakta et al., 2021). Despite this lively debate, and progress in the provision of basic and improved sanitation worldwide, the rights of those who are critical to management of both human and solid waste - sanitation workers - remain overlooked in inclusive WASH approaches. Equity and inclusion discussions are yet to directly respond to the stigmatization of sanitation workers who clean toilets, empty septic tanks, pit latrines, sewers and drains, collect and dispose of solid waste and sweep streets, exposing them to harm. Highlighted as an area of concern by the Special Rapporteur on the human right to safe drinking water and

<sup>1</sup> The number of people involved in ‘sanitation work’ globally is unknown. Definitions of ‘sanitation work’ also vary significantly within and between countries. Whilst some scholars, activists and policy advocates focus explicitly on those involved in handling human waste (feces) across the sanitation value chain (see, for example, the Initiative for Sanitation Workers: <https://www.susana.org/en/knowledge-hub/projects/database/details/676>), others include both human and solid waste management under the umbrella of ‘sanitation work’. This is because there is a great deal of overlap between these sectors, and those involved in the work (for example, waste workers in India handling both solid and human waste). Sanitary work can also include healthcare workers (collecting and sorting medical waste inside and outside of hospitals), wastewater treatment plant operators, and other workers who may come into contact with waste, as part of their jobs.

sanitation over a decade ago (de Albuquerque, 2009, 2012), this work remains deeply interlinked to identity and social status around the world, and especially in South Asia. To “leave no one behind” and achieve the Sustainable Development Goals (most notably Goals 5, 6, 8, 10 and 11), concerted efforts from equity and inclusion perspectives are needed to realize the rights of this “unseen” population.

This paper focuses especially on sanitation workers, to highlight the need for greater focus upon rights “in” sanitation, directly focussing on the individuals and groups who deliver and maintain services, as well as the rights “to” sanitation and WASH for users. We draw on the limited literature available on human waste management in particular - an area that has received less attention to date - as well as more established insights from solid waste management and healthcare, to highlight the need for the sub-discipline of equity and inclusion, and wider sector, to engage further with the rights of sanitation workers, around the world. Though the challenges facing those involved in manually handling human waste (including, for example, manual scavengers in South Asia), are particularly noteworthy, we recognize, and highlight, that sanitation work is a global occupation that demands greater attention. The paper outlines why an intersectional and interdisciplinary approach is needed to support sanitation workers - across the globe - to realize rights to decent work and living conditions, social security, education and training, supported by access to inclusive and gender-sensitive WASH infrastructure at work.

## Sanitation workers: Rights “in” sanitation

Whilst human rights activists have worked for decades to highlight the plight of sanitation workers, it is only in recent years that the health, safety and dignity of sanitation workers has received greater attention in WASH research, policy and practice on the global and regional stage. Understanding the challenges of sanitation work has been an emergent subject of interest to several disciplines and sectors within and outside WASH (notably healthcare, solid waste management and labor rights). Occupational health and safety research has an established body of research around the health outcomes of the job, such as Gastroenteritis, respiratory and musculoskeletal diseases, and mortality (Gong et al., 2013; Acharya, 2019; Chumo et al., 2021; Oza et al., 2022). There is also a growing interest in studying the correlations between worker training, knowledge, behavior and their health outcomes (Alam et al., 2022; Ye et al., 2022), and observing the operation of desludging to design standard operating procedures to improve occupational health (Eales, 2005; Abbasi and Badruddin, 2019; Gautam et al., 2021). Research has also addressed the socio-economic status of sanitation workers and their families, including caste and colonial underpinnings of the occupation in South Asia

(Joshi et al., 2004; Khurana and Ojha, 2009; Chowdhury, 2011; Hossain, 2013; Sultana and Subedi, 2016; Prasad and Ray, 2019; Walters, 2019).

A critical body of research also focuses on the multifaceted challenges of the livelihoods of sanitation workers, including how institutions shape this occupation, informality, low and irregular incomes, and arbitrary contracts (van der Wel et al., 2010; Nkansah et al., 2012; Mallory et al., 2020; Xu and Dou, 2021; Rajendra, 2022). This area of focus correlates with current initiatives in the WASH sector around improving sanitary work. For instance, in Bangladesh, Practical Action supported two sanitation worker groups to formalize and mechanize their work and build a public-private partnership with the local government (de La Brosse et al., 2017). They also provided vocational training (in health and safety and financial management) and access to subsidized personal protective equipment. Sanergy, a social enterprise, has also worked with manual pit emptying groups in Nairobi, Kenya, to deliver sanitation services in low-income settlements. Although supporting sanitation workers is vital, long-term improvement in, or job security for workers remains elusive, with many WASH projects and programmes oriented primarily toward efficient and sustainable service delivery, and not worker welfare (Mallory et al., 2020; Zaout et al., 2021).

As sanitation work is gaining traction within the WASH sector, several studies have called for, and are concerned with assessing the prevalence of sanitation work, profiling and mapping the challenges to moving to a “dignified” job (Dalberg, 2017; World Bank et al., 2019; Peal and Kapulu, 2021; Raghavendra and Kumar, 2022). Numerous national and international forums also showcase the significant role of sanitation workers and the various challenges they face. For example, in 2016, the fecal sludge management network in Bangladesh held a “Dignity of Septic Tank Emptiers Convention in Dhaka” to leverage support for this disadvantaged group (WSUP, 2016). In 2021, several researchers and practitioners ran the first “Sanitation Workers Forum”<sup>2</sup> to share recent work and research on sanitation work and identify ways to improve this occupation, alongside sanitation worker representatives. Since the challenges of this livelihood are rooted in social and political systems, movements beyond the WASH sector also strongly advocate for sanitation workers. For example, Baruah (2014) provides a historical overview of the social movements in India that advocate for the elimination of manual scavenging - a “caste-based and hereditary occupation form of slavery” (International Dalit Solidarity Network, 2022) - from Dalit movements against untouchability in 1972 to the current constitutional acts to end manual scavenging as a “supposed”

2 All videos from the forum can be found at: <https://sanitationworkers.susana.org/resources> and four summary blogs from the event here: <https://www.amita-bhakta-hidden-wash.net/forced-to-clean-excreta-by-accident-of-their-birth-in-a-particular-caste/>.

solution to the dire status of this job<sup>3</sup>. In Pakistan, the “Sweepers are Superheroes” campaign, led by human rights activists and lawyers was also established to challenge the social stigma of this job, stop discrimination in recruitment practices, and advocate for improved working conditions (Aqeel and Gill, 2021). It is important, in our discussion therefore, that we recognize that recent advances in debate are part of much longer-term struggles of, from and in support of sanitation workers globally.

## Going deeper: An intersectional and interdisciplinary approach

With some notable exceptions (outlined above), the vast majority of emerging literature on sanitation work in the WASH sector has, to date, centered mainly on occupational health and safety, technological “solutions” (Cawood and Bhakta, 2021) and policies and regulations, less so on the diverse experiences, needs and priorities of workers themselves. The absence of discussion on sanitation work in the sub-sector of equity and inclusion is particularly notable, and surprising, given that identity is deeply bound to recruitment practices, the division of labor (and work tasks), working and living conditions, livelihood trajectories and intergenerational change. In this short piece, we argue that understanding the equity and inclusion challenges associated with sanitation work requires a much *deeper* appreciation of who is involved in the work, how and why this is changing, and the differentiated individual and collective needs of workers. Utilizing an intersectional approach<sup>4</sup> and a desk-based narrative review of recent literature on sanitation work, we highlight below some of the key ways in which “who you are” might shape your everyday working realities in different contexts. We also pose key questions that require deeper, interdisciplinary engagement (from Anthropology and Geography, History and Social Development, to Policy, Law and Civil Engineering) with, and in support of sanitary workers and their representatives going forward.

## Caste and religion

Sanitation work, across all its forms, is deeply bound to caste, class, race, religion and migratory status. Whilst the

3 See also the ongoing campaign ‘Stop Killing Us’ by prominent anti-manual scavenging activist Bezwada Wilson of Safai Karamchari Andolan.

4 Despite diverse and at times conflicting interpretations (for origins, see Crenshaw, 1989 and for a useful overview, see Collins and Bilge, 2016), intersectionality remains a vital tool for WASH and equity and inclusion researchers, practitioners and policy advocates to examine how overlapping forms of oppression (according to caste, class, religion, race, gender, disability and age, sexuality and other identity markers) impact certain groups in daily life.

caste underpinnings of this work are most notable and widely documented in South Asia (where Dalits continue to dominate cleaning occupations), sanitary work has been, and continues to be associated with low-class and religious, racial and ethnic minorities around the world, from particular ethnic groups in Japan (Hanley, 1987; Groemer, 2001), Nigeria (Uwa, 2018) and Madagascar (Rijke-Epstein, 2019), to tribal minorities in Ghana (Nkansah et al., 2012), black employees in the USA (Martin Luther King, Jr. Research and Education Institute, n.d), and undocumented migrants in the Maldives (International Labour Organization, 2022). However, it is within South Asia that who you are is deeply intertwined with what you do (including how you are treated within and outside of the workplace), where you live, and what alternative occupations are available to you and your children. Within this context, manual scavenging, and other forms of hazardous and degrading waste work, remain dominated by particular low-caste and religious minorities, due to the historical division of labor linked to religious texts on purity and pollution – institutionalized by British colonizers (Sultana and Subedi, 2016) – and reproduction of caste as a contemporary form of social, economic and political power (Shahid, 2015; Dubey et al., 2021). Whilst commonly associated with the removal of feces from dry latrines in rural India, manual scavenging has adapted with modernization (Wilson and Singh, 2017) with the introduction of sewers, newly constructed toilets and septic tanks (Mander et al., 2019). Even though the practice has been banned, new machines have been introduced, and job titles have changed (from “Sweeper” to “Sanitary Worker”) – bringing new socio-economic groups into the occupation – manual scavenging and other hazardous waste work *persists* in India, Bangladesh and Pakistan<sup>5</sup> via waged and unwaged labor. For example, in Pakistan, adverts proclaim that “only Christians need apply” for government sanitary posts including dangerous sewer work (ur-Rehman and Abi-Habib, 2020), reinforcing discrimination and subjugation of (converted) Christians involved in cleaning (Butt, 2020; Aqeel and Gill, 2021). In Bangladesh, manual pit emptiers from self-defined *Harijan* communities (“children of God”<sup>6</sup>) are unable to access improved jobs on mechanical trucks used to empty human waste, with some reverting back to using buckets and spades (Zaqout et al., 2021). Critical questions and uncertainties remain, as new technology is introduced into the sector, yet manual handling of waste (and exposure to hazards for particular groups) persists across the globe. For example, what role can or does technology play in improving the work, and for whom? Who operates the truck or pump, and who still

goes into the pit? What are the implications of “job takeover” by different socio-economic or religious groups? Is work still (informally) sub-contracted out to particular groups of people, and what does this mean for wages and basic protections? Whilst the caste and religious underpinnings of sanitation work have received particular attention, key questions also remain around class and race, and how this intersects with sanitation work both historically, and across the world today.

## Gender

Sanitation work has traditionally been divided along gendered lines as well as by caste in contexts such as South Asia, shaping the lived experiences (including recruitment practices and nature of work tasks) of men, women, boys, girls and transgender communities. For example, whilst men and boys commonly descend into sewers and septic tanks to manually empty them<sup>7</sup>, women and girls are more often involved in toilet cleaning (including dry latrine cleaning, a form of manual scavenging) sweeping streets, railways and sorting municipal waste. In India, young women who have married into families that clean dry latrines are known to have been forced into the same work (often taking over households from in-laws), even if their own families did not engage in cleaning. Widows have also been recruited as government *safai karamcharis* (sanitation workers) through the *warsa hakka* scheme upon the death of their husbands – including from “sewer deaths” (Kadlak et al., 2019; Dubey et al., 2021). Personal protective equipment is rarely designed for women or children. A 2009 survey by the Women’s Engineering Society found that in the UK only 8% of women working in engineering roles wore PPE specifically designed for women and therefore were often uncomfortable or even placed at greater risk in the workplace (Women’s Engineering Society, 2010). There is little evidence that the situation is better in other countries, with early reports from Wai in Maharashtra, India (Center for Water and Sanitation (CWAS), CEPT University, 2020), suggesting that women workers lack access to adequate safety boots and goggles, have ill-fitting face shields and helmets, and only receive part of the full uniform given to sanitation workers. Female waste workers in India have little or no access to toilets to change menstrual materials, resulting in discomfort and gynecological problems. Menstruating workers use two to three sanitary pads at once, walk for long distances carrying up to 30 kg of waste throughout the day, and navigate staircases without railings whilst carrying large loads (Arise Consortium, 2022). Perimenopausal waste workers and sweepers with heavy

<sup>5</sup> Manual scavenging has also been reported in Nepal, Sri Lanka and the Maldives, though data remains scarce.

<sup>6</sup> The distinction between *Harijan* and Dalit is significant, and the subject of much debate between Gandhi (associated with use of the former) and Dr Ambedkar (for details, see Roy, 2017).

<sup>7</sup> Though women and girls rarely enter sewers or septic tanks, they have been found to ‘help’ male workers by carrying buckets and dumping waste (Karim, 2017; Cawood et al., 2021), and are directly exposed to fecal waste in dry latrines or other cleaning activities (for example, as caretakers for shared or public facilities, railway cleaners or road sweepers).



and irregular menstrual periods with the loss of up to 80 ml (6 tablespoons) of blood require access to sanitation to change soiled menstrual materials and wash (Bhakta et al., 2021). Faced by a lack of income, paid maternity leave and safe childcare spaces, female Nigerian waste workers also have no choice but to work and take their infants onto dumpsites to be able to breastfeed them (Obadina, 2016). By putting the rights of women and girls with no fixed “workplace” into sharper focus, could equity and inclusion perspectives on sanitation work inform gender-sensitive urban planning to ensure they can access facilities when and where needed? Lessons can also be taken from Andhra Pradesh, Telangana and Odisha in India, where socially and economically disenfranchised transgender people, who lack access to inclusive sanitation, are spearheading the takeover of desludging services through self-help groups to generate livelihood opportunities (National Faecal Sludge and Septage Management Alliance and Niti Aayog, 2021). Navigating work and domestic responsibilities, a lack of social security, negative impacts of physical labor on their reproductive health (Kadlak et al., 2019; Senthilir et al., 2020), vulnerabilities to sexual violence and harassment at home and work, poor access to healthcare, housing and education, job insecurity, chronic morbidity, and lack of participation in political activities ultimately has adverse effects on the mental and physical health of women workers (Monteiro and Nalini, 2021) who face “double” or “triple” discrimination due to caste, gender and occupation (Patras and Usman, 2019; Kumar and Preet, 2020; WaterAid India, 2020). Other critical questions relating to gender and sanitation work that remain unanswered include; how do female sanitary workers navigate menstrual hygiene in their shift patterns? Whilst equity and inclusion debates have driven menstrual hygiene management (MHM) provision in schools, can sanitation services truly be inclusive if the MHM needs of women and girls who spend hours collecting waste outside of school are overlooked? What facilities are available for sanitary workers in the workplace (for example, showers, handwashing stations)? What are the needs and priorities of transgender sanitary workers? What safety equipment is available, and is this suitable for different body types, preferences and climates? To what extent are the concerns of workers taken into consideration by employers, particularly in relation to sexual harassment?

## Disability

Whilst there is lively debate in equity and inclusion, and across WASH around access to facilities for users with a disability (see, for example, Wilbur et al., 2022), to date, very little is known about sanitary workers with a disability, and how disability intersects with gender, caste and other personal characteristics. This lack of knowledge exists around two key areas - workers with existing disabilities who undertake sanitary work (their specific needs, challenges and priorities),

and workers who have a disability, *because* of sanitation work (for example, from prolonged exposure to harm, such as hazardous gases or materials, and acute trauma, such as leg or arm fractures). Manual pit and septic tank emptiers and sewer cleaners face particular risks of lifelong disabilities due to work-related injury, including polio, musculoskeletal disorders, skin lesions. These in return are also associated with lifelong impacts on cognition and learning and in some cases psychosis (Gonzalez et al., 1992; Jukes et al., 2002; Esa et al., 2021). Inhalation of noxious gases also reduces quality of life due to asthma (Oza et al., 2022), and can lead to death for septic tank emptiers, who are rendered unconscious and can literally drown in feces in these “death traps” (Mander et al., 2019). Disability-inclusive WASH warrants expansion to consider the rights of injured sanitation workers with disabilities, and how the rights of workers with pre-existing (physical and psychological) needs can be realized. Discussions on the improvement of occupational health and safety for sanitation workers need to further progress to incorporate adapted protective equipment, flexible working hours, accessible facilities in the workplace, and social security support for workers with disabilities. Could disability-inclusive employment opportunities improve livelihoods for and inclusion of people with disabilities, in sanitation work, and societies where disability remains taboo? Inclusive sanitation programming also needs to pay greater attention to the WASH facilities available in low-income settlements or “colonies” in which sanitation workers commonly live, and if these are accessible for those with disabilities - a central question for urban planning and WASH interventions overall. Greater attention also needs to be paid to the harm that sanitation work brings and the wider environment in which it takes place on mental health and well-being, with reports of worker suicides, depression and anxiety, linked to lack of, or withholding of pay, and harassment.

## Age

A further area that has received limited attention to date is that of age, and how this intersects with other identity markers in sanitation work. Whilst there is extensive literature on child labor in relation to solid waste work (including sorting e-waste), less is known about children involved in handling human waste - though we know this also exists<sup>8</sup>, especially where it is a hereditary occupation. Existing studies note how child waste pickers financially contribute to low-income households, but find it challenging to avoid risks including traffic accidents, being trapped in waste compressors, slipping or falling, and being cut by waste materials, due to their age (Krajewski et al., 2002).

<sup>8</sup> In Bangladesh, recent research found that boys as young as 7 years old start shadowing male relatives who enter pits and tanks to remove sludge (often at night) (Cawood et al., 2021).

Studies have also found that families face the financial burden of treating wide-ranging health problems among waste collector children, including respiratory issues, malnutrition, fatigue, skin problems, vision impairments and costly treatment for bone fractures (Alam et al., 2021). Much more information is needed on how the experiences of sanitation work, especially human waste management, vary according to age, among young and older populations. For example, what are the different pathways into and out of the occupation for children and young people? What aspirations do children of sanitary workers have for alternative livelihoods? How effective is education and training in opening up different possibilities? And, how are the needs and priorities for older workers, including pension entitlements (as well as other core social protections) addressed? What are the implications or possibilities of changing occupations, later in life, and for overall life expectancy<sup>9</sup>? And, building upon the emergent scholarship in incontinence in equity and inclusion debates (Rosato-Scott et al., 2020) - how do workers across all ages who experience incontinence manage at work if they cannot control leaks of urine and feces and do not have adequate access to non-food items such as incontinence pads, and regular access to toilets?

The intersections of occupation with caste, class, race, religion, gender, disability and age, ultimately require much greater attention within equity and inclusion scholarship, and the WASH sector and social science research more broadly. To avoid simply listing identity characteristics, we need more detailed, and sensitive research into how these intersections (for example, caste, gender and religion, class and race, or age and disability), affect the everyday experiences of sanitation workers around the world. Whilst the questions posed assume that sanitation workers have “a workplace,” regular employment and clearly identified employers - we also know that this is *not* often the case, especially in contexts where subcontracting and outsourcing of sanitation services is increasingly the norm (reflecting a pressing need to review labor laws and employment practices). Special attention should also be paid, therefore, to the realities and priorities of informal and private workers from different backgrounds. Answering these questions requires, we argue, a mixed methodological toolkit that places an intersectional, interdisciplinary and participatory approach at the fore - something that equity and inclusion scholars and practitioners understand and apply well in their work. In putting forward such an agenda, we must also be mindful of who speaks for whom in research, policy and practice relating to sanitation work, reflecting on our own positions of privilege, questioning our assumptions, and why those associated with sanitation work (particularly Dalits in South Asia), remain poorly represented in leadership positions and debates in research, policy and practice.

9 Some estimates in India suggest that life expectancy for sanitary workers sits at around 40-45 years old (Dalberg, 2017). Little is known about life expectancy in other country contexts where sanitation work occurs.

The final section below, outlines some tentative avenues forward, with these important limitations in mind.

## From rights “to,” to rights “in” WASH

Collaboration between sanitation workers, human rights activists and allies in the WASH sector and equity and inclusion community, has the potential to foster a long-lasting improvement in the experiences of sanitation workers and workers who are able to leave this occupation. Engaging directly with sanitation workers of all backgrounds through participative and action-oriented research techniques (including, for example, PhotoVoice, oral histories, participant-led video and diary making) is key to realizing the rights of, and with workers, drawing on long-established discussions on “putting the first last” (Chambers, 1997). WASH professionals including equity and inclusion experts, social workers, and social development practitioners, need to apply and adapt the techniques which have enabled them to effectively engage with people with disabilities, women and girls, to work with sanitation workers to identify the support measures they need. Whilst the Washington Group Questions<sup>10 11</sup>, can help to identify injured workers’ functional limitations, accessibility audits can ensure that their rights to WASH are not compromised by their disabilities. Feminist and queer approaches can also elevate the voices of all workers, but especially women, girls and those identifying as transgender, to raise the issues that matter to them in sanitation work, yet may remain hidden.

Existing frameworks for equity, inclusion and rights in WASH such as those developed by WaterAid (n.d) for service users require further expansion to explicitly consider the measures needed to support a diverse population of sanitation workers (and other workers) who provide essential services. A framework of standards for inclusion in the sanitation workforce should be tailored to the needs of workers from different backgrounds and reflect their diversity. As noted above, equity and inclusion frameworks need to also recognize that sanitation workers do not necessarily have a fixed workplace, or access to adequate WASH facilities where they live. Future development of these frameworks to include sanitation workers requires collaboration between sanitation workers and those working on gender issues including MHM and transgender rights, disability, labor rights and planning, to provide inclusive WASH facilities including toilets and spaces for childcare in strategic locations for workers who are constantly “on the move.” Collaborative

10 The range of Washington Group Questions, including a “short” set and an “extended” set are available at this link: <https://www.washingtongroup-disability.com/question-sets/>.

11 See Wilbur et al. (2022) for an example of how the Washington Group questions were used as part of assessing girls’ impairments to ensure they met the inclusion criteria for research on MHM needs of adolescent girls with disabilities in Vanuatu.

approaches could also help to identify, and support existing routes for workers to realize their rights through collectivisation and unionization, and work with relevant bodies such as municipal authorities - something that again has a long, and contested history. By better understanding “who” sanitation workers are, there is scope to address barriers to using personal protective equipment including poor fit, discomfort, “breathability” of materials, and design (WaterAid, 2020).

Existing standards for workplace inclusion, promoted by the ILO and enshrined in national law in many countries, such as maternity protection, social security, standards on annual leave, minimum pay, unfair dismissals, harassment cases, insurance and compensation for injury, and sickness support must also form part of inclusive approaches to supporting sanitation workers. Empowering sanitation workers should not just be a device to improving sanitation service delivery but rather a commitment to the human right to decent work, and human flourishing. The WASH sector advances in waste management technology, and sanitation business models should be guided by an equity and inclusion lens to gain a holistic appreciation of the intersectionality of this occupation and the intertwined challenges associated with it. That this lens should be embedded in, rather than added to the current debate seems self-evident to us. Securing the rights of all who work in sanitation is foundational to equity and inclusion. Success is indicated when workers experience safety and security within the sanitation sector as well as access to safely managed sanitation services for themselves. This centring is crucial to promote decent sanitation jobs while extending inclusive sanitation services for all, and to promoting rights “in” WASH, as well as “to.”

## Author contributions

AB and SC conceptualized the paper. AB led the design and drafting of the manuscript with SC and MZ. AB, SC, MZ, and BE

reviewed, edited, and agreed on the final manuscript. All authors contributed to the article and approved the submitted version.

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## Conflict of interest

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