

Building a Roadmap for Inclusive Sanitation Facilities for the State of Uttarakhand

Policy Primer



National Institute of Urban Affairs

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Content Development by-

Ms Abhisikha Das, Program Associate, Inclusive Cities Centre (ICC), NIUA
Ms Kanika Bansal, Lead- Universal Design and Inclusion, Inclusive Cities Centre (ICC), NIUA
Dr. Mahreen Matto, Team Lead, Sanitation Capacity Building Platform (SCBP),
Mr. Utsav Choudhury, Program Manager, Inclusive Cities Centre (ICC)

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Ms. Akhila Das, Executive Director, CFAR,

Prof. Haimanti Banerji, Associate Dean, IIT-Kharagpur,

Mr. Niladri Chakraborty, Senior Lead (Practice), IIHS,

Ms. Ruchi Gupta, Team Lead, Sustainable Urban Development - Smart Cities (SUDSC) - Phase II, NIUA

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Sanitation Capacity
Building Platform



INCLUSIVE CITIES CENTRE
Towards Shared Urban Futures



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Building a Roadmap for Inclusive Sanitation Facilities for the State of Uttarakhand

Policy Primer



Nitesh Kumar Jha I.A.S.
Secretary



Govt. of Uttarakhand

**Urban Development
& Information Technology**
4 Subhash Road, Dehradun
Ph.: 0135-2655867

MESSAGE

Under the guidance of our Hon'ble Prime Minister, India has been working towards the goal of Antyodaya, empowering the last person at the last mile, in a mission mode. This strategy is a common practice in Uttarakhand where principles of cooperation and collective endeavor is central to the journey taken towards Swachh evum Sugamaya Uttarakhand. The state has been at the forefront of international and national commitment to ensure access to quality sanitation for all. Right from Sustainable Development Goals- Leave No One Behind and national commitment of Swachh Bharat Mission, Uttarakhand has shown potential to change for better.

In our journey towards Swachh evum Sugamaya Uttarakhand, the collaboration between the Urban Development Directorate (UDD) of Uttarakhand and the National Institute of Urban Affairs (NIUA) is projecting the right direction. I am pleased to know that NIUA is publishing a Policy Primer- "Building a Roadmap for Inclusive Sanitation Facilities for the State of Uttarakhand" for promoting "Swachh evum Sugamya" Uttarakhand, a valuable asset to all stakeholders and practitioners working in the urban space. This policy advisory has a special focus on the public sanitation issues faced by marginalized groups. It is imperative that urban practitioners and city administrators ensure implementation at the ground level of the policies being inclusive, emphasizing creation of an ecosystem and infrastructure that is sensitive towards the diverse and unique sanitation needs of marginalized groups.

I would like to congratulate Uttarakhand Development Directorate (UDD) for channelizing the resources and efforts to actionize inclusion in our policy landscape. I would like to also extend my heartfelt gratitude to the National Institute of Urban Affairs (NIUA) for their role in the development of this document. I am sure that this policy primer shall nudge the urban practitioners and ULB officials to mainstream inclusion in all elements of public sanitation to efficiently deliver public sanitation services to all with dignity. This document shall take forward the objectives of Swachh Bharat Mission and act as a testimony towards recognising the diverse groups' unique needs and actionize strategies to build inclusive cities where basic and essential services like sanitation is access proof for all.

Shri. Nitesh Jha, IAS
Secretary, Urban Development Department
Government of Uttarakhand

(Nitesh Kumar Jha)
Secretary
Urban Development
Govt. of Uttarakhand

फुफ्रु फल ग हनसु; क वलड, ०, १०
फुसु क
Nitin Singh Bhadauria, IAS
Director



‘गुह फुदक फुसु क्य;
Directorate Urban Development

MESSAGE

It is with great pleasure and a sense of accomplishment, I introduce the Policy Primer- “Building a Roadmap for Inclusive Sanitation Facilities for the State of Uttarakhand” for promoting “Swachh evum Sugamya” Uttarakhand which embodies the essence of our commitment to Inclusive Sanitation (CWIS) in the urban areas of Uttarakhand. Uttarakhand which embodies the essence of our commitment to Inclusive Sanitation (CWIS) in the urban areas of Uttarakhand. As the vision of Urban Development Directorate (UDD) is integrated development of the urban areas by making the cities vibrant, clean, and infrastructural strong and to bring about improvement in the service delivery, public sanitation emirates as a priority for the state.

I am pleased to share that this policy primer shall nudge the urban practitioners to mainstream inclusion in all elements of public sanitation facilities to efficiently deliver public sanitation services to diverse groups with dignity. It is imperative to invest in making our services inclusive, especially in public sanitation, realizing the current gaps and recognise the needs of diverse groups. This document takes forward the aims of making cities in Uttarakhand inclusive and highlights the ground realities along with curated recommendations and a roadmap to shape the future of public infrastructure, investment and programmes.

I would like to extend my heartfelt gratitude to National Institute of Urban Affairs (NIUA) for their role in the development of this policy primer. I urge all the urban practitioners, SBM coordinators, ULB officials to take account of this document to enhance the efficient delivery of public sanitation services to all with dignity. At the same time, prompting city officials to translate all the actions end-to-end right from procurement to design and ensure facilities are diverse group’s needs friendly. Let us create cities that are inclusive for all without discrimination where every action taken is aligned with the goal of inclusivity.

Mr Nitin Bhodria, IAS

Director, Urban Development Directorate, Government of Uttarakhand

FOREWORD

I am pleased to introduce the Policy Primer-“Building a Roadmap for Inclusive Sanitation Facilities for the State of Uttarakhand” that stands as a manifestation of the larger narrative of equal rights to sanitation irrespective of disability, gender and age. The collaboration between the Urban Development Directorate (UDD) of Uttarakhand and the National Institute of Urban Affairs (NIUA) has been a remarkable journey that has led to the creation of this comprehensive policy primer

I would like to congratulate the UDD for their enthusiasm and encouragement in the journey towards creating inclusive cities. Their collaboration and cooperation to promote the sanitation rights of marginalized groups by mainstreaming inclusion in the sanitation value chain. I extend my heartfelt gratitude to the dedicated team behind this endeavor and our esteemed partners at NIUA for their steadfast support.

This Policy primer pursues the goal of promoting “Swachh evum Sugamya” Uttarakhand which embodies the essence of the state’s commitment to Inclusive Sanitation in the urban areas of Uttarakhand. The recommendations and roadmap for building inclusive sanitation facilities shall strengthen the pursuit of making Uttarakhand inclusive for all. I hope this policy primer guides the urban practitioners, urban local bodies (ULBs) officials to incorporate inclusion in the public sanitation value chain.

I encourage all the ULBs and state authorities to make the most of this resource. Let us collaborate to build cities that align with our vision for integrated development, making them vibrant, clean, and infrastructurally strong, while improving our service delivery. Together, let us build cities that are inclusive, aspirational, and beacons of excellence in the realm of sanitation.



Dr. Debolina Kundu

Director (Additional Charge)

National Institute of Urban Affairs

Executive Summary

Access to sanitation with dignity is a human right. Poor sanitation puts challenges on the living standards of all citizen and can impact their overall development. It acts as a barrier to an individual's prosperity as well as sustainable development. This is worse in case of marginalized groups who have diverse sanitation needs. Unavailability of inclusive provisions in public sanitation creates additional barriers in their lives to participate in economic opportunities. Without basic sanitation services, they have no choice but to practise open defecation, posing a risk to health and livelihoods. It's the choice that matters to adequately lead a life with dignity and pursue economic opportunities for quality of life. When accessing services, resources and equal opportunities, marginalised groups particularly persons with disabilities, women, children and the elderly face plenty barriers. Coupled with lack of availability of resources; Rather, unequal policies and social practices, often leave them farther behind. Sanitation is an essential need, which plays a critical and multifaceted role in improving the quality of life for individuals, communities, and society as a whole. Its importance extends beyond basic hygiene and encompasses various aspects that contribute to health, well-being, and overall development.

Needs of marginalized groups are integral for inclusive interventions. Particularly, persons with disabilities, women, children, adolescent girls and the elderly are often excluded from safe and adequate hygiene and sanitation services. The lack of access to basic WASH infrastructure contributes to a disproportionate experience of poor health outcomes and risks related to WASH, such as physical strain and injury, gender-based violence, and psychosocial stress with missed educational, economic, and social opportunities. Public spaces are places for various social functions and are also essential components of the cultural heritage of settlements and economic activities. As certain, public sanitation facilities become nodes of rest, private space amidst a public place. Inclusive provisions like accessible toilets, provisions for adequate Menstrual Hygiene Management (MHM), availability of family toilets, addressing the needs of caregivers and children are critical in enhancing the public sanitation facilities for diverse users. Public sanitation facilities are no longer just a space for relieving oneself when needed but extends to the context of recreational spaces, transit nodes for resting spaces and commercial spaces. Therefore, public sanitation facilities have to upgrade according to the diverse user needs' and consider urbanization factors.

A growing focus on the intersection of factors such as disability, gender and age arrives as a need. While under the first phase of SBM-U, the focus was on improving access to toilets, SBM-U 2.0 has the additional focus on ensuring functionality and maintenance of community/public toilets. A new category of toilets termed 'Aspirational Toilets' is proposed to be constructed at historic/tourist places with high footfalls under SBM-U 2.0. Though the policy landscape is pointing in the right direction of ensuring sanitation for all, the efforts can be enhanced by incorporation of the concept of Citywide Inclusive Sanitation (CWIS), which is a public service approach to advance Equitable, Safe, and Sustainable outcomes. It aims at strengthening the design and implementation of core public system functions of Responsibility, Accountability, and Resource Planning and Management. The outcome of a CWIS approach is to ensure everyone in an urban area has access to and benefits from adequate and sustainable sanitation services. In this context, it is important to acknowledge and understand the diverse and unique needs of these marginalized groups and translate them into adequate provisions in the sanitation facilities, schemes and policies.

In this context, National Institute of Urban Affairs (NIUA) and Urban Development Directorate (UDD) have created the policy primer - "Building a Roadmap for Inclusive Sanitation Facilities for the State of Uttarakhand" for promoting "Swachh evum Sugamya" Uttarakhand which embodies the essence of the state's commitment to Inclusive Sanitation in the urban areas of Uttarakhand. To understand the present state of inclusion in public sanitation facilities concerning the needs and aspirations of a diverse set of users, an extensive survey was conducted in two cities- Dehradun and Ramnagar in Uttarakhand. The scope of this policy primer revolves around public sanitation facilities, i.e. public toilets and the diverse needs of marginalized groups especially persons with disabilities, women, children, and the elderly.

The purpose of this policy primer is to nudge and guide the urban practitioners, ULB officials, SBM coordinators to mainstream inclusion in all elements of public sanitation to efficiently deliver public sanitation services to all with dignity. The document is devised to communicate the importance of mainstreaming inclusion in the public sanitation value chain and how to revitalize the goals of SBM 2.0 with the commitment to 'Leave No One Behind'. Participatory and citizen centric approach has been the core to the data collection strategy. The study uses the data collected on universal accessibility in existing public toilets and user perceptions, and personal interviews conducted along with focused group discussion with marginalized groups to capture their needs and issues. The study collected data from at least 20% of the total number of public toilets in Dehradun and Ramnagar cities. More than 200 users were surveyed, four personal interviews and four focused group discussions were conducted with persons with disabilities, women, children, caregivers, informal workers, and the elderly.

In all, the document takes the readers through the journey of Public Sanitation facilities from the existing scenario towards Inclusive Sanitation in the state of Uttarakhand by incorporating diverse groups and their unique sanitation needs. The document also comprises key guiding principles to inclusive sanitation, emphasizing on universal design and inclusive planning, participation and citizen engagement, fostering innovations, innovative financial models, robust governance mechanisms and enhanced capacities of various stakeholders. . Moreover, the document also deeply drives into highlighting a roadmap for building inclusive sanitation facilities providing steps of as-is assessment, identification of needs, creation of inclusive provisions, monitoring and evaluation and capacity building that needs to be periodic yet impactful in disseminating information & communication. Finally, the document ends on the note of key action points for the state and the cities to mainstream inclusion in public sanitation. The recommendations in the document envisions to impact the entire service chain, its primary focus is on design and operation of public sanitation facility. It is expected that this document shall address the vital need of equitable access to public sanitation for all, enhancing the public sanitation serviceto become inclusive, leaving no one behind.

This Policy Primer pursues the goal of promoting "Swachh evum Sugamya" Uttarakhand which embodies the essence of the state's commitment to Inclusive Sanitation in the urban areas of Uttarakhand. To further the goals of SDGs and Leave No One Behind, this Policy primer shall act as a guide for impactful actions by the urban practitioners.

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List of Abbreviations

SBM (U)	:	Swachh Bharat Mission (Urban)
SDG	:	Sustainable Development Goals
NUSP	:	National Urban Sanitation Policy
CAGR	:	Compound Annual Growth Rate
SWAp	:	Sector Wide Approach
CSOs	:	Combined sewer overflow
CWIS	:	City Wide Inclusive Sanitation
SHG	:	Self Help Groups
MHM	:	Menstrual Hygiene Management
PTs	:	Public Toilets
CTs-	:	Community Toilets
CPHEEO	:	Central Public Health and Environmental Engineering Organisation
FSSM	:	Faecal Sludge and Septage Management
PwDs	:	Persons with Disabilities
WC	:	Water closet
CSR	:	Corporate Social Responsibility
GRC	:	Gender Resource centre
SHE team	:	The Sanitation and Hygiene Education Teams

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1. Introduction

Sanitation plays a critical and multifaceted role in improving the quality of life for individuals, communities, and society as a whole. Its importance extends beyond basic hygiene and encompasses various aspects that contribute to health, well-being, and overall development. Adequate sanitation, specifically toilets is one of the basic needs that ensure and promote the health of people in developing countries. The United Nations Sustainable Development Goals (SDGs) include specific targets related to sanitation as a crucial component of sustainable development. It acknowledges that access to water, sanitation and hygiene is a human right. Yet globally billions still face daily challenges accessing public sanitation even if it is the most basic of services. It is estimated that 2.4 billion people lack access to basic sanitation services, such as toilets or latrines. Half of global malnutrition cases are linked to chronic diarrhoea caused by a lack of clean water, decent sanitation, and good hygiene, including hand washing with soap. Out of India's 1.3 billion population, 91 million people (6% of the population) lack access to safe water, and 746 million people (54%) lack access to safely managed household sanitation facilities.¹



Figure 1: Sustainable Development Goals

Some glaring statistics

- 2017- The number of toilets in Mumbai for women is almost one-third of the number of toilets for men.
- 2019- 55 percent of public washrooms in Delhi were either extremely dirty or completely unusable.²
- Tamil Nadu ranked fifth in the Swachh Bharat Mission's all-India ranking on public toilets in 2022. However, with a population of over 7 million, Chennai has less than 1,000 public toilets, many of which are highly unhygienic.³
- Pune with a population of more than 44 lakhs, currently has only one toilet for every 244 persons in the city.⁴

Significant investments have been made to strengthen the public health system and sanitation in India, especially in light of the CoViD 19 pandemic, and through the first phase of the flagship programme Swachh Bharat Mission (Clean India Mission). The achievement of building about 1.5 million toilets in 2019 and over 100 million

¹(Water.org, n.d.)

²(Jain, 2020)

³(S, 2023)

⁴(Hindustan Times, 2018)

toilets during the past 5 years, is applaudable.⁵ The SBM guidelines (2014) also mandate the States/ Cities to ensure public sanitation facilities have adequate provision for men, women and facilities for the disabled (e.g. ramp provision, braille signage, etc.) wherever necessary. Swachata mobile app was developed to ease locating the nearest SBM public toilet thereby achieving its large goal of improving access to toilets. While under SBM-U, the focus was on improving access to toilets, SBM-U 2.0 has the additional focus on ensuring functionality and maintenance of community/public toilets. A new category of toilets termed 'Aspirational toilets'⁶ was proposed under SBM-U 2.0.⁷

One of the key aspects of SBM 2.0. is creation of aspirational toilets. 25% of public toilets added in any city/ urban unit should be designed as aspirational toilet. While the concept is still evolving, it can be broadly defined as a public sanitation facility with high end features aimed at elevating the basic sanitation experience. The specific features and standards may vary depending on location and budget, it is important to include inclusion as a key aspect in aspirational toilet. The underlying goal of such facility remains to create public sanitation facility that are not just functional but also dignified and comfortable for all, leading to a positive shift in sanitation practices.

Aspirational toilets should represent facilities beyond basic and conventional functionality and embodying higher qualities like cleanliness, modernity, accessible, inclusion and aesthetics. It shall promote environmentally sustainable high-quality materials, innovative and inclusive design elements, advanced sanitation technology and with user experience enhancing amenities. It is worthy to note that all aspirational toilets should be inclusive sanitation facility but all-inclusive sanitation facilities need not be aspirational.

Notably, both the Swachh Bharat Mission (urban) (2014-2019) and Swachh Bharat Mission (urban) 2.0 (2021-2026) have prioritised inclusion and accessibility for all citizens. The mission guidelines divyang-friendly (Disabled friendly), gender-friendly and age-friendly features in all sanitation facilities. . To ensure that the benefits of the Mission accrue to every citizen equitably and inclusively, standardised protocols were put in place. Integrations of inclusive provisions in ODF+ protocols and development of Gender Responsive Guidelines for SBM (U), MHM Guidelines are some of the examples. The Mission has prioritised the needs of women, elderly, children and persons with disabilities (Divyangjan) and other marginalised groups.

The National Urban Sanitation Policy (NUSP), 2008 was formulated by the Ministry of Housing and Urban Affairs with the goal to transform Urban India into community-driven, totally sanitised, healthy and liveable cities and towns.⁸ The vision for urban sanitation was established to ensure and sustain good public health and environmental outcomes for all their citizens with a special focus on hygienic and affordable sanitation facilities for the urban poor, women⁹ and other marginalised groups. Under NUSP, each state needs to formulate its own sanitation strategy and the respective cities should prepare sanitation plans in conformity with the strategy.

Though the policy landscape is pointing in the right direction of ensuring sanitation for all, inclusive sanitation facilities still remain an aspiration rather than a reality on the ground. Many studies indicate that access to public sanitation facilities is a critical issue, with significant gaps in access to toilets particularly for women, children, the elderly, persons with disabilities and transgender groups in India. A study conducted by Centre for Policy Research in 2020 in Bhubaneswar highlights that only 6% of respondents of the marginalised communities make use of CTs and PTs.¹⁰ Another case study conducted in 2021 on women's public toilet, Critical Assessment of Public Hygiene in COVID-19 in different localities of Aligarh city by Aligarh Muslim University highlighted gender-based discriminations, issues in location challenges, safety and security, inappropriate locations, infrastructural problems, inaccessibility and visibility and affordability among others.¹¹

⁵(The Borgen project, 2020)

⁶(Swachh Bharat Mission, n.d.)

⁷(Ministry of Jal Shakti, 2023)

⁸(Ministry of Urban Development Government of India, n.d., #)

⁹(Ministry of Urban Development Government of India, n.d., #)

¹⁰(Singh & Dwivedi, 2020, #)

¹¹(The Urban World - Quarterly Publication of Regional Centre for Urban and Environmental Studies of All India Institute of Local Self-Government, Mumbai, 2021, #)

According to Census 2011, India's urban population has grown quickly over the last century, with the proportion of urban to total population rising from 10.8% in 1901 to 34.0% in 2021¹². (Data for 2021 is provisional) As India is urbanising, urban areas are expanding with denser residing population. High migration rates, increasing floating population, longer distance between the place of residence and work, limited access to public toilets and absence of inclusive provisions have been alarming issues. The lack of inclusive public sanitation facilities are having a disproportionate impact on the socio-economic growth of marginalised groups, including persons with disabilities, women, children, the elderly and transgender individuals. In an individual's journey from his/her home (household) to a destination (place of livelihood, education, health, leisure), the unavailability of safe, accessible and hygienic public sanitation facilities limits the opportunities and potential for achieving a desired standard of living. Many times, lack of awareness about the significance of inclusive and hygienic sanitation facilities, coupled with poor sanitation practices associated with social/cultural norms and taboos caps access to toilets, particularly for marginalised communities. 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.¹³

2. Scenario in Uttarakhand

The Himalaya is considered the most densely populated and most rapidly urbanising mountain ecosystem in the world and Uttarakhand is the most rapidly urbanising Himalayan State, both in terms of urban population and number of towns.¹⁴ According to the 2011 Census, more than 30 percent of Uttarakhand's population lives in urban areas as against the 25 per cent average urban population of all Himalayan States. Increasing trends of rural outmigration, improved road connectivity, rural markets, and the phenomenal growth in tourism are the significant drivers of this rapid urbanisation.¹⁵ The overall urbanisation rate, which is around 30.2%, of Uttarakhand is comparable with the national average of 31.2%.¹⁶ It is noteworthy that the average annual urban growth rate of 4.0% is much higher compared to the rural growth rate of 1.2% of the state.¹⁷ Uttarakhand is located in the central Himalayas and is also highly vulnerable to natural hazards and future climate change. The Uttarakhand State Action Plan on climate Change (SAPCC) described the state's high risk to climate change. This brings to one of the challenges of difficult unique geographical hindrance and the aspects of sustainability in delivery of public sanitation services to all.

Uttarakhand, like many other states in India, has been making efforts to improve the availability and accessibility of public toilets to promote better sanitation and hygiene for its residents and tourists. Providing clean and functional public toilets is essential to cater to the needs of the growing population and the influx of tourists visiting the state's scenic locations. Uttarakhand actively participated in the Swachh Bharat Mission launched by the Government of India, which aimed to achieve universal sanitation coverage and eliminate open defecation. SBM (Urban), mandates states and ULBs to ensure provision of sufficient number of public toilets in each city particularly at prominent places attracting a floating population. Uttarakhand is one of the few states in the country which has been declared as open defecation free, according to the Economic Survey 2017-18.¹⁸ Target 6.2 in the Uttarakhand Vision 2030 emphasised on achieving access to adequate and equitable sanitation and hygiene for all and ending open defecation, paying special attention to the needs of women and girls and those in vulnerable situations.¹⁹ The total number of public & community toilets built in Uttarakhand under the SBM is around 4,642.²⁰

¹²Punyamurthy & Bheenaveni, 2023

¹³(Bhakta et al., 2022, #)

¹⁴(Tiwari & Roy, 2023)

¹⁵(Tiwari & Roy, 2023)

¹⁶(Official Website Of Urban Development Directorate Government Of Uttarakhand, 2023)

¹⁷(Official Website Of Urban Development Directorate Government Of Uttarakhand, 2023)

¹⁸(Department of Planning Governemnt of Uttarakhand & Institute for Human Development, n.d.)

¹⁹(Department of Planning Governemnt of Uttarakhand & Institute for Human Development, n.d.)

²⁰(Ministry of Housing and Urban Affairs, 2023)

With a rapidly rising urban population following massive migration to cities and the mushrooming of slums, the situation may be exacerbated in the future years. Further, Uttarakhand is a popular tourist destination known for its natural beauty, pilgrimage sites, and adventure activities as well as knowledge hub. The number of tourists visiting Uttarakhand has consistently increased from ~22 million in 2014 to ~39 million in 2019 and registered a CAGR (Compound Annual Growth Rate) of 11.97%.²¹ Under the SBM, construction of public toilets for the floating population (presumed at 5% of total urban population) is also mandated. A recent World Tourism & Travel Council (WTTC) report has pegged India as the 7th largest tourism economy globally in terms of absolute size, and further forecasts the sector to grow at 7% between 2017 and 2027.²² The state of Uttarakhand is expected to match this trend in terms of tourist arrivals. The Uttarakhand Tourism Board certain to publish SOPs for the maintenance of tourism infrastructure across the state and with specific focus towards hilly regions focusing on issues such as provision of adequate washroom facilities and improvement of hygiene at these facilities; information signs to clearly indicate the proper etiquette to maintain proper washroom hygiene.²³ However, the hilly terrain of Uttarakhand presents additional challenges in providing sanitation facilities in remote and hard-to-reach areas. Moreover, the tourist attractions are scattered and quite far from each other with limited sanitation facilities at fueling stations on the route. This creates challenges for users, especially persons with disabilities or special needs to access PTs with no inclusive provisions in these facilities. More over the cities are exposed to the climate induced disasters, there is potential for sewer flooding, increase in combined sewer overflows (CSOs), landslide risk for piped network, water population and contamination of flood water in the sewerage system leading to operational failure and cost of maintenance.

The State Government has also been following uniform policy and procedure under Sector Wide Approach (SWAp) in the implementation of water and sanitation programs throughout the state through decentralisation and increased role of PRIs and local communities in the state of Uttarakhand. The Communication and Capacity Development Unit (CCDU), established during 2005-06 has been involved in enhancing community participation and demand creation through the development of strategies for different marginalised groups. The State Water & Sanitation Mission (SWSM), the highest policy-making body in the sector, follows demand-responsive approaches and ensures adequate financial provisions and oversees the implementation of the sector program.

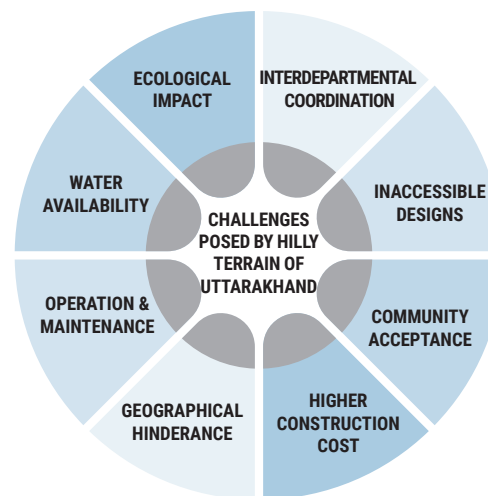


Figure 2: Challenges of Hilly Terrains

The Uttarakhand's Department of Drinking Water and Sanitation (DDWS) takes primary responsibility for the state's Water Supply and Sanitation (WSS)²⁴. Under this department, the Uttarakhand Peyjal Nigam (UJN) is responsible for the design and construction of WSS assets in both rural and urban areas, and Uttarakhand Jal

²¹(Uttarakhand Tourism, 2023)

²²ibid

²³ibid

²⁴Asian Development Bank, n.d.)

Sansthan (UJS) is responsible for operation and maintenance (O&M) with the authority to set, revise, and collect tariffs; and augment the WSS schemes when required.

Since the Government of India enacted the 74th Constitutional Amendment Act in 1992 to drive decentralization and local empowerment by delegating the responsibilities of urban service delivery to ULBs, the Urban Development Department (UDD), the administrative department for local self-government in Uttarakhand, has become involved in Urban WSS systems. Part of its mandate is to oversee the financial and administrative management of 92 ULBs, including coordination and disbursement of centrally allocated funds from national schemes to ULBs, and to monitor the implementation of WSS works. UDD and Uttarakhand Urban Sector Development Agency (UUSDA) drive and strengthen ULBs' empowerment and urban sector reforms to advance the decentralization process in Uttarakhand for all development sectors including WSS. In this context, the UDD has been managing the progress and improving the quality of sanitation services citywide. Taking forward the vision of SBM 2.0, UDD has been encouraging behavioral change in sanitation practices through awareness and linking it with public health, augmenting the capacity of ULBs, and encouraging participation. As the provision of water supply and sanitation is managed by a few autonomous bodies, this multi departmental management of the public sanitation service foresees challenges of delayed processes, exchange of information and delivery of public sanitation services to all diverse groups.

Through an understanding of the current sanitation policies in the State, potential opportunities and challenges have been identified in achieving the comprehensive and sustainable inclusive sanitation goals. With the cities of Uttarakhand becoming increasing movers of economic growth and social stability, it is important to promote inclusion and equity across the sanitation service chain. The present challenges of sanitation facilities concerning inclusion are multi-fold including concerns and insufficiencies in planning, facility design, technology selection, institutional mechanisms, financial mobilisation, decision making and managerial leadership. These concerns are casting negative effects on public health, the environment, and the economy. Promoting provisions like barrier free toilets and MHM infrastructure in sanitation facilities are being promoted across state. The Uttarakhand Building Bye-Laws and Regulations of 2011, Section (5.10) that specifies the maximum slope ramp dimensions and another Section (6.9)- Annexure-2 that prescribes the standards for providing facilities to the persons with disabilities from horizontal and vertical extension²⁵. However, there are no specific provisions listed in the Bye-laws to correspond to the requirements of diverse user-groups like women, children, and elderly. Furthermore, considering the complex and varying geography, different sizes of urban areas, level of development and vulnerability to climate change impacts, a comprehensive and collaborative approach is required. Interdepartmental coordination and collective actions will expedite the process to build "Sugamya and Swachh Uttarakhand".

3. Why we need inclusive sanitation in Uttarakhand

Uttarakhand, often referred to as the "Devbhoomi" or "Land of Gods," is a popular tourist destination in India known for its scenic beauty, spiritual significance, and adventure opportunities. Tourism in Uttarakhand attracts a diverse range of visitors, including nature enthusiasts, adventure seekers, pilgrims, students and those seeking tranquillity amidst picturesque landscapes. In 2022, close to five crore tourists, 3.8 crores Kanwar yatris and 45 lakh Char Dham Pilgrims, visited Uttarakhand.²⁶ The annual Char Dham yatra in Uttarakhand witnessed the highest-ever footfall in 2022 with over 40 lakh people travelling to the four Himalayan shrines of Badrinath, Kedarnath, Gangotri, Yamunotri. As public toilets are a critical tourist infrastructure, access to clean and well-maintained public toilets is an essential aspect of providing a positive tourism experience. The pressure of tourist in-flow in the cities of Uttarakhand puts additional pressure on the present public sanitation facilities. This poses the requirement of assessing whether the public toilets in cities of Uttarakhand are well equipped with the diverse needs of marginalised groups like persons with disabilities, women, children, the elderly and the transgender individuals.

²⁵NIC Government of Uttarakhand, n.d.

²⁶Times of India, 2023

Introduction to Citywide Inclusive Sanitation (CWIS)

In achieving equitable and sustainable sanitation service delivery for all, there is a growing global emphasis on Citywide Inclusive Sanitation (CWIS) as a more comprehensive approach. CWIS is a public service approach, ensuring to provide adequate sanitation services to everyone in the city, paying special attention to the needs of the poor, the marginalized, and of women and girls.

CWIS advances Equitable, Safe, and Sustainable outcomes, by strengthening the design and implementation of core public system functions of Responsibility, Accountability, and Resource Planning and Management.

The CWIS approach to urban sanitation also focuses on collaboration among many stakeholders to ensure that everyone benefits from adequate sanitation service delivery outcomes. Since each city is organized in a unique way, local actors need to acknowledge shared responsibilities and work collaboratively to provide urban sanitation to all. It aims to help cities develop comprehensive approaches to sanitation improvement that encompass long-term planning, technical innovation, institutional reforms, and financial mobilization. CWIS approaches go beyond traditional sanitation methods by considering the needs of marginalized communities, addressing gender disparities, and promoting inclusivity in service provision.

CWIS SERVICE FRAMEWORK			
	EQUITY 	SAFETY 	SUSTAINABILITY 
CORE CWIS OUTCOMES	Services reflect fairness in distribution and prioritization of service quality, prices, and deployment of public finance/ subsidies.	Services safeguard customers, workers, and communities from safety and health risks—reaching <i>everyone</i> with safe sanitation.	Services are reliably and continually delivered based on effective management of human, financial and natural resources.
CORE CWIS FUNCTIONS	RESPONSIBILITY An authority(ies) executes a clear public mandate to ensure safe, equitable, and sustainable sanitation for all.	ACCOUNTABILITY Authorities' performance against their mandate is monitored and managed with data, transparency and incentives.	RESOURCE PLANNING AND MANAGEMENT Resources—human, financial, natural, assets—are effectively managed to support execution of mandate across time/space.

Figure 3 CWIS Service Framework²⁷

CWIS focuses on service provision and its enabling environment, rather than on building infrastructure²⁸. CWIS focuses on the below principles:

- Equity:** Everyone in an urban area – including communities marginalized by gender, social, and economic reasons – benefit from equitable, affordable, and safe sanitation services.
- Environment and Public health:** Human waste is safely managed along the entire sanitation service chain, starting from containment to reuse and disposal.
- Mix of technologies:** A variety of sewered and non-sewered sanitation solutions coexist in the same city, depending on contextual appropriateness and resource recovery potential.
- Comprehensive Planning:** Planning is inclusive and holistic with participation from all stakeholders including users and political actors – with short- and long-term vision and incremental perspective and is synergistic with other urban development goals.
- Monitoring and Accountability:** Authorities operate with a clear, inclusive mandate, performance targets, monitoring requirements, human and financial resources, and accountability.
- Mix of Business models:** Sanitation services are deployed through a range of business models, funding sources, and financial mechanisms to reach all members equitably.

²⁷(Bill & Melinda Gates Foundation, n.d.)

²⁸ibid

What component of CWIS is relevant to the study

According to Census 2011, women constitute about 49% of more than one crore population of Uttarakhand. The elderly and children further constitute about 25% of the total population with the elderly population slightly higher than the national average. There are close to 3.5 lakh persons with disabilities (Census 2011), out of which about 45% are women living with a disability. The above data makes it crucial to understand the status of sanitation facilities catering to aspect of equity and accessibility for everyone in the urban area thus emphasising on the following CWIS principles i.e. equity, Comprehensive Planning, Monitoring and Accountability and Mix of Business models.

The aim of the document is to assist state and city officials in mainstreaming inclusion in all aspects of public sanitation so that public sanitation services can be effectively provided to everyone with dignity while adhering to the principle of “Leave No One Behind.”

Thus in this regard, it becomes crucial to understand the present state of inclusion in sanitation facilities concerning the needs and aspirations of a diverse set of users. For this, an extensive survey was conducted in three cities namely- Dehradun, Ramnagar and Champawat. The study collected data on universal accessibility in existing toilets, and user perceptions, through personal interviews and focused group discussions (FDGs) with marginalised groups to capture the needs and issues of various marginalised groups. The study collected data from at least 20% of the total number of toilets in each city. More than 200 users were surveyed, four personal interviews and four focused group discussions were conducted with women, children, care-givers, informal workers, persons with disabilities and the elderly. The objective of conducting FDGs with diverse groups:

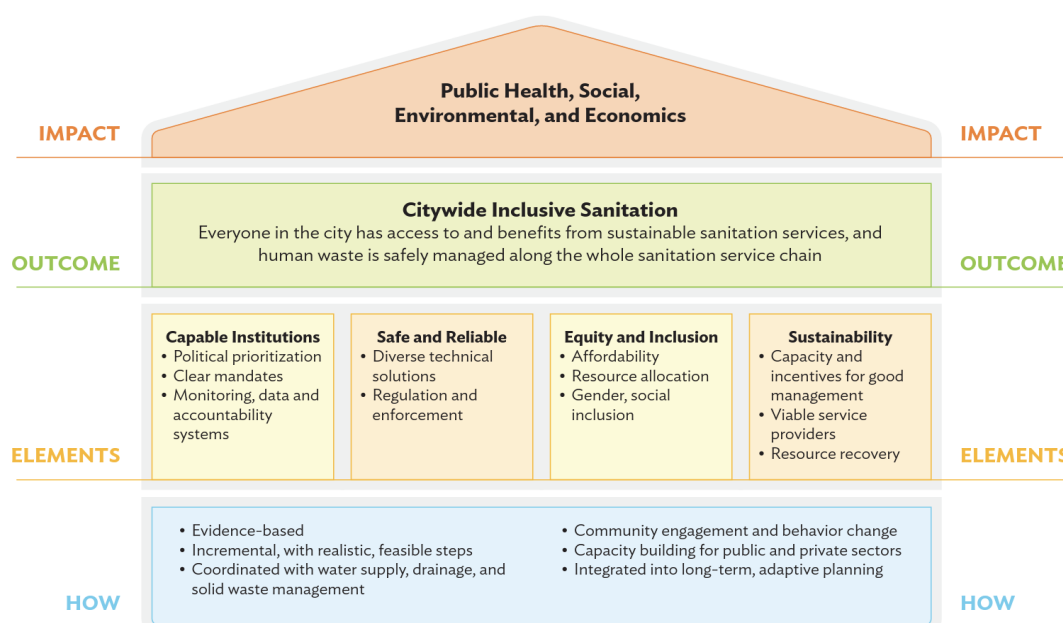


Figure 4: Citywide Inclusive Sanitation²⁹

1. Need assessment for inclusive provisions, looking at the socio-economic and cultural contexts
2. The range of access to public toilets (PTs) and associated services within the cities
3. Levels of support received (or perceived as being needed) to improve services to areas of the city

Based on the on-ground survey in the three cities, the detailed roadmap for inclusive sanitation has been prepared and recommended in the document entailing universal design and inclusive planning, innovative financial model, enhanced capacity building, participation and citizen engagement etc.

²⁹Asian Development Bank

Observations from Dehradun

Insights

1. User satisfaction

- ♦ Majority of the toilets, provided in all the popular locations, the user satisfaction was observed to be quite high.

2. Connectivity

- ♦ Majority of the public toilets surveyed were well-connected and visible from a distance. However, visibility of the public toilets and the wayfinding systems can be enhanced for users like persons with disabilities.
- ♦ Barriers like uncovered drains, level differences among others were found in many places adding inaccessibility in approach.

3. User Preference

- ♦ Most of the users surveyed, primarily utilised the restroom facilities for urination.
- ♦ Skewed gender distribution was observed with only 30% of the female users.
- ♦ Diversity is seen among the users ranging from tourists, street vendors and informal workers, and shop owners to visitors of neighbouring establishments.
- ♦ There is an inclination towards the use of Indian-style WCs instead of Western WCs.
- ♦ Toilets that don't have Indian-style WC were observed to have lesser footfall.
- ♦ Users surveyed highlighted that they rarely use public toilets and rely on their household toilets, except when they are unable to access them.
- ♦ Factors that triggered a choice of public toilet highlighted by the surveyed users were availability of water for flushing and cleaning, water & soap for washing hands, availability of both Indian and Western WC, clean and usable seats and clean door and door knobs among others were highlighted by the users

4. Inclusive Provisions

- ♦ Menstrual Hygiene Management was integrated with all surveyed toilet facilities, although it is not frequently used across all toilets.
- ♦ However, 60% of the public toilets were found to have no inclusive provisions.
 - There was a dearth of child-friendly provisions like low-height WCs, wash basins and hand dryers, diaper changing stations etc.
 - Provisions like lactation rooms, family toilets, etc. were also not available.
 - Very few toilets had disabled-friendly infrastructure including accessible cubicles, low-height WCs, grab bars at relevant places, low-height wash basins, anti-skid tiles, adequate manoeuvring space, ramps, tactile, tiles etc.
 - Most public toilets surveyed did not have an emergency alarm system and available human assistance.
 - Gender-neutral toilets and toilets for the transgender population were also not found during the survey.
- ♦ The design of the majority of the public toilets was observed to hinder the feelings of safety for female users.
 - It was also observed in the surveyed public toilets that female PTs had more space crunch than male toilets.
 - It was observed in all the surveyed public toilets, signages were missing

5. User Fee

- ♦ In all the public toilets surveyed, free use of urinals for males contributes to inequity and gender disparity in user charges in comparison to the females.

6. Operation & Maintenance

- ♦ There are no female caretakers in any of the surveyed public toilets.
- ♦ Interaction with local Self-Help Group (SHG) indicated their non- inclination to participate in the cleaning and maintenance of PTs. Although they were willing to take up operation and maintenance as well as contribute through making and selling cleaning products for the toilet.
- ♦ The users, especially women, emphasised the importance of fair compensation as a means to motivate and sustain the involvement of the community members in effectively managing the public toilets.

Glimpses from data collection in Dehradun – April- June 2023



Reconnaissance Survey (PC. Doab Singh)



An elderly woman paying user fee after using the Public Toilet (PC. Doab Singh)



Perception Survey (PC. Kanika Bansal)



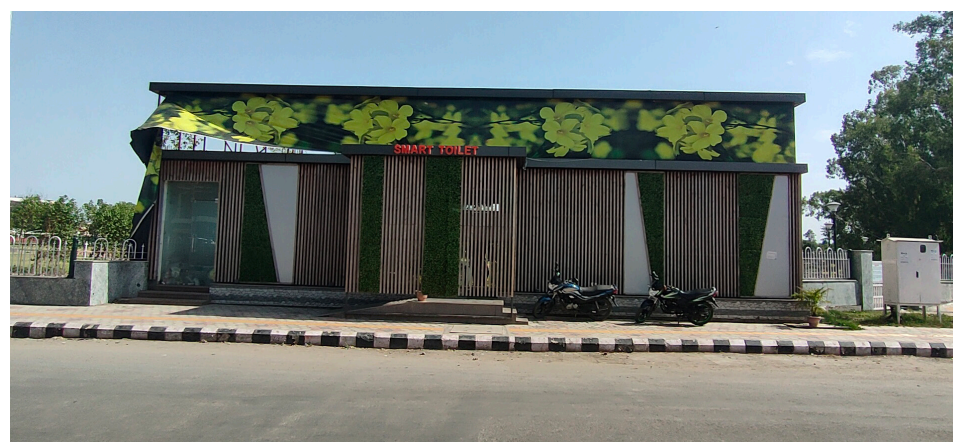
Focus Group Discussion with women (PC. Utsav Choudhury)



A senior citizen walking towards a public toilet (PC. Divyang Purkayastha)



Focus Group Discussion with mixed groups users (PC. Utsav Choudhury)



Smart Toilet near Parade Ground (PC. Sanjay V K)

Glimpses from data collection in Ramnagar



Perception Survey (PC. Monica Thakur)



Caretaker Interview (PC. Monica Thakur)



Focus Group Discussion (FGD) with women users
(PC. Kanika Bansal)



Leader promoting CWIS among the group
(PC. Nagar Parishad, Ramnagar)



Participation of caregiver in the FGD's (PC. Kanika Bansal)



Accessibility audit of Public Toilet (PC. Veronica Q Wijunamai)

Observations from Ramnagar

Insights

1. User Satisfaction

- ◆ Considerable users (53%) have a positive perception of the cleanliness of the toilets which were well-maintained.
- ◆ However, 20% of the users had deemed the public toilets as still dirty and shared about scope of improvements in the services provided.
- ◆ Most of the surveyed public toilets were adequately equipped with working essential amenities including urinals, water for flushing, soap and water for handwashing and toilet papers.

2. Connectivity

- ◆ The most common reason cited for using the public toilets was availability of a shop, business, or office in the vicinity, followed by being on a transit route, suggesting that the majority of users are likely individuals who are in the vicinity for work or travel purposes.

3. User Preference

- ◆ The public toilets surveyed were predominantly being used by men.
- ◆ Majority of the users surveyed were within the 20-39 age bracket, signifying that these toilets are primarily used by adults in their prime working years
- ◆ Notably, there was a higher proportion of females using the toilets.
- ◆ This was observed in the public toilets surveyed, females within the city tend to use the facilities only when it is essential, highlighting a difference in restroom usage patterns based on gender and residency status
- ◆ From the survey, it is inferred that the majority of users prefer Indian WCs as they were considered to be more familiar and hygienic among the surveyed population.

4. Inclusive Provisions

- ◆ Among the users surveyed, except a small number of users, caregivers seldomly visit the public toilets. The reasons cited by the participants were issues with cleanliness, inconvenience and lack of child friendly infrastructure, particularly child friendly basins.
- ◆ Out of the disability friendly provisions, the presence of human assistance followed by low-height WC and grab rails had been deemed the most crucial for the easy use and access of the public toilets by the participants.
- ◆ The participants, especially women, shared their needs of availability of a separate bin where they can safely dispose of their sanitary napkins.
- ◆ Of all the women participants surveyed said that there should ideally be a separate gender-neutral toilet available within the public toilet complex.
- ◆ Majority of their surveyed users indicated that they found the toilet complex comfortably safe, while only a few of them considered otherwise. These perceptions were irrespective of their gender.

5. User Fee

- ◆ Significant users surveyed indicated that they value high quality toilet facilities and are willing to pay for better service.

6. Operation & Maintenance

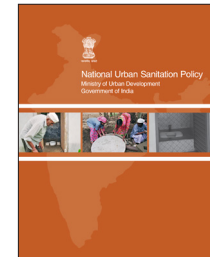
- ◆ The participants from the data collection felt that the toilet facilities need to be ideally open for 24 x 7. Such a collective viewpoint also highlighted the pertinent need for public toilets at all hours of the day, particularly in a town like Ramnagar which is frequented by numerous tourists and travellers making stopovers en route to other prominent tourist destinations and cities.

7. Grievance Redressal

- ◆ Notably, a substantial number of users express uncertainty about the effectiveness of the grievance redressal system. This indicates that users are not well acquainted with the presence of such a system at their disposal.

4. Existing mandates and standards

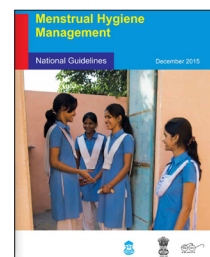
1. The Government of India published '**Guidelines on Community Toilets**' in **1995**. This guideline was the first attempt by the Government of India to capture the subject of Community Toilets in a comprehensive and exclusive manner that served as a guidance also to understanding the issues and needs of users for public toilets later. This guideline served as an important resource book to implementing agencies on issues related to understanding user preferences, demand responsive designs, construction and O&M. There are also several norms from the Bureau of Indian Standards that provide directions to specific aspects related to the planning of PTs and constructing these facilities with basic services for wider users.
2. The **National Urban Sanitation Policy** was launched in 2008 by the Ministry of Housing and Urban Affairs to understand the emerging needs of diverse users and emphasise the need to define integrated citywide sanitation plans for diverse users like persons with disabilities, women, informal workers and the elderly. The Policy included recommendations for institutional strengthening, awareness generation, behavioural changes, pro-poor approaches and cost-effective technologies aiming at developing state sanitation strategies and city sanitation plans, that should lead to open defecation-free cities, as well as sanitary and safe disposal of all human and liquid wastes in households/PTs/CTs.



3. **Swachh Bharat Mission Guidelines 2014**, Public Toilets are toilets which are provided for the floating population/ general public in places such as markets, train stations, tourist places, near office complexes, or other public areas where there are considerable numbers of people passing by. PTs are to be accessible to one and all and well-connected to important areas and pedestrian junctions. The guidelines emphasise that public toilets have adequate provision for men, and women and facilities for persons with disabilities (e.g. ramp provision, braille signage, etc.) wherever necessary and provide suggestive technical specifications, technologies and tentative cost of public toilets.



4. **The Menstrual Hygiene Management (MHM) Manual** is an integral part of the Swachh Bharat Mission (SBM) Guidelines. Swachh Bharat is India's national sanitation initiative launched by the government in 2014. Hygienically managing menstruation involves not only access to basic sanitation facilities, soap and water but also to so-called menstrual absorbents. Every adolescent girl and woman should use menstrual absorbents based on informed choice. Indian adolescent girls and women use different menstrual absorbents, not all of which are 'hygienic', however, no girl should face ridicule or shame in this situation. Rather efforts should be made to increase access to hygienic options in households, community toilets and public toilets.



5. **SBM Handbook on an accessible toilet**: The Handbook on Accessible Household Sanitation for Persons with Disabilities (PwDs) was launched in 2015. The Ministry of Drinking Water and Sanitation (MDWS) apart from substantially increasing the Government assistance for household toilets has also broadened the eligibility beyond BPL1 categories to firmly include households having Persons with Disabilities (PwDs). The new Swachh Bharat Mission (Gramin) while focusing on universal sanitation coverage is also looking at better ways of addressing the needs of Persons with Disabilities. This document also necessitated the urgency of accessibility in public toilets in urban areas where the population density is diverse and condensed with diverse user needs. Barrier-free accessible and cost-effective

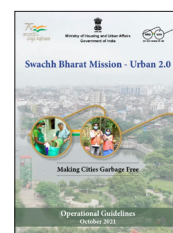


models in WASH for PwDs that can inform inclusive WASH costing in government programmes leading to a menu of accessible technical options to address barrier-free sanitation access for PwDs in households/public toilets/community toilets.

- Another important existing standard, the **Advisory on Public and Community Toilets by Central Public Health and Environmental Engineering Organisation (CPHEEO) in 2018** acknowledges the steps towards achieving universal access through individual, community or public toilets, the capital and operation and maintenance costs and the management arrangements needs to be detailed and made operational under the City Sanitation Plan. Section 2.2 of the document highlights 'The toilet design must allow for universal access and ease of use. The design must adequately address the different sanitation needs of special user groups including women, children, old, infirm and the differently-abled.' The gender needs checklist by CPHEEO is envisaged to serve as a tool for city administrators in planning, designing, operating and maintaining age, disability and gender-sensitive toilets and equal importance to caregivers' needs. Section 3.2.2 of the document also highlights 'Legible universal signage of a man, woman and person in a wheelchair should be used at the entrance and passageways.' The checklist covers choosing locations for toilet facilities with high visibility and thus safe to use for persons with disabilities, women and the elderly at all times, and design considerations outside the toilet facility which ensures ease of access.



- Swachh Bharat Mission - Urban 2.0 Operational Guidelines was launched in 2021** which paved the necessary roadmap to the inclusion of diverse groups' needs, especially persons with disabilities, women, caregivers & children, the elderly, and the transgender groups in the household/community toilets/public toilets. The document also provides guidance on features of aspirational toilets, the utilisation of technology to map and locate all the public toilets and directions to add age, disability and gender features to conventional public toilets.



- The Harmonised Guidelines and Standards for Universal Accessibility, 2021** in India, another standard, is developed to ensure that various infrastructures and facilities are designed, constructed, and maintained in a manner that is accessible and usable by all individuals, including persons with disabilities. These guidelines aim to promote inclusivity, eliminate barriers, and create an environment that respects the dignity and independence of everyone. It intends to build a focus towards the creation of inclusive environments for all, by meeting the wide-ranging accessibility needs of persons with disabilities, the elderly, women, children and all others through the universal design approach, and guides facilities like household/CTs/PTs.



Did you know?

Pune has a Public Toilet Policy³⁰ (2017) that envisions to improve public health, safety and standard of living by enabling a well-planned, cohesive network of accessible and well maintained universal public toilet facilities in an environmentally sustainable manner, which enhances user experience and promotes citizen ownership through individual social responsibility. The policy focuses on providing accessible public toilets for diverse groups especially persons with disabilities, women, and the elderly.

³⁰(Pune Municipal Corporation, 2017)

5. Diverse Needs and Aspirations of Different Marginalised Groups

The Public sanitation needs of marginalised groups are integral for inclusive interventions. Particularly, women, children, adolescent girls, the elderly, persons with disabilities (PwDs), and transgenders, are often excluded from safe and adequate hygiene and sanitation services. They are further excluded from decision-making processes, even though they face specific challenges regarding access to water and sanitation. It is important to acknowledge and understand the diverse and unique needs of these marginalised groups and translate them into adequate provisions in the sanitation facilities, schemes and policies. This section highlights the issues of the marginalised groups- women, children, tourists, persons with disabilities, elderly, transgender groups, identified from secondary sources as well as insights from the study.

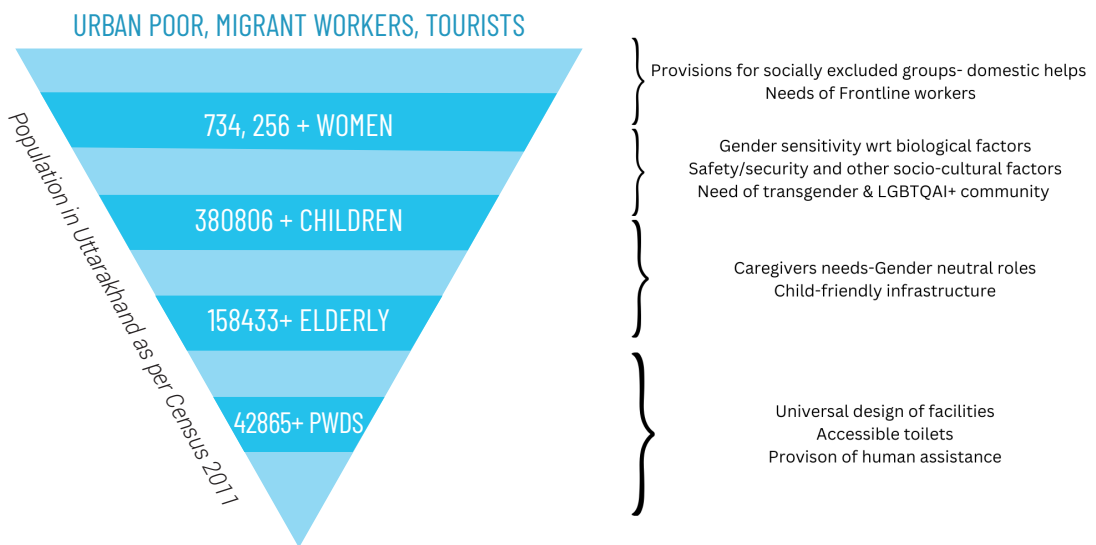


Figure 5: Unique and Diverse needs

Persons with disabilities

Nearly 2% of the Uttarakhand state’s population lives with different disabilities. From the primary data collected, users who were persons with disabilities expressed their importance of building accessible toilets at regular intervals along the route that connects the cities to the surrounding villages. They also emphasised the need of Western WCs in public toilets across the city. Out of the provisions like lower height WC, space for manoeuvring of wheelchairs, grab rails, lower height washbasins, human assistance with consent is set as priority. Users also expressed changing location and design of accessible sanitation facilities often create confusion for persons with visual impairments. Users shared their experience of facing humiliation while crawling to public **toilets due to absence of ramps for wheelchairs.**

1. The human right to water and sanitation constitutes the right of every individual, especially persons with disabilities devoid of any form of discrimination³¹.
2. The Rights of Persons with Disabilities Act 2016 promotes adequate standard of living to enable persons with disabilities to live independently or in the community. The Chapter V, Section 24- 3(e) of the RPwD Act directs appropriate governments to ensure access to safe drinking water and appropriate and accessible sanitation facilities especially in urban slums and rural areas for persons with disabilities without discrimination.
3. Persons with disabilities usually face accessibility challenges in public toilets due to absence of universal design components in approach and design. Majority of the toilets are constructed either above drains or unreachable from the road, and absence of ramps at the entrance force them to crawl to the premises, often dirtying themselves and their clothes.
4. Finding and reaching the toilet facilities is a task altogether for persons with disabilities.
5. There is a lack of signage for information and directions in multilingual, visual and tactile formats. There are no clear navigations and signages to guide persons with disabilities to the nearest accessible sanitation facilities. Absence of safety Instructions in accessible formats like braille and outdated information create additional challenges.
6. Generally, in toilet cubicles, there are no wide doors for wheelchair users, a lack of adjustable/ low height toilet seats, adequate manoeuvring space for wheelchairs, adequate space for lateral transfer in the toilet cubicle, which makes it difficult for them to use the facility independently. A lot of time they have to compromise on their dignity to make use of the facility.
7. The absence of universal elements like grab bars, low-height wash basins, low-height WCs etc. can lead to falls, injuries and uncomfortable experiences for them.
8. Even while using urinals, wheelchair users face difficulties due lack of adequate space to enter, exit and use the urinal space. Absence of low height urinals, wet and dirty floor surfaces, lack of grab bars and hand rails alongside of urinals make it impossible for them to use public urinals, thereby either curtailing their fluid intake or urinating in public.
9. Persons with visual and sensory impairments usually require tactile tile, multi-mode of information, and intuitive design elements to be able to use the facilities, which are usually not provided.
10. There are no Tactile Ground Surface Indicators (TGSIs) directing persons with visual impairments to the sanitation facilities. Lack of standardised design of accessible toilets, leads to confusion and an unhygienic experience for them.
11. Designs with cramped, dark spaces, issues of safety & security and inappropriate location of the toilet makes it difficult for persons with intellectual and psychosocial disabilities to use the facility.
12. Unavailability of both male and female caretakers for assistance forces women with disabilities to compromise on their dignity which often leads to harassment and assault.
13. Floors made of tile or other materials can be too slippery for persons with crutches, persons with visual impairment, and persons with walking or balancing impairments.
14. Persons with disabilities need availability of a universally designed toilet with universally accessible design of infrastructure, service and facilities. Accessible toilets, at least one (unisex), with Standardised design, with grab bars, adequate space for manoeuvring and lateral transfer, low height fixtures etc should be incorporated in each sanitation facility.
15. Provisions of emergency alarm switches in public toilets, no stains and graffiti, adult diaper changing station, aesthetic, safe and accessible approach and surrounding, readily available hand dryers, paper napkins and vending machines for sanitary napkins/diapers at accessible heights among others are potential components of aspirational toilets.
16. Multilingual, tactile and multi modal directional and information signs, clear and visible signages with international symbol of accessibility, ease to track/locate toilets based on filters like disability-friendly PTs can add convenience for persons with disability. Mapping of sanitation facilities which are accessible, clean, hygienic, with caretakers of both genders on application/ online maps like google maps is also desirable for persons with disabilities.

³¹(UNICEF, 2022)

Elderly

According to the population census (2011), there are nearly 104 million elderly persons (aged 60 years or above) in India out of which 53 million are females and 51 million are males. India is estimated to have the largest elderly population in the world, with the majority of them working post-retirement age. In Uttarakhand, above 11% of Uttarakhand's total population are aged over 60 years,³² although a large number of tourists coming for pilgrim and chardham yatra are elderly. Moreover, the state is considered to be preferred as a retirement home for the citizens, and the increase in elderly influx has been observed.

The first Longitudinal Ageing Study in India (LASI) released in 2020 by MoFHW, identifies that two in every three senior citizens in India suffer from some chronic disease. This prevalence of chronic diseases in elderly population, it is essential for them to have regular access to sanitation facilities, the risk of fall and accidents due to ill-built and unmaintained facilities is also higher. From the primary data collected, it is observed that there is unavailability of age-sensitive features like anti-skid floors with proper drainage, grab rails near WCs and near water basins, adequate space for movement with walkers or walking sticks and provision of human assistance.

1. A number of times elderly people avoid travelling and social interaction because of the scarcity of public toilets or their inaccessibility. Common conditions in older age including hearing loss, cataracts and refractive errors, back and neck pain and osteoarthritis, diabetes, dementia, add to their special accessibility needs.
2. Urinary and faecal incontinence are common problems in older people. The elderly population faces different kinds of challenges related to availability, accessibility and usability in sanitation facilities while navigating through the public spaces of a city.
3. The unavailability of clear directions and signage for finding a safe and hygienic public toilet is a struggle for them.
4. Poor and confusing design of sanitation facilities, lack of informational signage can preclude independent use, particularly for people living with dementia.
5. Toilet entrances often have poorly constructed steps and inadequate handrails which adds difficulty for elderly suffering from osteoarthritis and imbalance. Further, the toilets either have no ramp or the slope of the ramp is difficult or impossible for a wheelchair, walking frame, and/or pushchair.
6. In general, steps are not clearly marked and do not have contrasting colours, that make navigation difficult for elderly with low vision. Further, non-uniform risers and treads with not enough width further add risks of tripping and accidents.
7. Insufficient widths of entrances and/or stall doors creates challenges in movement and manoeuvring for persons using walkers, wheelchairs and other assistive devices. Slick tile floors can be a tripping hazard for them.
8. Some of the concerns highlighted in usability are insufficient or poorly designed sanitary equipment, such as washbasins, toilets, flushing mechanisms, and urinals. Most of the wash basins and toilets are not located at heights accessible to everyone.
9. Public toilets that comply with universal design standards generally serve the demands of the elderly. A well-designed and spacious wheelchair and walker-accessible bathroom also improves circulation, preventing falls and injuries from bumping into something.
10. Lever knobs are simpler than those that require twisting the handle. Removing locks and provision of both side opening/ sliding doors can make access easier if necessary for an emergency.
11. With reduced muscle tone in the elderly, a higher toilet can ease the movement of sitting and especially getting up. Toilets which are little higher than the conventional height (can be done by "wedging" the existing toilet), are oftentimes preferred more.

³²(Department of Planning Governemnt of Uttarakhand & INSTITUTE FOR HUMAN DEVELOPMENT, n.d.)

Women

From the primary data collection of user groups in Dehradun, Ramnagar and Champawat, women highlighted their preference for Indian Squat WC due to cultural and health reasons. It is observed that generally female toilets are designed in leftover spaces leading to cramped design. Users also highlighted safety concerns due common entrances for both males and females and absence of female caretakers. Absence of provisions for caregiving facilities like baby diaper changing station, space for resting, human assistance, and adjustable seats among others were also highlighted by the users. Users also spoke about the location of the public toilets in dark and remote areas, presence of CCTV, connected by an accessible route to the facility for safety and security. They also cited behavioural issues where individuals do not leave the WCs clean for the next user in line, creating inconvenience and unhygienic conditions.

1. Despite an increase in the number of public toilets, safety & security and cleanliness & hygiene are primary concerns of women while using public toilets. Safety doesn't only mean the safe design of the bathroom alone, it also includes accessibility, psychological comfort, safe surroundings, and adequate light availability.
2. Lack of proper hygiene and sanitation in the public toilets leaves women vulnerable to different infections (there has been a nationwide increase in the cases of Urinary Tract Infections) and this discourages most of them from using public toilets. Due to unavailability of safe and clean washrooms, women are either forced to curtail their food and fluid intake, which in the long run affects their health or incur cost for using toilets in restaurants or eateries.
3. The location of public toilets is an important consideration for women while deciding on using any sanitation facilities. PTs located in dark, secluded spaces are usually avoided by women. Toilets in proximity of negative developments like wine shops, barber shops etc, also attract anti-social activities, making women avoid such sanitation facilities.
4. Only 14% of the total number of toilet surveys had female caretakers in women's toilets, which is required to strengthen the sense of security,
5. Doors with no lock/ latch, doors that don't lock properly, toilets in crowded and noisy surroundings as well very deserted places, creates a feeling of unsafe and unsecure environment, discouraging women to use the facility.
6. While use of urinals doesn't have any user fees for men, women have to pay for using the facility even for urination, fixing their dress or just checking for periods.
7. Women and girls have different sanitation requirements than men and boys due to both biological factors (menstruation, pregnancy etc), and hygiene plays an important role. Unclean WCs, unavailability of Indian WCs, stained door, unclean door knobs, unavailability of mug and tap or health faucet and unavailability of sufficient water (as well as hot water) and soaps are few factors that add to overall negative experience for women and girls. Many times cubicles of female sections in public toilets have abusive graffiti inside toilet cubicles, which makes it uncomfortable for women while using them.
8. While there were sanitary pad dispensing machines in 100% of the toilets surveyed, their upkeep and maintenance and the quality of sanitary pad is often compromised in many places. Further, disposal of the sanitary waste is critical. Many times, absence of adequate knowledge to use a sanitary pad incinerator eliminates hazardous fumes inside the facility. Also, considering the availability of a wide array of menstrual hygiene products, there are other provisions like a wash basin with hot water for washing menstrual hygiene products, which are also in demand. Provisions of resting benches, changing rooms etc are also desirable elements.
9. There is no provision for wide doors, adequate space, handrails and grab bars, among other requirements to cater to the needs of pregnant women. Also, it is not convenient for women with infants or toddlers to use public sanitation facilities. There are absence of facilities for caregiving like lactation / nursing room, diaper changing etc.

10. The challenges faced by women with disabilities are further ignored. Usually there are no women caretakers for assistance, absence of accessible toilets in the female section (many times a common facility is provided with entry from male section), causing them inconvenience.
11. Female friendly public toilet³³ should be safe and private, cater for menstrual and other hygiene requirements, be accessible to all users particularly pregnant women, be affordable and available as per need, be well maintained and managed, and meet the requirements of caregivers and parents.

Children and Caregivers

As per Census 2011 the total children (0-6 age) living in urban areas of Uttarakhand were 365,038 which is 11.97% of total urban population. Although, no child friendly infrastructure provisions were found during the study. Users complained about the unavailability of diaper changing stations and diaper disposal facilities in public toilets. Users also expressed lack of child friendly toilets and unhygienic and dirty conditions of public toilets, making them refrain from using these facilities with children.

1. Access to clean water, basic toilets, and good hygiene practices not only keeps children thriving, but also gives them a healthier start in life.
2. Families, particularly while travelling, have to use the public toilet facilities together with their children, and face issues like unavailability of baby holding stations, baby changing stations or family-friendly cubicles or nursing/lactation rooms.
3. The designs of public toilets are not accommodative of the caregiving needs.
4. Child friendly facilities like low height/child- size basins, child friendly WCs, anti-skid flooring, low height or floor mount hand dryers, doors with ease of operation, are often missed in the design of public toilets, refraining independent use by a child. Such features are usually (if) provided in the female section only, following the gender bias of caregiving responsibility.
5. Elements suitable for anthropometry of a child, such as a smaller toilet seat at lower height, and urinal at low height and sink at low height with easy to operate taps should be provided for children to independently use the facilities.
6. Family style restrooms that offer flexibility that males or females, and one or more individuals (i.e. family members), of the same or opposite sex, can use them, helps in fulfilling the caregiving responsibilities of a girl/boy child by either of the parents.

Transgender groups

Rubina, a transgender and Public Relations Manager in Dehradun and considers herself the representative of the community, highlighted the issues faced by their community while accessing public toilets and using the facilities occasionally. As a consequence of the underlying discrimination against the transgender community, toilets remain sites of social exclusion and violence in their day-to-day lives.³⁴ Yahana, a transgender and social worker, highlighted limited use of public toilets due to their constrained work hours in a small city. They highlighted their basic public sanitation needs are similar to cis-gender users. However, advocacy is clearly a need to eliminate discrimination they face while using the public toilets.

³³(UNICEF et al., n.d.)

³⁴(TriumphIAS, 2019)

1. The Transgender Persons (Protection of Rights) Bill, of 2016, provides visibility to transgender persons and their legal rights. It is important to understand that designing transgender-inclusive sanitation requires a deeper examination of the role of caste, gender, and age within the transgender community.³⁵
2. Sanitation needs for trans women, trans men and born transgender individuals are different. The definition of transgender sanitation requires expansion and should include the needs of transgender persons who menstruate, are disabled, or are post-operative. For transgender people who have undergone sex-change operations, it is difficult to hold back the urge to urinate for a long time. The situation is even more complex for female-to-male transgender people. The sanitation needs also differ from transmen to transwomen. Trans-men also require address for their menstrual hygiene needs, such as availability of sanitary napkin vending machines, incinerators and dustbins, for disposal.
3. Transgender individuals usually face assaults, discrimination and harassment while using the public sanitation facilities particularly in the men's section. Unavailability of gender neutral public sanitation facilities in sufficient numbers across the cities accelerates such instances (discrimination, assaults).
4. Completely separated blocks (i.e. no shared wall between male and female sections) to offer additional safety and privacy but also exhibits a sense of exclusion.
5. Well-lit spaces with regular power supply, easy and safe access, and installation of CCTVs at the entrance of the toilet block with an alarm bell at strategic places within the facility are needed to prevent the occurrence of crime and create a safe and comfortable for everyone including transgenders to use the public toilets. Installation of a panic button connected to the nearest police station is also a desirable provision.

Urban poor and floating population

The participants from the data collection in Dehradun highlighted the need of Public toilets to be conveniently located within the neighbourhoods where the urban poor reside or work. Easy access to sanitation facilities reduces the time and effort required for daily needs by the urban poor and informal workers. High costs can be a barrier to access, particularly for those living below the poverty line. Public toilets to be well-lit, secure, and located in areas that are safe, especially during night-time contribute to the comfort of the users.

1. Adequate sanitation facilities are a fundamental right for all individuals, including those living in urban poverty.
2. Informal workers- street vendors, domestic workers, daily wage labourers, drivers among others, in particular need clean and hygienic sanitation facilities.
3. Informal Sector workers also make use of the facilities to take bath, do laundry, get ready to work and clean back again.
4. Oftentimes, there are not adequate numbers of public toilets in areas of their work. For instance, female informal workers, particularly domestic workers, find it hard to find a clean and hygienic public toilet in residential colonies they work in.
5. Urban poor, particularly women and children, face heightened risks and challenges related to sanitation due to their vulnerable living conditions and limited access to resources. A public toilet is more than an infrastructure for the urban poor but a way of life.
6. Facilities should consider cultural norms and practices to ensure that public toilets are acceptable and usable for diverse populations.

³⁵(Biswas & Economic and Political Weekly, 2019)

6. Recommendation for Inclusive Sanitation

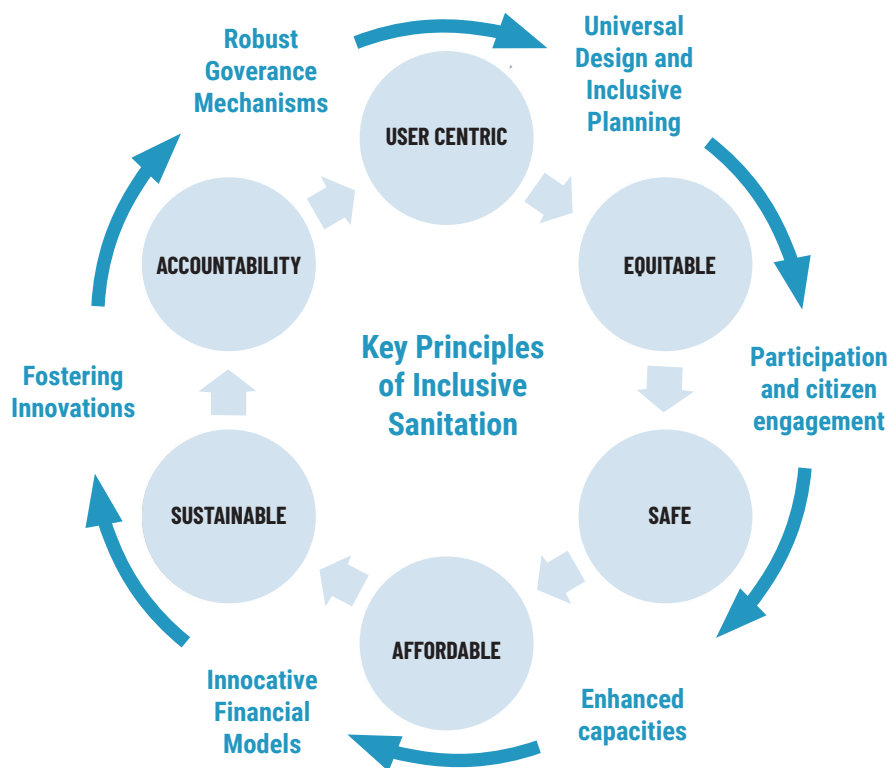


Figure 6: Key Principles of Inclusive Sanitation

Promotion of Inclusive Sanitation forward a paradigm shift in urban sanitation which adopts more contextual, sustainable and equitable solutions. This would include soft institutions as well as hard infrastructural development. Its comprehensive process includes policies, institutions, regulations by involving all stakeholders—both users and providers across the sanitation value chain. The following recommendations will attempt to influence the entire sanitation value while primarily focusing on creation of inclusive sanitation facilities.

Universal Design and Inclusive Planning

It has been observed during the study that tier 1 cities like Dehradun have enough public toilets in close proximity while the spatial distribution of public toilets is quite scattered in tier 2 cities like Ramnagar or Champawat. While the latter scenario puts a lot of pressure on the infrastructure, the former creates financial instability. In terms of ease of access and inclusivity, it is understood that while an attempt is being made to make the facilities universally accessible for diverse groups, yet the approach and actions are piecemeal and hence services are not efficiently delivered. It is necessary to understand that the provisions of specific features for making the facilities inclusive, requires marginal extra cost. Few recommendations are as follows:

- 1. Needs-based location/site planning-** Provision of gender-neutral toilets can be explored at public places with a smaller number of users to make it cost efficient. Also, additional toilets as gender neutral toilets can be provided at places with heavy footfall like bus stops, market places, recreational spaces where users' needs might be diverse.
- 2. Adoption of a cluster-based approach-** It would be advisable to do a demand analysis and adopt a cluster-based approach to scatter the types of inclusive provisions. This indicates in a cluster of toilets situated in

a 200 m radius³⁶ or limits of a commercial area (whichever is less), there will be a gender sensitive toilet, family toilet, fully accessible toilet, gender neutral toilet. Similarly in tier 2 cities, priority should be given as per the demand analysis. Further a simple cubicle with most of the inclusive features can be promoted for faster and wider implementation. Innovative design, based on the due weighted considerations to requirements of specific location and diverse users, replicating efforts across different cities can be developed and replicated.

3. **Inculcating Progressive design thinking-** It is important to add the aspect of “Progressive design” while building aspirational toilets. It is often observed that though it is important to create state of art features like building automation systems, sensor based electrical and plumbing fixtures, tissue dispensers etc, it usually does not work in public toilets considering the socio-economic-cultural complexities of Indian society. At times, these elements also affect the economic sustainability of the sanitation facility. It is important to adopt a phased approach, focused first on creating a sanitation facility catering to the needs of its intended users - an approach towards desirable toilets, and then adding futuristic elements.

It is important to assess sanitation facilities in gradations, rather than simply labelled as unimproved/ improved or inclusive/non-inclusive. While it might be difficult for the cities to identify funds and make immediate investments in creation of inclusive facilities, it is ideal to create models for replication and scalability.

4. **Strict adherence and Localisation of Policies and Guidelines-** There is a robust policy landscape facilitating the inclusive design, implementation, operation and maintenance. For instance- the Harmonised Guidelines and Standards for Universal Accessibility in India, 2021³⁷ provides detailed sections in Internal and External Elements (Chapter 3 & 4) on accessible toilets, the Menstrual Hygiene Management (MHM) Guidelines, 2015³⁸ on gender sensitive needs. The advisory on public and community toilets, 2018³⁹ provides a comprehensive framework for inclusive planning and design of community and public toilets. The framework and checklist prepared by NFSSM Alliance on “Inclusive Sanitation: Way forward for cities⁴⁰” provides provisions for each marginalised group. Strict adherence to the national guidelines and standards shall be mandated in design of public sanitation facilities. Alongside, the provisions shall be modified as per local needs and context. For instance, while the national guidelines suggest at least one Indian toilet in the facility, Indian WCs are the preferred choice amongst users in Uttarakhand. It would be advisable to ideally have more or atleast have an equal number of Indian WCs in the public sanitation facility.
5. **Adoption of human centric design principle-** The diversity existing in the population and amongst the marginalised groups needs to be recognised and their different accessibility needs should be acknowledged. Identifying and understanding the intersectionalities existing within these groups, therefore, is an important aspect of developing inclusive sanitation facilities. First of the critical steps in this regard is mapping and enumeration of disaggregated data of the intended users, which can be used during planning and design of inclusive sanitation facilities. To address unavailability of disaggregated data at local level, participatory planning tools like user preference surveys, informal interviews, community meetings and discussions, aid the identification of localised and contextualised priorities.
6. **Vertical development with Mixed Land Use-** There are many social facilities like night shelters, citizen information centres, community gathering spaces as well as public toilets which need to be provided in a city. While the hilly states have limited land for development, the possibility of vertical stacking of such facilities in one building can be explored.

³⁶Average walkable distance is 400m

³⁷(NIUA et al., 2021)

³⁸(Menstrual Hygiene Management, 2015)

³⁹(CPHEEO; Ministry of Housing and Urban Affairs, 2018)

⁴⁰(NFSSM Alliance, 2020)

Participation and citizen engagement

1. Citizen engagement through **public consultation and advisory groups** helps in interactions with the users/communities in recognizing their concerns/needs/challenges. These engagements can be through Focus Group Discussions with the diverse users, regular public consultations meetings with the users to understand their specific and evolving requirements/aspirations as well as benefit from the local knowledge and innovations. Involving labour associations, shopkeepers' associations, and relevant active stakeholders in the process of policy/decision making will also be helpful in scoping for requirements as well as sustainable financial models. The Community toilet constructed at Adarsh Nagar Zone of Jaipur city is a successful example where citizen engagement has been integrated to build an inclusive sanitation facility.⁴¹
2. **Involvement of users and local members** can uplift the upkeep, hygiene and maintenance of toilets. As observed during the study, the users of public toilets majorly consist of local shopkeepers, street vendors, domestic helps, informal sector workers and paratransit operators. Involving community oriented Self-Help Groups, shopkeeper associations, resident welfare associations, labour associations, and any active association in the operation and maintenance of the toilets can create better ownership among the users. The Trichy model can act as a best practice in this scenario.
3. **Accurate and effective user feedback** plays a very important role in ensuring efficient operations and maintenance of public sanitation facilities. Accessible, comprehensive and interactive feedback mechanisms should be provided in each facility. Innovative user Feedback Mechanisms can be explored like creation of community WhatsApp groups, upon mobile applications like google maps, and subjective user reviews on web platforms etc.
4. **Engagement of youth (students)** can also act as an important driver in getting more accurate and granular information to validate the user feedback. A successful model from Uttarakhand itself, it will be ideal to collaborate with local academic institutions for engaging students in conducting periodic accessibility audits and feedback on routine operations and maintenance of the public sanitation facilities.

Fostering Innovations

1. **Standardisation in design of accessible toilets-** It is observed during interactions with persons with different types of disabilities, that different/multiple designs of accessible toilet facilities create confusion, particularly for persons with special needs such as visual impairments or intellectual disabilities. It will be advisable to create standardised design for accessible toilets including uniform specifications of type of taps, flushed, door handle type, door lock type, location and height of handwash, tissue dispensing machine etc. This standardisation can be built on the existing specifications given in Harmonised Guidelines, 2021.
2. Demonstrated Public toilets can be constructed, showcasing field level application of new/alternative technologies. These toilets shall act as live laboratories for new materials that are suited for specific locations in the hilly terrains such as Uttarakhand.

Innovative Financial Models

1. **Differential user charges-** It is observed that there is a differential paying capacities and perception of a clean and hygiene sanitation facility among the users. The same need to be further investigated, researched and leveraged in a systematic manner. It should complement the suggested revenue model of CPHEEO of Categorize toilets based on High / Medium / Low revenue potential and suitably mix to ensure cross subsidisation between toilets within a package. Further, there needs to be a harmony in user charges aimed to reduce the pink tax⁴². Developing a time-based framework for payment of toilet use can be explored. For instance, up to 2 mins, up to 10 mins and more then 10 mins charges can be different. A rechargeable toilet pay card can be explored to access public sanitation services.

⁴¹(Times Now, 2021)

⁴²Additional burden on women to use safe and hygienic sanitation facilities even for urination

2. **Creation of economic sustainability-** Sanitation facilities should have some ancillary activities. Additional revenue generating activities like shops, ATMs shall be provided alongside the sanitation facility. Although, there is a need to break the stigma associated with sanitation facilities. For example- Considering the immense inflow of tourists in Uttarakhand, who use the public sanitation facility, there is a huge potential in exploring revenue generating avenues which would also promote the local identity of the city as well as develop tourist friendly infrastructure. Tourist information shops, gift/ souvenir shops for local products/ handicrafts/ handlooms integrated into the design of public sanitation facilities and rented to SHGs or local communities on profit sharing basis. Information centres in market areas, E-centres/CSOs- Adhaar card, KYC- additional services can be additional profit generating activities that can be integrated with the sanitation facility. Additionally, possibilities of giving these shops on lease in lieu of proper operation and maintenance of toilets can be explored.
3. **Adoption of Inclusive Procurement** - Listing of only standardised items in bill of quantities and procurement platforms leads to difficulty in procurement of inclusive items like beepers, sensors, braille encrypted grab rails etc. Inclusive and innovative procurement processes should be explored to eliminate these procedural challenges. Opening avenues for disabled owned suppliers/ women led enterprises, having additional budget for inclusive provisions, ensuring quality check for construction of inclusive provisions can be some elements of this process. Procuring recyclable, eco-friendly sanitary pads from the local SHGs is one of such interventions.
4. Cities need to adopt a **flexible approach to procurement**, both in structuring the PPP and in the selection of private partners owing to the innovative nature of onsite sanitation services and capacity limitations among the public and private sectors. Enabling factors for private sector engagement will include – a clear rationale for PPP; early engagement with potential service providers; improved public sector capacities to structure and execute balanced PPPs and undertake the necessary due diligence for this purpose; concessions relative to the economic viability of projects and guaranteed revenue streams; flexible procurement processes to allow for emerging private sector capacities; optimum risk allocation and flexible contract design that allows for fair and balanced renegotiations if necessary; improved regulations that are critical for project viability.
5. Leveraging funds under **Corporate Social Responsibility (CSR)** can also help in strengthening inclusive sanitation facilities. For instance, Delhi Municipal Corporation with PVR Nest (the CSR wing of PVR group), has created gender sensitive sanitation facilities called Pink Toilets. Such toilets have been created in about 25 sites (approx. 75 toilet blocks), in the various zones - South, West, Central Zone, City SP Zone, Karol Bagh of Municipal Corporation of Delhi.
6. Big establishments like popular clothing/ sweet shops, banks, etc can be motivated to create public sanitation facilities, open for the general public. Incentives like rebates in property tax can be explored to promote such activities. Alternatively, statutory systems can be modified to mandate development of public sanitation facilities by the developer of land more than 500 sq.m.
7. Providing pay-per-use amenities such as RO water, sanitary pads, and locker space along with app-based door lock control to regulate crowds improves user experience and also boosts operating income.

Robust Governance Mechanisms

1. **Promoting Gender Resource Centre (GRC)**, a mechanism adopted by many governments including Delhi Government⁴³, can strengthen integration at all levels and with different administrative bodies, providing services and administering schemes and programmes for the empowerment of women, transgender and girls. The GRC will converge the three levels of community structure led and shaped by women and other marginal groups to strengthen and support activities to ensure safe and inclusive sanitation. GRCs can have representation in decision-making and deliberating bodies such as the Sanitation Task Force and Ward Committee to advance gender-inclusive sanitation. The model can be extended to include intersectionalities with disability, income and age.

⁴³(Department of Women and Child Development, n.d.)

2. Public grievances are closely related to public service delivery. A **strong and effective Grievance redressal-system** is an essential part of public administration and referred to as the heart of governance'. A good grievance redressal system should have proper accountability, transparency and feedback facility. A decentralised and accessible model of grievance registration should be explored with a centralised record of complaints and report of redressal.
3. Developing a **rating system for public toilets** to encourage the operation and maintenance agencies with awards and recognitions for maintaining clean, hygienic and safe facilities.

Enhanced Capacities

4. **Enhancing capacities of city officials-** Specialised training and capacity building of city officials needs to be regularly planned to sensitise and train the officials on the technical aspects of planning, design and implementation of inclusive sanitation facilities. There is a strong need to develop a uniform and comprehensive understanding on topics like inclusive development, human centric design, participatory planning through easy and innovative methods like stimulation exercises, bringing voices from the ground and empathy building exercises,
5. **Building capacities of Sanitary workers and caretakers-** Empathy building and sensitisation of the sanitary workers and caretakers should be done in a periodic manner. It is essential in order to make them understand the significance of inclusive elements, features and services and provide the same. It would bring down the attitudinal barrier towards women, urban poor and persons with disabilities.
6. **Knowledge creation, exchange and insights from best practices-** A knowledge exchange platform, like Toilets Innovation and Knowledge Exchange, can be developed by think tanks, academic institutions, or alliances to bring together existing information and research on toilet provision and design (architecture, service and product). Such a platform will be critical in bridging the gap between academic innovations and practice and can be useful for students, urban practitioners, architects and designers, business owners, government agencies, to identify and develop solutions for inclusive, sustainable sanitary provisions.
7. Uttarakhand has approximately 70% of the rural population who are dependent on the urban centres and constitute a major portion of the floating population. Additionally, the state attracts tourists from different parts of the country from different ethnicities, cultures, age groups and social norms. Considering User behaviour plays a very important role in ensuring the desired state of cleanliness and hygiene of any sanitation facility, **advocacy on appropriate toilet behaviour** can result in ease of maintenance of public toilets. Instructions should include pictorial and multilingual formats regarding cleanliness and hygiene practices like use of flush, health faucet, hand wash and working of taps, hand dryers, toilet papers etc. Further, tactile and braille information boards should also be included at relevant places. A movement/mission can be designed to inform users on how to use the facilities without distress. Utilising avenues of Information, Education, and Communication (IEC) and Behavioural Change Communication (BCC) scopes to address the challenges of behavioural change, especially on 'how to use a public toilet?' can be achieved. 'Polluters Pay' concept can be tested with a sample of public toilets to understand the behavioural changes of users.

7. Roadmap for building inclusive sanitation facilities

Situation Assessment

1. Collection of Demand side and supply side disaggregated data on Public Toilets to ensure evidence-based planning. The Demand side data would include (Estimated Number of users/ footfall/ persons gathering, duration and timing of activities, Gender, age, disability-based differentiation, Willingness to pay for toilet usage, User preferences on type of toilet, other services. The supply side data would include aspects like Location(s) of existing PT/CTs, Gender, age and disability wise toilet seats, urinals, baths, Facilities provided (child care room, hand wash, changing room, caretaker provisions, etc.), level of cleanliness/ operation and maintenance including availability of water, electricity, Wastewater disposal mechanism and solid menstrual waste collection service, User charges collected for different uses, Technical, Administrative and financial capacity of the ULB.⁴⁴
2. A GIS based inventory of existing facilities is best suited for archival, spatial and non-spatial analysis.

1

Identification of Needs

1. Understanding user needs and problems through periodically conducting User Perception survey, Personnel Interviews, Focused Group Discussions with different user and marginalised groups. It will help in identifying their priorities, special needs, and existing challenges in the system.
2. Correlation analysis of the identified needs and perception with the disaggregated data
3. Conducting footfall assessment in the vicinity of potential locations. People count undertaken while designing shopping malls, traffic studies will help in identify potential people likely to visit / use the toilet. The assessments also help calculate the number of units required for each type of user as per norms and potential neighbourhood location. This calculation will help adopting an incremental approach by arriving at land requirements or conversely based on land available what proportion of users can be provided with services. Collecting data on types of users will additionally come in handy while proposing aspirational facilities like lactation rooms, family toilets etc.

2

Creation of Inclusive Provisions

1. The toilet design must allow for universal access and ease of use. The design must adequately address the different sanitation needs of special user groups including, women, children, the elderly and persons with disabilities.
2. Using the standards and guidelines proposed in National Guidelines like Harmonised Guidelines and Standards for Universal Accessibility in India, 2021, Menstrual Hygiene Management National Guidelines etc needs to be adopted in design and implementation of the sanitation facilities. Other recommended documents include Inclusive Sanitation: Way Forward for Cities – A Framework and a Checklist.
3. It is essential to categorise the Toilets on the basis of locations and user types.
4. Norms for provision of toilets as recommended in the CPHEEO Advisory⁴⁴, URDPFI Guidelines and Harmonised Guidelines, 2021 shall be referred and adopted as per the need assessment done with the intended users.
5. Site selection, selection of required inclusive provisions and prioritising them shall be done in a participatory manner. Establishing priorities shall be done in accordance to the cost involved and available funds. Additionally, the State shall also establish avenues for inclusive funding.
6. Opportunities for different types of shops and other ancillary services shall be included in the design of sanitation facilities.

3

⁴⁴(CPHEEO; Ministry of Housing and Urban Affairs, 2018)

4

Monitoring and Evaluation

1. Involvement of local Self-Help Groups in operation and maintenance of the sanitation facilities shall be encouraged.
2. Simple and effective complaints reporting mechanism can provide good feedback to ULB and cause it to act against the contractor to remedy the situation.³⁴ Innovative User feedback systems shall be identified for active participation of marginalised groups.
3. Periodic Accessibility Audits shall be conducted by city officials or through involvement of unbiased auditors like youth/ person with disabilities/ women entrepreneurs/ local NGO.

5

Capacity Building

1. Periodic sensitization and capacity building activities shall be conducted by the city for caretakers, O&M agencies, contractors along with city officials
2. Regular campaigns shall be organised to ensure sensitization of users about toilet etiquettes and informing about use of aspiration facilities.
3. Innovative yet impactful information & Communication material shall be created and disseminated to encourage behavioural change.

8. Key action points

For State

1. Foremost, the state would require to create a policy or protocol to mainstream inclusive sanitation. This would include amendment of the state sanitation strategy and integrating the recommendations in the state guidelines.
2. Integrating progressive and critical data collection on gaps of accessibility and inclusion in public toilets. Creation of self-assessment tools for recognizing gaps and challenges in the public toilets, wrt. accessibility and inclusion
3. Development of utility-driven performance indicators and systems for monitoring progress. This allows authorities to plan and improve city-level systems based on actual performance against public sanitation goals.
4. Creation of explicit Key Performance Indicators and associated data systems to translate inclusive sanitation mandates into clear goals and incremental targets of urban local bodies for making progressive improvements using transparent incentives and penalties.
5. Creation and tracking of inclusive funds for public and community toilets supports authorities to invest in re-development, retrofitting the current infrastructure to accommodate the needs and aspirations of marginalised groups, especially persons with disabilities, women, children and the elderly. The funds can also be utilised for building model toilets like gender-neutral, disability and family-friendly toilets for benchmarking universal design and needs of the marginalised groups.
6. Establishing a centralised and effective grievance redressal system and mechanisms to recognise the areas of interventions.
7. Promoting possible state level convergences among different central schemes/missions like National Urban Livelihood with sanitation value chain for generating scopes for employment opportunities for SHGs

8. Creation of a state level platform for Innovation and Knowledge Exchange for peer to peer learning and knowledge sharing
9. Organisation of Periodic training and capacity building and sensitization workshops
10. Establishing protocols and avenues for inclusive governance mechanisms across the state.
11. Developing standardised protocols and mandates to ensure participation and engagement of marginalised groups.
12. Investing in developing localised, contextualised, and most importantly standardised design templates of inclusive sanitation facilities.
13. State bye-laws shall acknowledge and integrate standards for inclusive sanitation facilities among privately owned establishments.
14. Exposure visits and cross learning opportunities shall be created and leveraged for different sets of practitioners including policy makers, engineers, architects as well as operation and maintenance agencies, SHG groups, and even members from the marginalised groups.
15. Developing guidelines for creating design promoting identity of state, and adopting user centric and inclusive practices.

For City

1. Collection of regular Demand side and supply side disaggregated data on Public Toilets to ensure evidence-based planning and development of GIS based inventory of existing facilities is best suited for archival, spatial and non-spatial analysis.
2. Organise 'Sugamya Swachhta' events to create awareness among the general public about toilet Etiquette and inclusion. Further such events can be leveraged to break stigma associated with sanitation workers through facilitating them with recognitions and awards.
3. Develop local model of differential user charges through evidence-based research
4. Conduct periodic surveys on 'Hygiene mapping', 'Safety Mapping', and 'Community need mapping' of the public toilets in the city
5. Conduct regular and periodic sensitisation and training workshops of caretakers, operation and maintenance agencies and sanitation workers on inclusion.
6. Explore avenues for financial sources like local CSR funds (case reference: PvR Nest)⁴⁵ or adopting innovative financial models.
7. A need-based assessment shall be done for logical location of public sanitation facilities
8. Identify and develop sites for integrated social facilities along with inclusive sanitation facilities.
9. Inculcating localised progressive thinking while conceptualising and implementing aspirational toilets in the city
10. Encouraging active role of marginalised groups like women, transgenders, persons with disabilities and local tribal communities in operation and maintenance, designing and construction of the public toilet.

⁴⁵(PVR nest, n.d.)

9. Annexures (Case Studies)

9.1 Success Story of Café, Sales Outlet cum All Weather Public Toilet at Zangsti, Leh

The project in Leh town, situated above 3,000 meters, strives to uplift the standards of public sanitation infrastructure, catering specifically to the needs of tourists, general public and sanitation workers of the town. It was observed that, there is a lack of access to clean toilets especially during high inflow of tourists. The existing public toilets are often inconveniently located and poorly maintained, exacerbated by the challenges of Ladakh's cold desert climate, where temperatures dip below freezing in winter, rendering traditional flush toilets non-functional due to frozen water pipelines.

In collaboration with BORDA, LEDeG undertook the task of identifying potential sites for all-weather public toilets. The Zangsti location was chosen in consultation with the Municipal Committee Leh (MCL) and Leh Development Area (LDA). The resulting facility, which integrates an all-in-one café, sales outlet, and all-weather public toilet, is constructed using eco-friendly techniques, including insulated walls and mud plasters, ensuring universal accessibility.

To boost access and usage of toilets it was necessary to set up facilities that were conducive to both locals as well as tourists. It was also important to ensure that these toilets were climate proofed and served their purpose during the winter months. This led to the implementation of two key interventions:

1. The re-popularisation of eco-friendly dry toilets which the average Ladhaki was familiar with and worked well in winter
2. The pioneering of efficient all-weather wet toilets with flush toilets for incoming tourists with special technology that would prevent the water from freezing in winter

Location: Leh, Ladakh, India

Year of construction/implementation: 2019

Agencies involved:

1. Bremen Overseas Research and Development Association- South Asia (BORDA South Asia)
2. Ladakh Ecological and Environmental Group (LEDeG)
3. Leh Municipality
4. LAHDC- Ladakh Autonomous Hill Development Council, Leh

Type of practice: Infrastructure, innovative O&M and financial model

Key beneficiaries: Tourists, General Public

Salient features

Weather-Resilient Infrastructure:

Development of all-weather public toilets designed to withstand Ladakh's extreme weather conditions, ensuring functionality even in freezing temperatures. The public toilets are able to remain functional throughout the year, as they were constructed using passive solar techniques such as direct gain technology – direct gain is the heat from the sun being collected and contained in a space/surface, it is considered to be the simplest and most cost-effective way of passively heating a structure.

This direct gain technology is especially leveraged to warm the running water in pipes and prevent them from freezing in winter. A toughened double-layer glass with aluminium spacers has been used for glazing the water pipes. PPR – Polypropylene pipes act as insulators and are double-layered with nitrile foam to further deter heat from escaping. A pressure pump is used to maintain water pressure in each tap. There is also an overhead-insulated water tank, kept in a glass chamber to retain heat and improve thermal conductivity

The outside 'shell' of the toilet infrastructure is insulated as well using Polyurethane Foam (PUF) and Expandable Polystyrene Foam (EPF) that have been sandwiched between the double wall to block the heat from escaping through. An 18 mm plywood, a thin layer of tar felt, an EP Foam, and straw mixed with soil have been used in the roof. A corrugated tin sheet has also been incorporated on the roof as a waterproofing agent

Versatile Facility Integration

Implementation of a multifunctional facility, combining a café, sales outlet, and public toilet, enhancing user experience and catering to diverse needs.

Innovative O&M Model:

The O&M is carried out by an NGO, PAGIR (selected through the tendering process by the municipality). The NGO works with physically challenged artisans who create craftwork with cloth, paper, and other materials. The toilet facility has a common area with a small kitchen, which is now utilized to run a café and art expo/shop by the NGO.

Sustainability and Cultural Sensitivity:

Integration of eco-friendly construction practices, such as insulated walls and mud plasters, demonstrating a commitment to sustainability and cultural sensitivity by incorporating local techniques and architectural knowledge.

What worked

The success of this project can be attributed to a sustainable operation and maintenance (O&M) function, ensuring continuous functionality. The incorporation of eco-friendly construction practices, such as insulated walls, contributed to the creation of all-weather public toilets, addressing Ladakh's extreme conditions. Additionally, the strategic selection of suitable locations, particularly major tourist spots, enhanced accessibility and relevance. This combination of a sustainable O&M model, all-weather functionality, and strategic site selection not only improved public sanitation infrastructure but also positively impacted the overall tourist experience in Leh town.

Why did it work

The success of the Leh town sanitation project can be attributed to a combination of factors. A thorough needs assessment ensured targeted solutions to specific challenges, while collaborative efforts with stakeholders facilitated community engagement and cultural alignment. Innovative and sustainable design practices demonstrated adaptability to the local environment, increasing project resilience. The integration of a multifunctional facility enhanced usability, and challenging social taboos through an innovative approach transformed toilet maintenance into a sustainable business model, altering perceptions. Addressing sanitation challenges not only improved hygiene but also contributed to an enhanced overall tourist experience, positively impacting Leh town's image and potentially attracting more visitors.

Lesson Learnt

The Leh town sanitation project underscores the importance of a needs-driven approach, emphasizing the necessity of thorough needs assessments to tailor solutions. Collaborating with local stakeholders and fostering community engagement is vital for cultural alignment and project acceptance. Innovative and sustainable

design practices contribute to resilience and environmental sensitivity. The integration of multifunctional facilities enhances usability, and challenging social taboos requires creative and inclusive strategies. Finally, addressing infrastructure challenges positively impacts tourism, emphasizing the interconnectedness of sanitation, cultural norms, and economic development for the holistic success of such projects.

Impact made

The toilet units in Leh have been successful in increasing active usage of public toilets set up. The Zangsti unit sees an average footfall of up to 200 users a day (user numbers vary from up to 500 during the tourist season to 100 during winter) while the bus stand toilet sees an average usage of 150 users per day.

In order to ensure the safe disposal of waste and modernize dry toilets, BORDA and LEDeG have also worked on providing the appropriate protective equipment to sanitation workers maintaining such units as well as an adequate number of wheelbarrows to transfer waste and are working with the local government to innovate on mechanized solutions for the same.

The introduction of café and restaurant spaces run by entrepreneurs has also helped dispel misconceptions amongst the local population of viewing the maintenance of toilets as an 'impure profession', the revenue from these commercial spaces also help run the toilets.

Pros and cons

Pros:

The project's strengths lie in transcending the conventional norms of public toilets. By going beyond the generic framework, it emphasizes accessibility, ensuring facilities are inclusive and cater to diverse needs. The innovative approach enhances versatility, making the infrastructure adaptable to various requirements. Moreover, the project exhibits scalability, providing a foundation for broader improvements in public sanitation. This not only positively impacts the immediate community but also sets a benchmark for future projects, contributing to a more inclusive and accessible environment.

Cons:

Challenges in the project include the need for ongoing efforts to ensure sustained success, financial sustainability, and a broader impact on cultural norms. The extended construction duration and high costs present hurdles, impacting immediate efficiency. Operational delays and a learning curve in understanding the project require stringent supervision for effective maintenance. These cons underscore the importance of careful planning and dedicated efforts to overcome obstacles and achieve long-term success.

Link:

<https://www.facebook.com/100067259790150/videos/all-weather-public-toilet-the-dream-finally-comes-true/438337687196477/>

9.2 Trichy Model: Building Gender Equality through Management of Community and Public Toilets by Self Help Groups

The pilot study also explores how CT/PTs can become further accessible and gender inclusive. TNUSSP has designed Behavioural Change Communication campaigns to address CTPT users' behaviours. In the six months since the pilot programme's introduction, there has been an increase in users across toilets. Presently, three O&M management models are being piloted: private, self-help group and individual entrepreneurs. Community toilets run by SHGs were strengthened through City Wide Inclusive Sanitation (CWIS) programme initiatives.⁴⁶ SHE teams have presented an inclusive, community owned, federated model of CT/PT management.

Location: Tiruchirappalli (Trichy)

Year of construction/implementation: 2020

Agencies involved: Tamil Nadu Urban Sanitation Support Programme (TNUSSP); Government of Tamil Nadu (GoTN)

Type of practice: policy/technology and innovation/infrastructure

Key beneficiaries: Public

Application Level: Local/City/State/Regional/National

Salient features:

1. Focuses on five main areas - Design, Cleanliness, Effectiveness, Maintenance and User Satisfaction
2. Individual SHE teams are responsible for overseeing and managing the financial sustainability of their facility.
3. Members have been trained to maintain financial records, to collect user charges, record and track income & expenditure, open & operate bank accounts.
4. Financial transactions are undertaken after approval in the SHE team meeting.

What worked:

1. SHE teams ensure proper operations of the facilities including appointment of toilet cleaner; ensuring availability of cleaning agents; and regular maintenance of facility.
2. All aspects of maintenance such as lighting, signages, proper sludge management of toilet and menstrual waste are addressed.

Why did it work

1. Revenue generated from user fee, typically ranging from Rs. 1 to Rs. 5, has been used to improve and maintain the facilities, leading to greater uptake of these services.
2. To foster competition among SHE teams a revolving shield is awarded to the best performing team on a monthly basis based on cleanliness, operations and infrastructure.

Lessons learnt

1. The exercise has demonstrated how inclusive, participative and women led models of toilet management can be both successful and sustainable.
2. Central to sustain this initiative is community mobilisation and participation, proper training, continuous support and oversight.

Impact made:

1. Under the WAVE Federation model, communities have been able to form new SHE teams and take over the management of local public conveniences that were previously under the management of the Trichy City Corporation
2. Additional training of the SHE teams under the Tamil Nadu Urban Sanitation Support Programme has provided a renewed thrust to the existing SHE-managed model and resulted in 100+ additional community toilets, including those with bathing facilities, being brought under this model.
3. This has led to the increased usage of the public conveniences and has resulted in the reduction of open defecation.
4. With 150 SHE teams operating, nearly 400 women have received training from this initiative. In addition, vulnerable members of communities are provided employment, as those who are physically challenged, destitute, widowed or old are typically appointed as caretakers at the facilities.

Pros and cons:

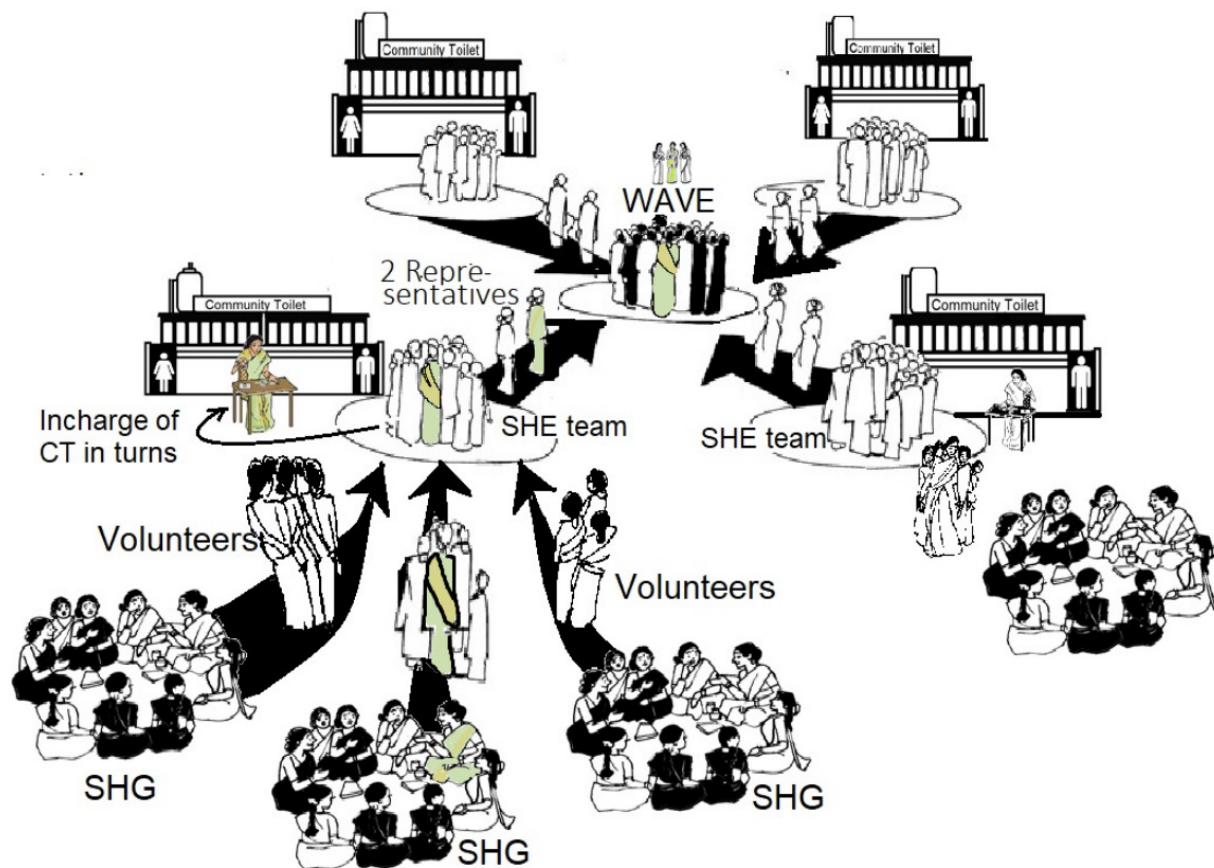
Pros

Creating awareness among users on safe sanitation practices was key to improved service and responsible use.

Cons

Convincing the community to be part of the operations & maintenance was a tough trade off. Attached taboos and discriminatory practices with sanitation made it difficult for the creation SHE team.

Link/ QR: <https://doi.org/10.24943/tnusspsa.20181204>



9.3 Chhattisgarh State Inclusive & Accessible Sanitation Policy for Persons with Disabilities and Transgender Persons

https://sbmgcg.in/backend_panels/downloads/1548335866Chhattisgarh%20State%20Inclusive%20WASH%20Policy%20.pdf

Chhattisgarh has a long standing commitment of becoming an inclusive society where marginalized groups' needs are prioritized and actionized. Inspired by the directives of SBM, intensive consultations and deliberations with diverse stakeholders including the PwDs and Transgender persons was concluded with a need to ensure safe & clean sanitation facilities for both these vulnerable groups. This led to the formulation of the 'Chhattisgarh State Inclusive Sanitation Policy for Persons with Disabilities and Transgender persons in 2018. This policy recognizes the enormous task and commitments to live up to the tradition of Chhattisgarh that has pioneered many social sector programmes including disability and transgender groups, in the country. The policy is applicable to the entire state, rural and urban which include government, public sector undertakings, private public partnerships, and local self government.

The policy envisions disability in a holistic manner wherein their access to sanitation has been viewed as an integral part of empowerment of PwDs and TGPs to lead a life with dignity. Accordingly, the component of accessible sanitation is observed as the responsibility of the Ministry of Water & Sanitation, Ministry of Rural Development and the Ministry of Social Justice & Special Assistance (SJSA) that recognizes specific responsibilities of the individual departments as well as in convergence. This policy is based on the Guiding Principles of Self-Representation, Inclusion, Commitment to Quality, Rights Based Perspective to ensure PwDs and TGPs holistic inclusion in Sanitation.

Salient features

1. Recognizing the rights of PwDs and TGPs, the Government of Chhattisgarh has created an enabling environment for these two excluded groups through equalization of opportunities and ensure full access to water & sanitation and hygiene facilities within the house, workplace, in the community and all public places.
2. The Government ensures the promotion of innovative & adaptive technology and service solutions in order to create and facilitate access to water & sanitation and hygiene facilities to PwDs and TGPs.
3. The Government is committed to abolish all forms of discrimination and violence faced by PwDs and TGPs who are subject to multiple and aggravated forms of discrimination on the basis of caste, class, gender, tribe, sexual orientation, disability, language, religion or in any other form.

Objectives

1. Inclusion of disability rights, values and practices in sanitation strategies
2. Develop an integrated management system including database management for the coordination of inclusive sanitation planning, implementation and monitoring in the line functions of various stakeholder departments

⁴⁵CWIS, 2019. *Community toilets and SHE Teams*

3. Create a community cadre as “Accessible Sanitation Champions” at the block and village level;
4. The community based organizations such as Village level organizations (VO) and Cluster level federations (CLF) under the Chhattisgarh State Rural Livelihoods Mission (CGSRLM) functional area will essentially be the pivot for implementation of Chhattisgarh Swachh Bharat Mission (Gramin)
5. Ensuring adequate budget provision by the stakeholder departments of the state as well as local self-government;
6. Public education through awareness generation and sensitization for inclusive and accessible SANITATION;
7. Strengthen the capacity of stakeholder department functionaries at all levels and ensure active involvement of the various stakeholders in order to achieve the goal of sustainable accessible sanitation
8. Ensure that the size & pattern of the accessible toilet is constructed based on the requirement of user PwD taking into consideration extent of physical and sensory difficulty and provided with the personal assistive devices to ease the access to the toilet

In order to ensure equitable access to sanitation by marginalized groups especially PwDs and TGPs, this policy provides actionable strategies such as structural mapping of the targeted groups with appropriate tools, purposing accessibility audit guidelines for verification protocols in the sanitation facilities, formulate block-wise annual action plan in order to facilitate awareness generation, sensitization construction of accessible units at all levels as well as increase social sensitivity and social sentience towards PwDs and TGPs through various public awareness programmes on their rights to water & sanitation and hygiene and in line with the SBM guidelines ensure construction of accessible toilets. In addition to the guidelines provided by the Ministry of Social Justice and Ministry of Drinking Water & Sanitation, GoI, appropriate design would be created / adopted to suit the local needs and conditions in terms of topography, habitat and material availability.

9.4 Happy Toilet Programme - Singapore

The Happy Toilet Programme, implemented in Singapore in 2007 by the Restroom Association (Singapore), focuses on improving the quality and standards of public toilets. The programme uses a star rating system to assess public toilet quality and provides training and resources to enhance facilities. Those who participate in the grading process receive a certification of quality based on their rating. As a result, this initiative has significantly improved the public's perception of hygiene and sanitation in public toilets. The success of the programme has been acknowledged by the World Toilet Organization, which recognizes it as a best practice in public toilet management.

Location: Singapore

Year of construction/implementation: 2007

Agencies involved: Restroom Association Singapore (RAS), Singapore Tourism Board, National Environment Agency, Ministry of National Development

Type of practice: policy/technology and innovation/infrastructure

Key beneficiaries: Public, tourists

Application Level: Local/City/State/Regional/National

Salient features:

9. Provides star rating for public toilets
10. Focuses on five main areas - Design, Cleanliness, Effectiveness, Maintenance and User Satisfaction
11. Star rating application open to all owners of public toilets
12. 12 months validity on certification of quality
13. "Happy Toilets" promoted through the RAS website for public to identify star graded facilities

What worked: The use of the rating system and collaborative efforts from multiple agencies and stakeholders improved the overall quality of public toilets and raised awareness about sanitation.

Why did it work: The Happy Toilet Programme's star rating system follows a two-step assessment process. Initially, restroom owners are responsible for conducting the first round of assessment on the status of their public washrooms. Subsequently, a certified eco-assessor performs an audit to verify and certify the toilets. Even after the certification of 'Happy Toilet, occasional audits are conducted by volunteer assessors. This continuous monitoring and evaluation model ensures that the toilets remain well-maintained throughout the certification period.

Lessons learnt: The Happy Toilet Programme demonstrated the importance of maintaining high-quality public toilets and the positive impact it has on public perception and behaviour towards hygiene.

Impact made: The Happy Toilet Programme significantly improved the standard of public toilets in Singapore, increasing public awareness of hygiene, and has been recognized as a best practice in public toilet management by the World Toilet Organization.

Pros and cons:

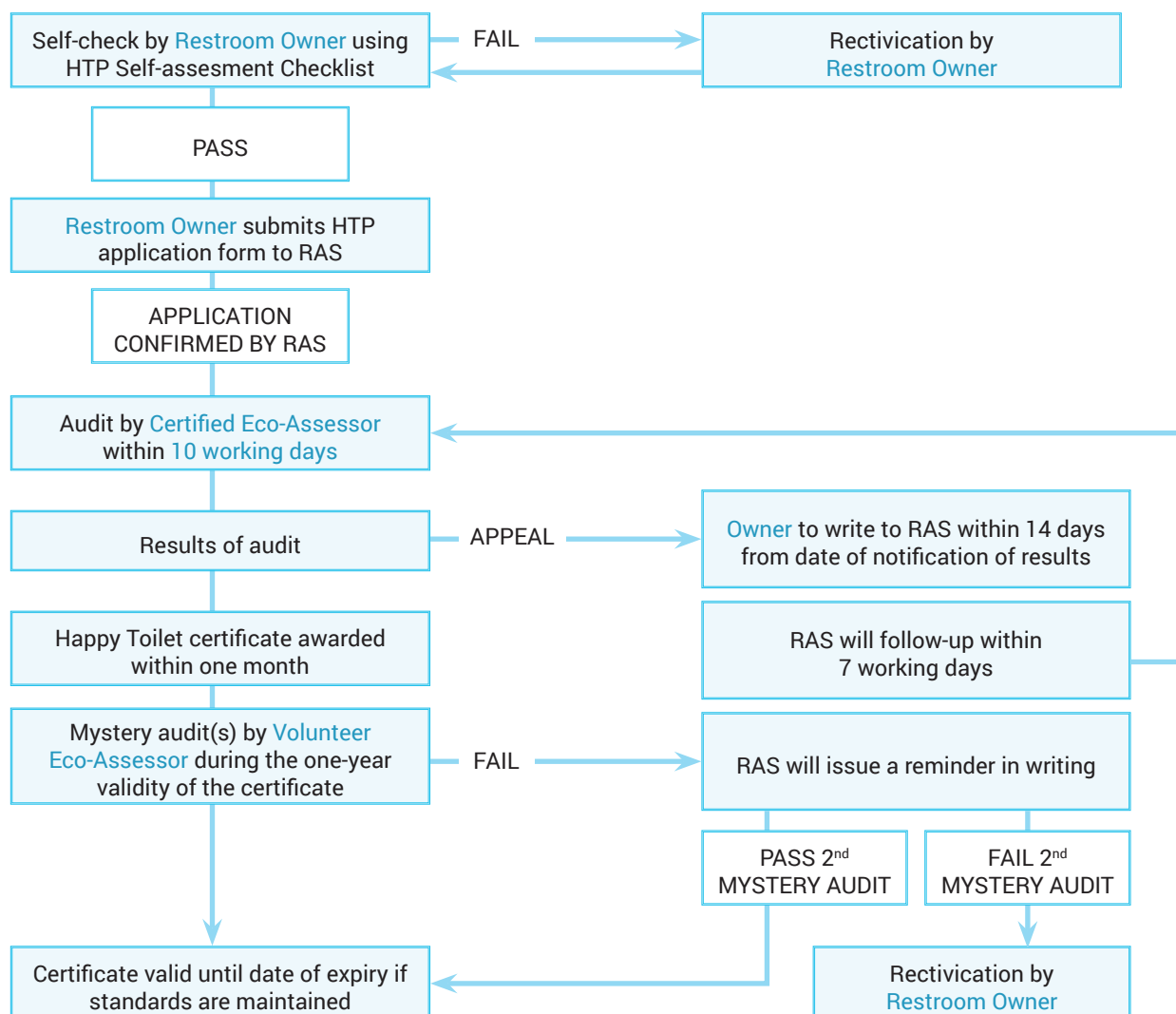
Pros:

1. Improves public toilet quality and cleanliness
2. Raises awareness of hygiene and sanitation
3. Enhances customer satisfaction
4. Facilitates collaboration between agencies and stakeholders
5. Instils a sense of ownership and responsibility to maintain the toilets

Cons:

1. Potential challenges in maintaining consistent standards across all public toilets
2. Public toilet owners may not have enough incentives to apply for and comply with the rating system.

Link/ QR: <https://www.toilet.org.sg/happytoilets>



Flowchart of the Happy Toilet Program (HTP)

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National Institute of Urban Affairs

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1st Floor, Core 4B, India Habitat Centre, Lodhi Road, New Delhi - 110003, INDIA
Phone: (+91 11) 24634971, 24643576

Website: <https://niua.in/>