CESS MONOGRAPH 56

Status of Individual Latrines under Swachh Bharat Mission in Telangana State

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CENTRE FOR ECONOMIC AND SOCIAL STUDIES
BEGUMPET, HYDERABAD
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Foreword

Individual and community sanitation and hygiene are the foundations of preventive health. The mission to install individual toilets at the national and state levels in order to eliminate open defecation has grown into a major initiative. This is extremely important for the country's overall progress. Making India free of open defecation is a mission that requires careful consideration, and the success of this initiative is dependent on the convergence of the political will of the state and central governments.

This monograph presents a detailed account of Telangana's journey from a state with inadequate sanitation to a state free of open defecation. This critical study uses quantitative methods to examine the operationalization of national policies and the increase in the number of individual household latrines (IHHLs). The study also describes national and state-level IHHL coverage in rural areas and highlights the poor coverage at the level of administrative divisions such as districts, mandals, and constituencies. With the aid of numerous research studies and reports, the author presents a detailed description of the situation on the ground.

The study emphasizes the need to be vigilant and prevent even minor, localized relapses in regard to open defecation and makes several recommendations for ensuring total IHHL coverage in the future as well.

The study adds to the existing knowledge on the subject, and I hope that it is useful to the policymakers, water, sanitation, and hygiene (WASH)-related officials, and other interested sections of civil society.

E. Revathi
Director, CESS

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Author

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Acronyms

AP	Andhra Pradesh
APL	Above Poverty Line
ASHA	Accredited Social Health Activist
AWC	Anganwadi Centres
BPL	Below Poverty Line
CAG	Comptroller and Auditor General
CCDUs	Communication and Capacity Development Units
CESS	Centre for Economic and Social Studies
CRSP	Central Rural Sanitation Programme
DRDA	District Rural Development Agency
DWSM	District Water and Sanitation Mission
EA	European Accreditation
FAO	Food and Agriculture Organization
GO	Government Order
GPs	Gram Panchayats
HH	Household
HQ	Head Quarter
IAS	Indian Administrative Service
IEC	Information, Education, and Communication
IHHLs	Individual Household Latrines
ILCS	Integrated Low-cost Sanitation
JMP	Joint Monitoring Programme
LOB	Leftover Beneficiaries
MCs	Municipal Corporations
MDGs	Millennium Development Goals
MGNREGS	Mahatma Gandhi National Rural Employment Guarantee Scheme
MLA	Member of Legislative Assembly
MP	Member of Parliament
MPPs	Mandal Praja Parishads
MRO	Mandal Revenue Officer
NABARD	National Bank for Agriculture and Rural Development
NBA	Nirmal Bharat Abhiyan

NGOs	Non-governmental Organizations
NGP	Nirmal Gram Puraskar
NHFS	National Family Health Survey
NSSO	National Sample Survey Office
ODF	Open Defecation Free
RMSA	Rashtriya Madhyamik Shiksha Abhiyan
RWSS	Rural Water Supply and Sanitation
SBM (G)	Swachh Bharat Mission (Gramin)
SCs	Schedule Castes
SEPR	Society for Elimination of Rural Poverty
SHGs	Self-help Groups
SLWM	Solid and Liquid waste management
SSA	Sarva Shiksha Abhiyan
STs	Scheduled Tribes
SWSM	State Water and Sanitation Mission
TFC	13th Finance Commission
TMC	Thousand Million Cubic
TSC	Total Sanitation Campaign
UNICEF	United Nations Children's Fund
UNO	United Nations Organization
UTs	Union Trritories
VRO	Village Revenue Officer
VWSC	Village Water and Sanitation Committee
WASH	Water, Sanitation, and Hygiene
WHO	World Health Organization
ZPP	Zilla Praja Parishad

Section – I

Introduction

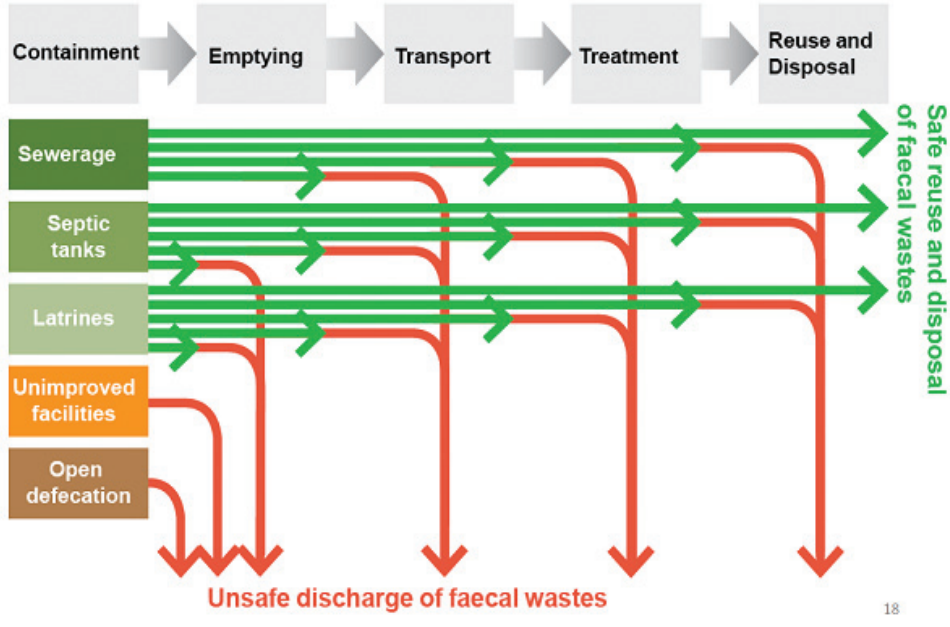
Individual household latrines (IHHLs) provide people with a private place to defecate,thus preventing open defecation in fields, in bushes, or on beaches (Water Aid 2018). A household (HH) sanitary latrine unit includes the following components: a sanitary substructure (which safely contains human faeces and eliminates the need for human handling before it decomposes), a super structure with a water storage facility, and a hand wash unit for cleaning hands. Apart from this, there are a variety of safe sanitation systems available in the market, including the twin pit, septic tank with soak pit, Eco-San, and bio-toilets. The Ministry of Drinking Water and Sanitation of India is encouraging twin-pit technology. However, states are encouraged to develop alternative safe technologies as well and are tasked with providing information to beneficiaries about available technologies and costs, so that they can make an informed decision (Swachh Bharat Mission (SBM) Guidelines 2017). The general recommendation is that latrines should be built at least 15 metres away from water sources, such as a borewell or well, and 6 metres away from the home. However, given the space constraints in urban areas, particularly in slums where houses are closely packed, such criteria will not work. Therefore, the government is encouraging such HHs to construct latrineson their premises.

The IHHL's primary goal is to eliminate open defecation because numerous studies have shown that it contributes to child mortality and morbidity. Open defecation is the practise of emptying one's bowels in public without using properly designed structures for human waste disposal, such as toilets. This practise is common in rural and impoverished areas around the world, particularly in Sub-Saharan Africa and Asia. According to World Bank (2017), regions with high rates of open defecation face significant challenges related to sanitation and waste management disposal. Studies on open defecation show that there is a statistical correlation between regions with the highest percentage of people who do not use toilets or other human waste disposal facilities and low education or poverty.

The World Health Organization (WHO) defines a population practising open defecation as those who do not use any kind of toilet facility for defecation. Those who use

unimproved sanitation facilities such as pit latrines without a slab, open pit latrines, or hanging latrines are not considered to be practising open defecation. The United Nations Organization (2008) found that India is losing billions of dollars each year because of health hazards resulting from poor sanitation. As health expenditure is becoming more expensive, this causes financial strain on the affected families. Open defecation has decreased from 65% to 34% in the South Asia region and by 30% in countries such as India, Bangladesh, Nepal, and Pakistan. However, there are still 610 million people who defecate in open places (UNICEF 2021).

Figure 1.1: Safe Management of Human Waste



Source: Adapted from WSP (2014), as modified in JMP (2015)

Article 21 of the Indian Constitution says that access to water, sanitation, and hygiene (WASH) is a human right. In addition to the need for housing, other micro-environmental demands and critical issues, such as WASH, are key components that contribute to the population's overall quality of life. Swachh Bharat Mission (Gramin) defines safe sanitation as safe excreta disposal, proper toilet usage, and avoidance of open defecation in addition to solid and liquid waste management (SBM (G) Guidelines, 2017). This helps avoid many dangerous diseases, decreasing mortality in children under the age of five, contamination of groundwater supplies, and loss of family income due

to increasing health bills; it also helps in maintaining human dignity. In order to manage safe sanitation at all levels–HH, community, and government –it is important to comprehend the effects of inadequate sanitation, the contributions of all key players, including communities, and the execution of safe sanitation processes.

According to the WHO's discussion on sanitation technologies and methods, India's great civilizations, such as Harappa and Mohenjo-Daro, as well as the recently found Rakhigarhi civilization of the Indus Valley had very advanced levels of urban sanitation. The WHO also stated that the world's first urban sanitation systems were included in this metropolitan plan. Sanitation systems existed in Roman cities, such as Pompeii, and in Roman villas, with water being delivered in the streets and stone and wooden drains being built to collect and discharge effluents from populated areas. After this period, the concept of sanitation continued to evolve and played an important role in human endeavours. However, people who are living in poverty in India do not have access to sanitation services, even though the central and state governments are working hard to ensure that everyone has access to basic amenities such as sanitation and water.

The World Bank stated that sanitation in India was one of the millennium development goals (MDGs) that was most out of sync with the rest of the world, despite significant progress. World Bank also said that there will be upgraded toilets or latrines available to 2.4 billion people between 2000 and 2020. About 1.7 billion people worldwide do not have access to even basic services currently. Up to 580 million people share upgraded sanitary facilities with nearby dwellings, whereas 616 million rely on "unimproved" services. Around 700 million individuals were unsuccessful in meeting the sanitation MDGs. As per the MDG report (United Nations 2015), the percentage of persons using improved sanitation facilities increased from 54% to 68% between 1990 and 2015, with developing countries accounting for 43% to 68%.

Drinking water facilities around the world increased from 76% to 91%, with 70% to 89% of this being in developing countries. According to the report, the percentage of the world's rural people without access to better drinking water reduced by more than half since 1990 (from 38% to 16% in 2015). Sanitation percentage in rural areas dropped by nearly a quarter (from 38% in 1990 to 25% in 2015), while open defecation rates dropped from 38% in 1990 to 25% in 2015. Despite this, nearly half of the rural residents lack access to adequate sanitation, with one in every four persons defecating in the open. In contrast, only 18% of city dwellers do not have access to improved sanitation

(IHHLs). When the MDGs were eventually phased out and replaced by the sustainable development goals (SDGs), sanitation continued to be an important component (Goal 6: Clean water and sanitation).

As per the WHO (2021), "sanitation typically refers to the provision of facilities and services for the safe disposal of human urine and faeces." Sanitation also refers to garbage collection and wastewater disposal services as well as the upkeep of sanitary conditions, including preventing human contact with dangerous wastes and processing and properly disposing of sewage effluent. Environmental sanitation is defined by the WHO (1992) as "the regulation of all those aspects of man's physical environment that have a negative impact on his physical environment, health, poverty reduction, improved quality of life, and increased productivity – all of which are required for sustainable development". Based on the availability of toilet facilities, the Joint Monitoring Programme (JMP 2016) defined the sanitation service levels as follows:

a) **Open defecation:** This refers to the human practice of defecating in open places, such as roadsides, fields, forests, bushes, waterways, and other natural resources. As per the WHO(2017), India accounts for 59% of the world's 1.1 billion people who practise open defecation; this has serious consequences for both their health and the environment.

b) **Unimproved sanitary facilities:** This refers to poorly managed and disposed hazardous waste from outdated sanitary facilities. Such unimproved toilets lead to risky management and disposal of human waste. Flush toilets with no piped sewer system or pour-flush toilets, pit latrines without slabs or open pits, buckets, hanging toilets or hanging latrines, and open defecation are some examples. Unimproved sanitation is more prevalent in both poor and densely populated countries, including India.

c) **Limited sanitation:** Limited sanitation means that families share improved sanitation with other HHs.

d) **Basic sanitation:** This differs from limited sanitation in that HHs have toilets that are not shared with other HHs.

e) **Safely managed**: These are improved sanitation facilities and are designed to keep excreta away from human contact, removing it hygienically. Examples include

flush or pour-flush toilets with piped sewer systems, septic tanks, pit latrines, ventilated improved pit latrines, pit latrines with slabs, and composting toilets.

1.1 World IHHL Situation

A recent report from WHO (2021) mentioned that nearly half of the world's population (3.6 billion people) does not have access to adequate sanitation, and 494 million people practise open defecation. It also said that if the IHHL's current rate of development continues, 100% sanitation will only be achieved by the 22nd century. According to UN-Water (2021), a four-fold increase in rate is necessary to meet the demand for sanitation. As per the WHO, people in India, Indonesia, Pakistan, Nepal, and China (Asian countries) and Nigeria, Ethiopia, Niger, Sudan, and Mozambique (African countries) make up the vast majority of the population (82%).UNICEF (2021) estimates that approximately 700 children die every day from diarrhoea due to insufficient hygiene, water, and sanitation around the world.

The WHO and UNICEF have studied improvements in sanitation between 2015 and 2020. As per WHO and UNICEF (2015) study, the percentage of people who have access to safe sanitation facilities has increased from 47% to 54% in this period. Rural sanitation coverage increased from 36% to 44%, while urban sanitation coverage increased from 57% to 62%. Surprisingly, the study also found that the number of individuals practising open defecation declined from 73.9 crores to 49.4 crores, with a drop of 85% in rural areas. Based on current growth rates, it is expected that 67% of facilities in the world will be safely managed services by 2030. Both WHO and UNICEF found that a total of 62 countries had achieved access to at least basic services at a rate of > 99%. Eight countries have already achieved universal access, with eight more countries on course to do so by 2030. The WHO and UNICEF have worked for decades to raise public awareness about the relevance of WASH problems.

Specifically, the recent pandemic (COVID-19) has emphasized the significance of hygiene. People have become more conscious of hand washing practises since the pandemic, such as washing hands before and after meals or after using the restroom. They are now used to cleaning their hands with alcoholic sanitizer every hour to avoid contracting the coronavirus. With this in mind, the United Nations (UN) established the Sanitation and Hygiene Fund in 2020, which was created to improve world sanitation conditions. The major goal of this initiative is to provide more funds to countries with the greatest prevalence of diseases caused by a lack of sanitation services and the least

ability to respond to them. The United Nations plans to raise $2 billion for these countries over the next five years (UNSDG-2020).

1.2 Impact of Unimproved Sanitation

The state and central governments are aware that sanitation-related issues impact multiple sectors – namely, health, issues related to gender, the environment, and the economy. According to UNICEF, faecal contamination and poor sanitation are related to child mortality, malnutrition, and stunting (health-related). Open defecation is especially detrimental to women and girls because it makes physical attacks and rapes more likely (gender-related). Poor sanitation has an impact on the land and water (environment-related) and as a result, financial problems ensue (economy-related). Keeping the advantages of having a toilet facility in mind, the Ministry of Drinking Water and Sanitation (*Jal Shakti*) has been implementing many schemes for improving sanitation coverage across the country, including the construction of community toilets, IHHLs,and so on. The impact of each sector is discussed in detail below.

Water and soil (environment): Untreated water contaminates water bodies and soil, exposing people to innumerable diseases. Inadequate sanitation facilities have also created an unhealthy environment that can pollute the land as well as groundwater and surface water. Unclean water also contributes to soil pollution and, thus, environmental pollution. As a result, governments and policymakers, both globally and locally, are demonstrating interest in improving sanitation coverage and putting pressure on households" to comply with regulations.

Health: Food scarcity, water contamination, inadequate sanitation, and hygiene are factors that influence the quality of life. A WHO-funded study (India WASH Forum 2015–16) found that villagers were prone to diseases such as viral fevers, nausea, and stomach disorders due to poor sanitation practices. It should be noted that 1 gram of faeces has nearly 1 crore viruses, 10 lakh bacteria, 1,000 parasite cysts, and 100 parasite eggs (WHO, 2015). A lack of sanitation facilities allows human waste to be transmitted by a variety of agents, such as flies, and contaminate the land, food, and water. This results in diarrhoea, worm infestations, skin illnesses, and immune system problems, which contribute to considerable child mortality from preventable diseases, especially in disadvantaged urban settings around the world. It could also result instunting of both physical and mental growth. According to UNICEF (2021), when children do

not have access to clean water, it affects their health, nutrition, education, and learning abilities, thus affecting many aspects of their lives. Girls, women, and people with disabilities are particularly vulnerable.

Gender/child-related issues: In India, more than 68% of the population lives in rural areas, with the remaining in semi-urban and metropolitan areas (Census Report 2011). Due to their lack of immunity, inadequate sanitation is always a threat to children under the age of five. Severe diarrhoea is one of the leading causes of death in children, killing almost 1.5 million children each year (Guidelines of SBM (G), 2017). The lack of cleanliness and frequent infections also stunt growth. Improved sanitation has a positive impact on children's lives, such as improved school attendance, particularly in adolescent girls. To reduce school dropout rates, especially among adolescent girls, it is essential to have sanitation facilities in schools. Similarly, inadequate access to drinking water and lack of sanitation facilities, particularly in rural India, could affect the safety of vulnerable populations such as disabled people and women by requiring them to leave the safety of their homes, potentially exposing them to sexual abuse (Kumar 2015 (b)).

Economy: World Economic Forum report (2019) said that poor sanitation has financial impacts as well. The expenses for traditional sanitation and the lack of toilets account for 6.4% of India's GDP. A World Bank study(2021) states that poor sanitation costs India's health, education, access time, and tourist sectors approximately 38.5 billion US dollars every year. Despite long-term efforts by various levels of government and the communities themselves, access to sanitation, especially among the rural poor, remains inadequate. However, investment in sanitation has increased since the 2000s, which was previously low compared to international standards.

1.3 Issues and Challenges

The Comptroller and Auditor General (CAG) audited the Total Sanitation Campaign (TSC) and the *Nirmal Bharat Abhiyan* (NBA) programmes in 2015 (CAG 2015). However, the central government has been unable to improve IHHL coverage due to the following reasons:

- **Poor planning:**Planning for better sanitation facilities should start at the *gram panchayat* (GP) level. However, while preparing village development plans, the higher authorities at the next level need to guide the GP members on how to

implement the planning process and what to include in it. The CAG report found that there was no suitable method in place to assess the exact situation, such as whether the number of toilets had increased or reduced and whether there was a risk of rural families relapsing in regard to toilet usage.

- **Ineffective use of funds:** The CAG report observes that there were concerns with the transfer of finances. The expansion of the IHHL programme was also limited by the funding being diverted to other programmes. The ministry only spent Rs 10,157.93 crore out of a fund of Rs 13,494.63 crore during the same period.

- **Unrealistic targets:** According to the CAG report, the Ministry of Drinking Water and Sanitation plan to build 426.32 lakh and 469.76 lakh Individual Household Latrines (IHHL) for below-poverty-line and above-poverty-line families, respectively. However, only 222.32 lakh (52.15%) and 207.55 lakh (44.18%) IHHLs were built between 2009-10 and 2013-14. Up to February 2011, the Ministry had constructed 693.92 lakh IHHLs in 16 states, compared to 367.53 lakh households (Census 2011) in these states having toilet facilities within the premises.

- **Low quality of toilet construction:** The IHHL coverage was also influenced by the quality of toilet construction and poor building quality, lack of running water, and non-sustainability; behavioural and budgetary constraints added to the challenges. The TSC and NBA both failed to address rural India's challenges.

- **Ineffective information, education, and communication (IEC) activities:** The CAG also recommended that the IEC material be adapted keeping in mind the situation on the ground; if this is not done, the programme would fail. There is also a shortage of human resources in the government to deal with sanitary issues, which affects IHHL construction and the associated awareness programmes.

- **Convergence:** While the convergence approach helped some rural families to receive benefits from the *Indira Awas Yojana* or Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS), others, such as community sanitary complexes, school toilets, and *anganwadi* centres (AWCs), did not benefit from this approach.

- **Inadequate monitoring and evaluation mechanisms:** Sanitation programmes failed due to insufficient monitoring and evaluation. The CAG expressed the

same sentiment in their study regarding IHHLs. The authorities have not documented any physical or financial progress.

1.4 Objectives of the Study

The main objectives are as follows:

1. to discuss the national-and state-level policies regarding the WASH sector;
2. to examine the present IHHL scenario at the all-India level before and after the SBM (G) programme; and
3. to examine the condition of IHHL in Telangana, especially in terms of administrative divisions.

1.5 Methodology

The analysis is based on data obtained by the Directorate of Census Operations in May–June 2010 and published in the Census Report (2011) as well as data from the SBM (G), which was published between 2014 and 2021. The administrative divisions of Telangana, which are key to this study's analysis of the IHHL situation, were constantly changing. Therefore, the period of analysis was split as shown in Table 1.1.

Table 1.1: Break-up of the Study Period

S.No.	Study Period	Data Used	Administrative Divisions Covered
1	2012	Census Report (2011)	10 districts, 459 *mandals*, and 119 constituencies
2	2012–19	SBM (G)	32 districts, except the Hyderabad district
a)		2012–16	SBM (G) 10 districts
b)		2016–20	SBM (G) 32 districts, except the Hyderabad district

Two time periods were used to analyse the data: Up to 2012, census data were used and after 2014, the SBM data were used because the SBM was introduced to improve IHHL coverage across the nation. Up to 2016, the state had only 10 districts. However, between 2016 and 2019, the Telangana state government reorganized the 10 older districts into 33 new districts to ensure effective communication between the people and the

administration and to make it easier for the state's poorest residents to benefit from development and welfare programmes.

Cartographic maps were created using ArcGIS version 10.2, which provides a better geographical understanding of the state. Census of India reports, SBM (G) dashboard data, Ministry of Jal Shakti annual reports, guidelines for sanitation schemes, state Rural Water Supply and Sanitation (RWSS) reports, daily newspapers, journals, other publications, and articles were used to analyse the IHHL status. Reports and studies by international organizations such as UNICEF, WHO, World Bank, and UNO were also reviewed. Along with these, various reports of state and central government sanitation projects were also examined. A few district stakeholder experiences were also included in the report.

1.6 Structure of the Report

The report consists of six sections. The Introduction discusses the definition of sanitation as well as the current world situation, the importance of the study, the objectives, and the methods used. The second section focuses on a review of the literature. The third section deals with the status of sanitation in India. Sanitation status in the erstwhile Andhra Pradesh (AP) State and present Telangana State is discussed in the fourth section. IHHL coverage under the SBM (G) from 2014 to 2020 is examined in the fifth section. The final section concludes with recommendations.

Section – II

Review of Literature

2.1 Introduction

India has witnessed a rapid transformation in regard to the use of toilets during the past 30 years. According to the 1973–74 National Sample Survey Office (NSSO) report, only about 1% of rural families in India had toilet facilities. However, from the 1980s, there was rapid growth in sanitation facilities, particularly in urban India. The trajectory of change in this area comprised the shift from a country that had rampant open defecation to one that aimed to eliminate open defecation. The transition comprised phases of change from septic tanks and twin-pit toilet models to toilets connected to underground drainage in some parts of the country. By 1997, about half of the urban population (49%) had access to water-flush toilets, more than one-fourth (28%) had sewerage connections, and about one-fifth (21%) had access to low-cost toilets across the country. By March 2000, 60% of urban residents had access to sanitation as compared with just 20% of rural residents. Sanitation programmes in India are largely focused on individual toilets without much attention to important issues such as drainage and solid waste disposal. The behavioural shift and the change in perceptions regarding hygiene speak to the success of a large-scale social movement during the past 50 years. The discourse and campaigns also stressed the gender element in sanitation facilities, emphasizing the safety of women and girls in rural areas.

Sanitation infrastructure and facilities gradually began to be discussed in the context of human rights and the campaign for the dignity of manual scavengers in India. Advances in sanitation facilities parallel the growth of the sanitation movement and social movements for the emancipation of manual scavengers, who were historically known as "untouchables" and face severe discrimination in India's caste-based society (Pathak 2015). Studies on the growth of sanitation facilities and perceptions of the community and the government located the "critique of environmental sanitation policies and programmes in the context of scavenger freedom in India" (Pathak 2015). These dimensions of human rights and caste structure are important since India has about four lakh manual scavengers cleaning toilets in urban India alone, as per the Planning Commission estimates (1989). The total number of manual scavengers across rural

India in 2019 was around 15 lakhs, of whom 70% were women, according to conservative estimates of the Rehabilitation Research Initiative. It is unfortunate that a large number of people are engaged in scavenging even after the passage of the Prohibition of Employment as Manual Scavengers and their Rehabilitation Act.

The country faces considerable challenges related to water supply, sanitation, solid waste management, and drainage as a result of its rising population (Araral and Ratra 2016). As per the Census Report (2011), these resources are not equally distributed throughout the country – 63.4 million people in rural areas lack access to safe drinking water. Extreme weather conditions and climate change are linked to a lack of equitable distribution of key resources. Furthermore, 44% of the population continues to defecate in public (Stewart 2017).

Since 2014, the percentage of HHs with an IHHL has increased significantly (Santosh Malhotra 2021), and there is little doubt that the use of toilets has increased considerably since then; however, the exact percentage is debatable. The study monitoring India's sanitation campaign also found that between 2014 and 2019, there was a change in monitoring parameters, from seeking to document behavioural change to just counting toilets, due to pressures brought on by the approaching deadline for India's open defecation free (ODF) status announcement (October 2019). The legitimacy of the government's ODF declarations was also called into question, with the government reporting merely that village GPs had declared themselves ODF. The study also says that this negligent attitude to sanitation was consistent with the government's complete lack of regard for public health, as evidenced by two complementary facts: first, public expenditure by the federal and state governments combined was less than 1% of the GDP until 2000 and had only reached 1.15% of the GDP by 2019 and, second, private/ out-of-pocket expenditures accounted for 70% of total health expenditure.

Studies on the progress of IHHLs during SBM in Telangana highlight the achievements and outreach as well as the prevalence of gaps and barriers in some areas. A report by CESS on *Constituency wise analysis of drinking water and sanitation facilities in Telangana* (2015a) reveals that only 52% of HHs in the state have access to IHHLs. Out of 10 districts, only 3 – Hyderabad, Rangareddy, and Khammam – had sanitation coverage of more than 50%, while the remaining districts had inadequate sanitation coverage (<50%). The Adilabad and Mahbubnagar districts had the lowest sanitation coverage among all

districts. The report also highlights the stark urban–rural differences in regard to sanitation facilities owing to urbanization in the state. Urban constituencies had superior sanitary facilities compared to semi-urban and rural areas. Out of 119 constituencies, only one-fourth had more than 75% of sanitation coverage and this was predominantly in urbanized regions. In addition, one-sixth of the constituencies had very poor (less than 25%) sanitation coverage.

Several slogans have been raised in support of sanitation, including Toilets first, temple later" (Prime Minister Narendra Modi), "No toilet, no bride" (Jairam Ramesh), and the "Take the poo to the loo" (UNICEF). All these slogans emphasize the importance of IHHLs across the country. According to WASH studies, both the state and central governments in India are at a crucial moment. Several studies reveal that a section of people, both in rural and urban areas, still defecate in the open. Rural areas and slums continue to present multiple obstacles despite substantial efforts. According to the CESS's Human Development Report, 2017, the newly constituted state is deficient in terms of natural resources and basic HH health amenities, such as drinking water and sanitation in the residential premises. Sanitation is particularly important in Telangana, which has witnessed increased stunting and wasting in the recent past. According to the Telangana National Family Health Survey (NFHS) data, both stunting and wasting are worsening, and the prevalence has risen from NFHS 4 to NFHS 5, with stunting increasing from 28% to 33.1%and wasting increasing from 18.1% to 21.7%.

The success of the SBM also depends on access to running water in rural areas of the state. The baseline studies and other reports on Mission *Bhagiratha* provided detailed information on the status of water supply for habitations across the state. A study by CESS (2017) examined sanitation and hygiene services as well as imbalances between socio-economic and social categories because inequalities in access to water supply were strongly correlated with access to sanitation and hygiene facilities. Furthermore, the study observesthat HHs without IHHLs were largely from the marginalized communities in rural Telangana. The presence of a piped water connection, as well as the infrastructure that goes with it, induces a shift in behaviour in terms of cleanliness and hygiene. Women have exclusive access to the toilets, which affords them privacy. Using a public toilet, on the other hand, is still preferable to defecating in the open.

The CESS study (2017) also found that in rural areas, 60% of houses have a toilet on the premises while in *nagar palikas*, 92% have this facility. The rural residents in the scheduled tribe *(*ST)–concentrated districts had low access to piped water and that scheduled caste *(*SC)–concentrated villages have a higher WASH index than ST-concentrated villages. However, the toilets were not used by any of the family members, emphasizing the importance of improving public awareness about the use of toilets in the state.

The MAUD (2017) said that the available literature on the waste disposal system in the state emphasizes that government schemes focused on universal access to sanitation facilities need to ensure a "proper disposal system and treatment of sludge from on-site installations (septic tanks, pit latrines etc.)". Plans for sustainable access to sanitation facilities need to incorporate inclusive strategies for their success and maintenance in the long run.

Prior to the SBM, sanitation coverage was very low across the country. One of the main reasons why people were hesitant to build toilets was the difficulty in accessing government incentives owing to a lack of adequate monitoring systems. Although every year toilets are built with the support of various government incentives, there is no clear information regarding the beneficiaries of this programme. Due to the lack of a beneficiary-centred monitoring mechanism, there is a risk of duplicating programme benefits. Periodic monitoring and review of the programme's progress, as well as the associated challenges, bottlenecks, and resolution of the same in consultation with the implementing stakeholders, will significantly improve the situation (Sudhakar and Anjaneyulu 2016).

Access to water and sanitation infrastructure can have positive spillover effects, including reduced morbidity from waterborne diseases and increased property values in cities (Asian Development Bank 2019). For instance, according to Sogani and Vyas (2019), in Jaipur, spillover impacts contributed to an increase in property values and also had positive impacts on local business profits and taxes, health, odour reduction, and other social and environmental parameters. This study also stresses the importance of sewage treatment in reducing groundwater contamination and promoting local aquifer recharging as well as the economic benefits of agricultural or industrial reuse of treated water and waste-to-energy gains.

2.2 Sanitation Programmes in India

The government of India began implementing sanitation programmes in the health sector in 1954 as part of the First Five-Year Plan. Only 1% of rural residents had access to sanitation, according to the 1981 census. Later in 1981, the International Water Supply and Sanitation Decade was established. The major goal of this initiative was that 25% of the rural population should obtain access to sanitation. The Ministry of Urban Development was in charge of rural sanitation until 1985 when it was moved to the Department of Rural Development, which was designated as a nodal agency for coordinating sanitary latrines (WASH Cost Project 2008–12, CESS). Even though the programmes did not attain their full potential due to a variety of challenges, the central government supported the building of IHHLs from 1980 to 2014. Prior to the SBM (G), India's track record in terms of latrine facilities was deplorable. In rural houses, 30.7% had latrine facilities, up from 21.9% in 2001. In urban areas, the situation was somewhat better.

Figure 2.1: Demand-driven approaches in India

There is a need to offer 100% toilet facilities throughout the country, regardless of districts, mandals, or villages. The NBA or SBM (G), the 13th Finance Commission, and state and central governments programmes contributed to funding for sanitation,

in 2010. NABARD, HUDCO, and some world institutions are among the national and international banks that are providing finance to assist people in building IHHLs in their houses. UNICEF, WHO, and local non-governmental organizations (NGOs) are all working towards behavioural change regarding using toilets. As much as access to or building a toilet is an issue, usage of the same is also critical to achieving the goal of sanitation programmes. According to studies, the majority of rural Indian families donot have access to sanitation, and some of those who do have it are not using it. In urban areas, however, the majority of people who have IHHLs have stopped open defecation.

The state and central governments both recognized the need for adequate sanitation and continued to improve rural sanitation through several programmes. Some of the important initiatives are the following:

a) The Central Rural Sanitation Programme (CRSP), 1986

b) The Total Sanitation Campaign (TSC), 1999

c) Nirmal Gram Puraskar (NGP), 2003

d) Nirmal Bharat Abhiyan (NBA), 2012

e) Swachh Bharat Mission (Gramin), 2014

a) The Central Rural Sanitation Programme, 1986: The CRSP was an upgraded version of integrated low-cost sanitation (ILCS), which was India's first sanitation programme. The government established CRSP in 1986 with the primary goal of enhancing the quality of life of rural people as well as providing women with privacy and dignity. The CRSP initiative took a "demand-driven" approach, and it raised public awareness and helped in the uptake of IHHLs. At the end of the Ninth Five-Year Plan, 9.45 million latrines had been built in rural HHs under this programme. However, the Ministry of Drinking Water and Sanitation, Government of India, observed that IHHL's progress was not up to the mark. Lack of community participation, a supply-driven and subsidy-oriented approach, poor utilization of finances, low building standards, beneficiary absence, and an emphasis on high-cost design were some of the reasons. Schools, Integrated Child Development Scheme (ICDS), Panchayat Raj Institutions (PRIs), NGOs, and SHGs were all overlooked in the scheme.

b) **Total Sanitation Campaign, 1999**: In India, after CRSP, the central government introduced another programme, the TSC, which was launched in 1999. The major goals of this programme were to end open defecation in rural areas and to provide financial assistance to those who needed to build toilets. The TSC approach emphasized the benefits of a community-led and people-centred approach. By 2013, separate toilets/urinals for boys and girls were installed in all schools and *anganwadi* institutions across the country. School children have an important role in raising parents' awareness, which would help improve IHHL uptake. IEC were also prominent themes covered in the programmes.

Large-scale mobilization of people is necessary on the ground to carry out the programme. District Collectors played a critical role in implementing the scheme and enlisting the assistance of departments such as the *Panchayat Raj*, co-operatives, SHGs, and NGOs to expand IHHL coverage. The effectiveness of the programme was further supported by the State Water and Sanitation Mission (SWSM), District Water and Sanitation Mission (DWSM), and specific communication and capacity development units (CCDUs).

The scheme was implemented in 572 districts across India in the first year and was extended to the remaining 27 districts in the second year. The budget allocation was Rs 12,495.09 crore. The central government contributed Rs 7,802.08 crore while the states contributed Rs 2,750.10 crore. The community contributed Rs 1,942.91 crore to this programme, making it the TSC's biggest achievement. A total of 3.32 crore family toilets, 3.82 lakh school toilets, 1.17 lakh AWC toilets, 10,200 community complexes, and 7,000 rural sanitary marts were constructed across the country. Rural India's sanitation coverage improved by 3% from 2001 to 2007.

In 2004, the central government conducted a mid-term evaluation of the programme in 20 TSC districts. Throughout the 20 districts, there was knowledge and practice of personal hygiene. The study also observes that community toilets were useful to disadvantaged women, who could not afford to construct toilets. The toilets were installed in half of the schools and AWCs in the districts and the women were also involved in the construction process.

c) **Nirmal Gram Puraskar, 2003:** The NGP initiative was launched in October 2003 by the government of India as part of the TSC. The NGP's primary goal was to strengthen the country's sanitation efforts andenhance sanitation coverage. Under the scheme, subsidies or incentives were given to the poorest of the poor to encourage the construction of IHHL units.The incentives were distributed according to the population as shown in Table 2.1.

Table 2.1: Incentives for PRIs under NGP

Criteria Amount	Gram Panchayat					Intermediate Panchayat		District Panchayat	
Population as per the 2001 census	<1,000	1,000–1,999	2,000–4,999	5,000–9,999	Above 10,000	Up to 50,000	>50,000	Up to 10.0 lakh	>10.0 lakh
Incentives (Rs)	**0.5**	**1.0**	**2.0**	**4.0**	**5.0**	**10.0**	**20.0**	**30.0**	**50.0**

Source: Ministry of Drinking Water and Sanitation (2010).

The NGP aimed to improve sanitation and open defecation awareness as well as honour individuals who worked to make a difference in sanitation. In 2005, the competition's top prize was presented to 38 GPs and 2 block panchayats. The NGP award was given to about 9,675 GPs, 120 blocks, and 3 districts on 4 May 2007. In 2007, the programme was granted to 143 PRIs from the (now former) state of AP.

d) **Nirmal Bharat Abhiyan, 2012:** The government renamed the TSC to *Nirmal Bharat Abhiyan* in 2012. It replace both the NBA and the TSC. It is a saturation strategy aimed at accelerating sanitation coverage in rural areas. NBA provides financial assistance to families to build IHHLs, schools, and AWCs for low-income people. To abolish open defecation across the country, the NBA focuse on both toilet construction and influencing people's behaviour regarding toilet usage through robust IEC materials. According to an NSSO study, the NBA programme raised IHHL coverage from 33% to 41% in 2011. The NBA is also aligned with the MGNREGS and has been implemented to make IHHL facilities more accessible to rural HHs by releasing funding.

e) **Swachh Bharat Mission (G), 2014:** Based on reports from the CAG, UNICEF, and others, the central government decided to remove bottlenecks from earlier programmes in order to speed up implementation of the IHHL programme and for this, it created a new initiative called the *Swachh Bharat Mission– Gramin* and

Urban. SBM began encouraging the installation of IHHLs within the residential or HH's premises,both in rural and urban areas.

Table 2.2: IHHL Coverage by Different Programmes in India and the State

Name of the Programme	Year	Incentives	IHHL Coverage (%)	
			State	India
Central Rural Sanitation Programme (CRSP)	1986	Rs 500, Rs 625	<1	1.0*
Total Sanitation Campaign (TSC)	1999	250 kg Rice and Rs 750; Rs3,600	6–7*	9.0*
Nirmal Gram Puraskar (NGP) (ODF villages get awards; see Table 2.1)	2003	Minimum Rs 50,000 per village	18–20*	21.9
Nirmal Bharat Abhiyan (NBA)	2012	Rs 4,100 and Rs 9,100	29.5	30.7
Swachh Bharat Mission (Gramin)	2014–15	Rs 12,000	26.6	38.7
	2015–16		34.6	50.8
	2016–17		47.2	64.9
	2017–18		84.9	84.2
	2018–19		98.3	96. 2
	2019–20		100.0	100.0

Source: Various reports of UNICEF, the Census of India, and the particular programme and SBM (G).

**Approximate values.*

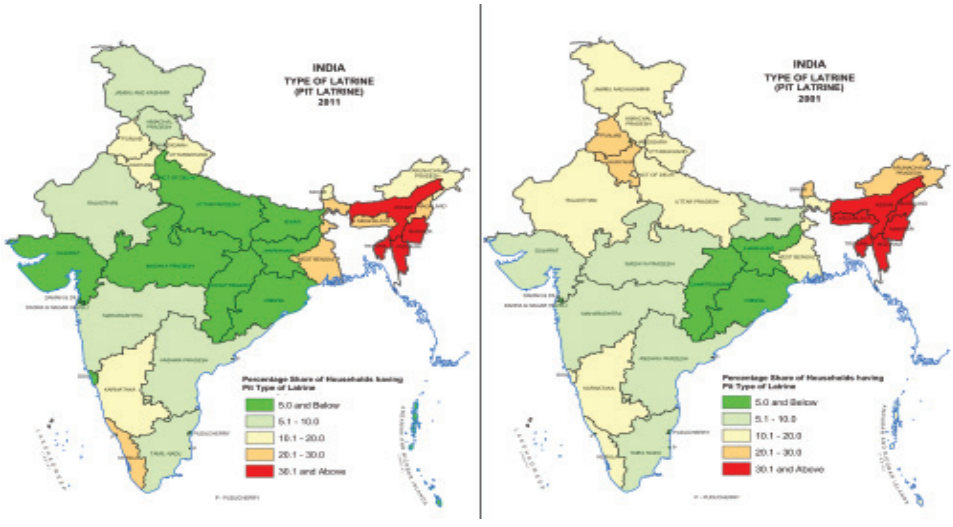
Section – III

Individual Household Latrine Situation in India before and after the *Swachh Bharat* Mission (G)

3.1 Introduction

The central and state governments have made significant efforts to promote sanitation in rural India. Until 1990, just about 1% of the country's population had access to IHHLs. Many improvements were made afterwards, and programmes were established to expand IHHL coverage. UNICEF, WHO, and the Planning Commission have documented that in 1991, roughly 9% of IHHLs were covered under sanitation schemes across the country. By 2001, the percentages had risen to 13%, with approximately 22% of rural IHHL coverage, including 7% of IHHLs with running water facilities. Only about one-third of all HHs (36.4%) had access to IHHLs in 2001. Rural India comprised a total of 13.8 crore HHs in 2001. Of this, one-fifth (21.9% or 3.1 crore HHs) had IHHL coverage;this went up to nearly one-third (30.7% or 5.1 crore HHs) by 2011. In 2001, Himachal Pradesh performed well followed by Punjab, Haryana, and Uttarakhand. However, some other states from north, central, and east India – Bihar, Madhya Pradesh, Rajasthan, Odisha, and Uttar Pradesh – recorded very poor IHHL coverage.

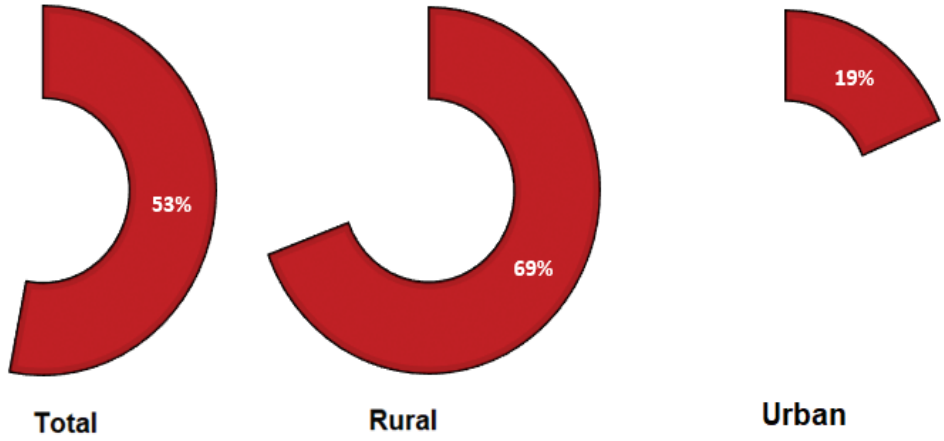
Figure 3.1: Status of Pit Latrines across the Country, 2001–11



Source: Census Report (2011).

In India, IHHL coverage has increased to 46.9%, with 53.1% of HHs remaining uncovered. In 2001, 73.7% of urban HHs had IHHLs and by 2011, that number had risen to 81.4%. According to the census data (Census Report 2011), under the TSC, the IHHL coverage rose by less than 1% across the country between 2001 and 2011 (a 10-year span). In 2011, the rural India had 16.7 crore households. Among them, 69.3% of HHs lacked a latrine facility on their property. Of 36 states and union territories, 14 have IHHL coverage below the country average. According to the 69th NSSO Survey (July 2012 to December 2012), 59.4% of rural families in the country practised open defecation, with rates as high as 90.5% and 81.3% in Jharkhand and Odisha, respectively.

Figure 3.2: Percentage of HHs with No Access to Proper Sanitation in India, 2011



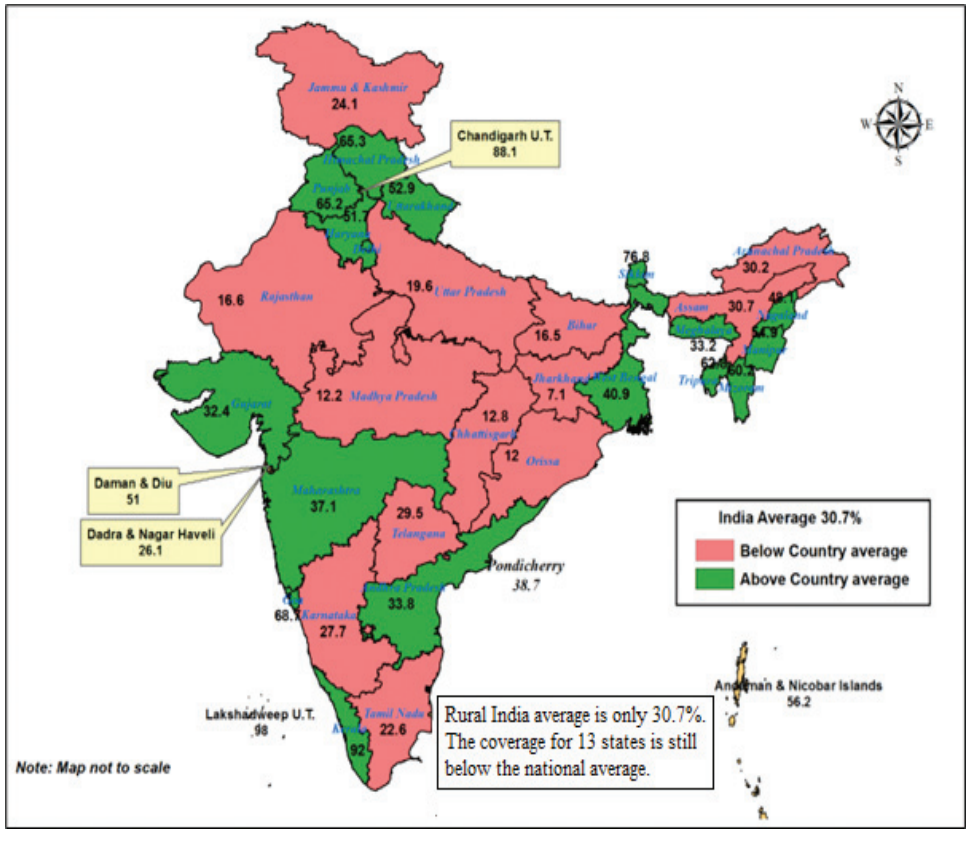
Source: Census Report (2011).

The HHs having latrine facilities are divided into four classes according to the JMP(2010):(a) >75%, (b) 50%–75%, (c) 25%–50%, and (d) <25%.

(a) **Better coverage (>75%):** Only eight states – Lakshadweep, Kerala, Chandigarh (88%and above), Manipur (86%), Mizoram (84.6%), Sikkim (84.1%), Tripura (81.5%), and Delhi (76.3%) –have 75%coverage, and Lakshadweep and Kerala have more than 90% coverage. It should be noted that Lakshadweep, Kerala, and Chandigarh have a high level of awareness or higher education level, high density, small geographical area, and the availability of open spaces, which contribute to high toilet coverage. For instance, Lakshadweep became the country's first town to install nearly 12,000 eco-friendly toilets, which was done by the government. Because

the groundwater is only 1 to 2.5 metres below the surface, the island cannot support sewage treatment. The initiative aims to protect the island's fragile ecosystem, which is under severe threat due to an acute sewage disposal problem brought on by an increase in local and tourist populations (Centre for Earth Science Studies–CESS 2011). According to a study, the reasons for the high coverage vary by state. Kerala's success was a result of the fact that toilets are built based on changes that suit local conditions and the toilet-building movement is led by citizens rather than officials (Batia 2017). In Chandigarh's case, however, the geographically small size, low population density, proactive administration, and easy-to-navigate roads ensured the success. In the *Swachh Sarvekshan* 2016 survey, it was also ranked second cleanest in the country (Moudgil 2016).

Figure 3.3: State-wise IHHL Coverage in Rural India, 2011



Source: Census Report (2011).

Manipur, Mizoram, Sikkim, Tripura, and Delhi are all small in terms of population and geography. In the north-eastern states, the National Rural Health Mission (NRHM) has prioritized universal access to safe drinking water, sanitation, and hygiene and has proposed that each village form a village health and sanitation committee (VHSC), which has contributed to improved toilet facilities in all north-eastern states (Saikia 2014). Toilets are required in every HH in Delhi, which is completely urban, and this has greatly helped IHHL coverage.

(b) **Good coverage (50%–75%):** This category (50%–75%) includes 11 states. In Goa, 71% of rural HHs have access to latrines and in Punjab too, the number is similar (70.4%). In other states such as Nagaland (69.2%), Himachal Pradesh (66.6%), and Andaman and Nicobar Islands (60.2%), more than 60% of rural HHs have access to latrines. In Assam, Haryana, Uttarakhand, Meghalaya, Arunachal Pradesh, and Daman and Diu, 50% to 60% of the population has access to latrines.

(c) **Average coverage (25%–50%):** Only eight states/union territories have a quarter to half of their population using latrines. These include Puducherry, Jammu and Kashmir, Maharashtra, Gujarat, AP, Karnataka, West Bengal, and Dadra Nagarhaveli. West Bengal only has 46.7% latrine facilities. Even in the more advanced states, such as Maharashtra (38%), Gujarat (33%), AP (32.2%), and Karnataka (28.4%), the availability of IHHLs is quite low, but in the case of the former three, their coverage is more than the country average.

(d) **Poor coverage (<25%):** Less than 25% of HHs have latrines in Jharkhand (7.6%), Madhya Pradesh (13.1%), Odisha (14.1%), Chhattisgarh (14.5%), Bihar (17.6%), Rajasthan (19.6%), Uttar Pradesh (21.8%), and Tamil Nadu (23.2%). Many studies have shown that a lack of running water is one of the causes of low IHHL coverage. For instance, in Jharkhand, IHHL coverage is extremely low (one-third), and the water facilities within the HH's premises as well as the drinking water contain fluoride, arsenic, and iron. TSC was launched throughout the state by the Jharkhand government to improve toilet facilities. It is also one of the least urbanized states, with some of the country's worst health indicators (Saxena 2012).

3.1.1 Reasons for Poor Coverage

Patil et al. (2014) found that in Madhya Pradesh, the main reasons for open defecation despite having IHHLs were culture, habit, or preference for defecating in the open,

followed by insufficient water availability. Jena (2014) states that the Odisha state government has not invested adequately in the sector, and people continue to suffer from extreme poverty, landlessness, illiteracy, and social discrimination as well. Privatization of drinking water in Odisha, as well as increased pollution of drinking water sources, is affecting the poorer sections. As per the Census Report (2011), three-quarters of HHs rely on open water bodies and must collect water from about half a kilometre away. In the absence of proper sanitation, many people in Odisha resort to open defecation and must wait until late at night or early in the morning to relieve themselves. According to Babu *et al.* (2017), the reason for the low IHHL coverage in Madhya Pradesh and Odisha was the highly ineffective functioning of the village water and sanitation committees (VWSCs) and VHSCs in most NGP and non-NGP villages.

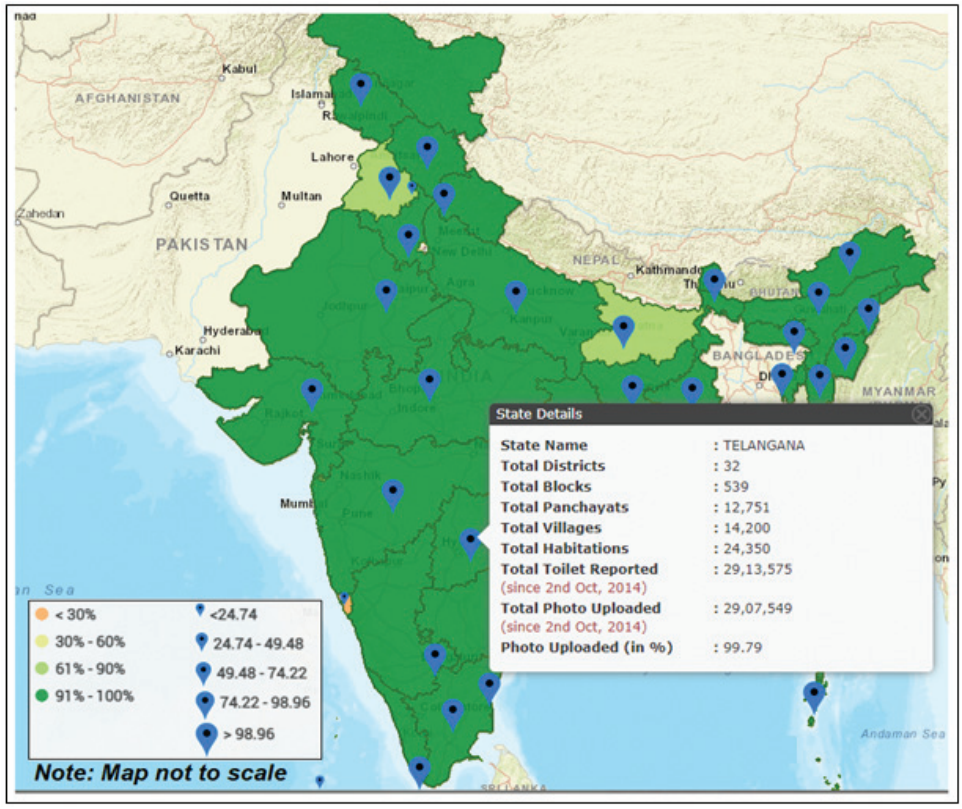
In Bihar, Mani (2010) says that TSC did not address the needs of the poor and vulnerable adequately and facilities in schools, health centres, and AWCs were inadequate. In this state, there is insufficient water and the quality of water is poor. Only 4.2% of HHs have piped water connections, 22 of the state's 38 districts have quality problems caused by arsenic or fluoride contamination, and more than 30% of the state is vulnerable to flooding, all of which have an impact on IHHL coverage. Somya (2015) states thata part of the Thar desert lies in Rajasthan, historically, the state has performed poorly in terms of sanitation due to water scarcity, low literacy, and difficult terrain.According to Shukla and Nayak (2013), the sanitation and drinking water departments were grossly underfunded in Uttar Pradesh, with inadequate investments in infrastructure. Also, because of poor planning and implementation, investments did not yield proportionate results, and politically, these sectors were not a high priority. According to Das (2014), open defecation is a socially acceptable behaviour in India especially in Maharashtra, if not all states. Most people consider toilets to be dirty and believe that they are not responsible for cleaning and maintenance. The dangers of dirty toilets and the diseases they spread are poorly understood. According to Das (2014), people resort to open defecation because of poor design of toilets, use of low-quality construction materials, a lack of proper maintenance, a lack of knowledge about proper toilet use, and a lack of running water.

3.2 Status in India (after SBM): Studies at the world, country, and local levels have praised the SBM's success. A UNICEF study titled *Access to toilets and women's safety, convenience, and self-respect in rural India* (UNICEF 2020) observes that after the toilets

were built, most women (93%) stated that their safety had improved. According to a UNICEF study conducted in 2018–19, water pollution levels in non-ODF villages were significantly higher than in ODF villages. The WHO praised the SBM's progress in its 2018 report. During 2014–19, enhanced sanitation coverage across the country prevented nearly 3.0 lakh deaths from diarrhoea and malnutrition.

As per the SBM (G) website, between October 2014 and May 2021, India built 10.6 crore HH toilets (IHHLs). A total of 711 districts and 36 states were declared ODF districts, but states/union territories such as Dadra and Nagar Haveli, Andaman Nicobar Island, Bihar, Punjab, Maharashtra, and Tamil Nadu were not listed in the ODF category. Almost 6.0 lakh villages across the country have been designated as ODF. In 2015–16, 47,000 toilets were built, followed by 1.82 lakh in 2016–17, 3.49 lakh in 2017–18, 5.56 lakh in 2018–19, and 6.0 lakh in 2019–20 up to May 2021.

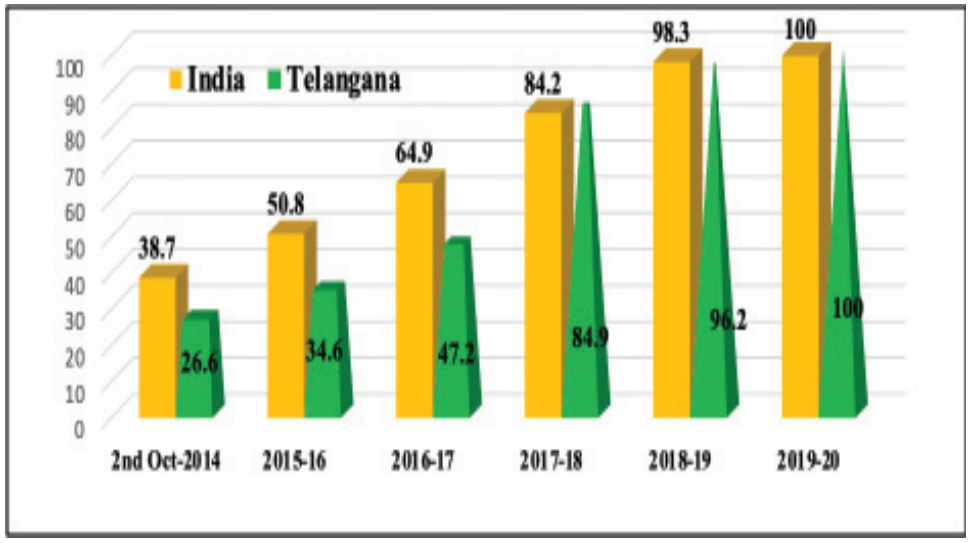
Figure 3.4: Status of SBM (G):Telangana, 2021



Source: SBM (G) website: Ministry of Jal Shakti (2021).

In 2015–16, half of the HHs in rural India were covered with improved sanitation facilities,whereas in Telangana, only one-third of HHs had constructed IHHLs. By 2017–18, the IHHL coverage reached its peak both in Telangana and India. In 2017-18, India's IHHL coverage was 59.4%. From 2017 onwards, with the ODF approach, the sanitation programme in the country achieved remarkable progress, taking the country closer to realizing Mahatma Gandhi's ODF dream. During this period, a total of 1.43 lakh villages were declared ODF villages, though only 80 districts out of 670 in the country were designated as ODF districts. The ODF goal of IHHL has been achieved in Kerala, Sikkim, Himachal Pradesh, and Uttarakhand. The coverage in 17 states is higher (59.4%) than the country average. More than 85% coverage is seen in Gujarat (89%), Haryana (88%), Meghalaya (87%), West Bengal (86%), and Mizoram (85%). The average for the remaining 11 states (including Telangana) is below the country average.

Figure 3.5: Financial year–wise IHHL Coverage Status in India, 2014–21



Source: Ministry of Jal Shakti 2021.

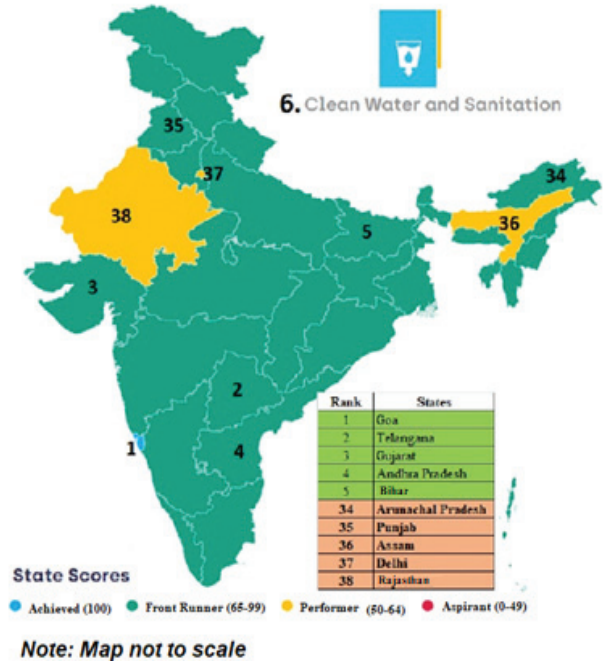
Open defecation in rural India has largely been eradicated after the introduction of SBM. The Clean India Mission (SBM (G)) is the world's largest sanitation initiative. SBM also increased awareness and developed strategies to encourage individuals to change their behaviour and stop open defecation. Improved sanitation is found to have helped increase HH incomes in India. As per the most recent surveys comprising over

10,000 HHs, people saved an average of Rs 55,000 (US$727) per annum. The study examined savings on medical expenses and travel time for open defecation as well as the prevention of premature mortality, among other issues. India's elimination of open defecation would result in a significant reduction in overall economic expenses (SBM Guidelines 2017).

3.3 Sustainable Development Goals, India Index, 2021

The NITI Aayog has analysed the India SDG index and released the dashboard for 2020–21. It says, after Goa, Telangana performed well and stands in the second position (scoring 95 points in the composite index score, ranging from 0 to 100), whereas Assam, Delhi, and Rajasthan are the lowest-performing states in the segment of SDG dealing with the provision of clean water and sanitation. The NITI Aayog states that every rural HH in Telangana has drinking water and sanitation (IHHL) facilities and all districts are free of open defecation. Figure 3.6 shows the first five and last five states in the ranking.

Figure3.6: SDG Index Goal 6 Ranking by States



*Source: NITI Aayog, Government of India (*https://sdgindiaindex.niti.gov.in/# ranking, 2021*).*

Table 3.1: Clean Water and Sanitation Indicators in India and Telangana (%)

District	Individual HHToilets Constructed against Target (SBM(G))	Districts Verified to Be ODF (SBM(G))	Rural Population Having Improved Sources of Drinking Water	Rural Population Getting Safe and Adequate Drinking Water within Their Premises through Piped Water Supply	Schools with Separate Toilets for Girls
Target	100.0	100.0	100.0	100.0	100.0
India	100.0	100.0	97.4	51.4	95.3
Telangana	100.0	100.0	100.0	100.0	96.2

*Source: NITI Aayog, Government of India (*https://sdgindiaindex.niti.gov.in/#/ranking,2021*).*

3.4 Conclusion

Prior to the SBM, sanitation coverage in the country was extremely low. One of the main reasons for people's reluctance to construct toilets was the difficulty in obtaining government incentives due to a lack of sufficient monitoring systems, with no precise data available on the beneficiaries of this SBM programme. This could result in duplication of the programme's advantages. After the launch of the SBM, progress was monitored and reviewed on a regular basis. Earlier problems and bottlenecks were resolved and people and implementation stakeholders were actively involved, resulting in a considerable improvement in the country's status, leading to it being declared ODF (2019) by the Centre.

Section – IV

Individual Household Latrine Coverage in Telangana before the *Swachh Bharat* Mission

4.1 Introduction

On 2 June 2014, Telangana became India's 29th state, with Hyderabad as its capital. It was carved out as a separate state from AP under the Andhra Pradesh Reorganisation Act, 2014. In terms of area and population, it is 12th in India. It is located between 15° 50° and 19° 55° north latitude and 77° 14° and 81° 19° east longitude (State Statistical Abstract2021). The Penganga, Wardha, Pranahita, and Godavari rivers form its northern boundary, while the Krishna and Tungabhadra rivers form its southern boundary. In the west, there is no significant physical feature that can be considered a boundary. Maharashtra surrounds the state on its north-western and northern borders. Karnataka encircles the state to the west and Chhattisgarh to the northeast, while AP borders the state on the east and south. Godavari, Krishna, Manjeera, and Musi are the four important rivers in Telangana. Godavari and Krishna, in south India, are perennial rivers and are some of the longest and broadest rivers in the country. They run from the north-west to the south-east, emptying into the Bay of Bengal (Telugu Academy 2022).

The Telangana state government reorganized the erstwhile 10 districts into 33 districts between 2016 and 2019 in order to bring administration closer to the people. Nalgonda is the largest district in terms of area, followed by Bhadradri, Nagar Kurnool, Bhupalapalli, and Mahbubnagar, with Rajanna Sircilla, Hanamkonda, Medchal, and Hyderabad being the smallest districts. The distribution of administrative units of the erstwhile districts along with the number of GPs, revenue divisions and assembly constituencies are furnished in Table 4.1.

Table 4.1: Administrative Divisions in Telangana, 2014

S.No	Erstwhile District	RD	*Mandals*	MCs	Municipalities	NPs	GPs	MPPs	Assembly Constituency
1	Adilabad	5	52	0	7	0	866	52	10
2	Hyderabad	2	16	1	0	0	0	0	23
3	Karimnagar	5	57	2	4	5	1,207	57	13
4	Khammam	4	41	1	4	2	671	41	10
5	Mahbubnagar	5	64	0	5	6	1,330	64	14
6	Medak	3	46	0	5	3	1,077	46	10
7	Nalgonda	5	59	0	5	2	1,176	59	12
8	Nizamabad	3	36	1	3	0	718	36	8
9	Rangareddy	5	37	0	2	4	688	33	9
10	Warangal	5	51	1	2	3	962	50	10
Total		**42**	**459**	**6**	**37**	**25**	**8,695**	**438**	**119**

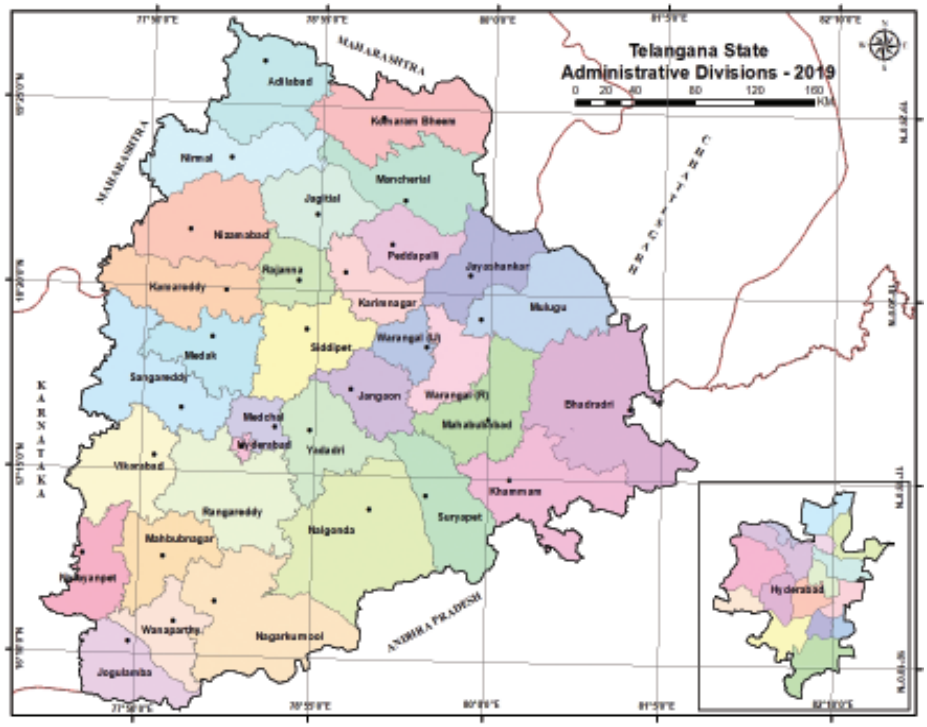
Source: Statistical Abstract of Telangana State (2015).

Currently, Telangana consists of 33 districts, 74 revenue divisions, 594 revenue *mandals*, and 12,770 GPs. There are a total of 158 towns, with 116 census towns and 42 statutory towns. In addition to 9 *zilla praja parishad*s (ZPP) and 464 *mandal praja parishads* (MPP), 13 municipal corporations (MCs), 128 municipalities, and 25 *nagar panchayats* (NPs),there are 10,434 census villages and 12,770 GPs in the state. Of these, 9,834 villages are inhabited and 600 villages are uninhabited. Telangana has 17 Lok Sabha members of parliament (MPs) and 119 assembly members (MLAs) (DES 2021).

4.2 Basic Demographic Details of the State

According to the 2011 Census, Telangana had a population of 35,003,674, including 8,303,612 HHs, with 17,611,633 males and 17,392,041 females. SCs accounted for 15.4% of the population while STs accounted for 9.08%. The state's sex ratio (number of females per 1,000 males) was 988. Rural areas accounted for 61.1% of the population of Telangana, while urban areas accounted for 38.8%. The population density (number of people living per sq. km) was 312. In comparison to the country average, Telangana had a very low literacy rate when compared to the national average (74%). The literacy rate was 66.3%, with 75.0% for males and 57.9% for females. The urban population, however, had a higher literacy rate (81%) than the rural population (57.3%).

Figure 4.1: Telangana by Districts, 2019



Nearly one-third of the state's population lives in the Greater Hyderabad Municipal Corporation. Based on the 2011 census, 1.36 crore people (38.8%) lived in cities and major towns and the remaining 2.14 crore (61.1%) lived in rural areas across Telangana. Hyderabad district has a population of 3,943,323, followed by the Medchal-Malkajgiri district (2,460,095) and the Rangareddy district (2,426,243), while nine districts – Nalgonda, Nizamabad, Sangareddy, Khammam, Suryapet, Hanamkonda, Bhadradri, Siddipet, and Karimnagar – have populations of 10 to 16 lakh each. The population in the remaining 21 districts is less than 10.0 lakh, with 7 districts in the state having very low populations: Wanaparthy (5.7 lakhs), Narayanpet (5.6 lakhs), Rajanna Sircilla (5.5 lakhs), Jangaon (5.3 lakhs), Kumuram Bheem (5.1 lakhs), Jayashankar Bhupalapalli (4.1 lakhs), and Mulugu (2.9 lakhs).

Table 4.2: Administrative Divisions and Population in Telangana, 2019

S. No.	Administrative Divisions				Population (in numbers)				
	District	GPs	Census Villages	*Mandals*	Total Population	Males	Females	Rural Population	Urban Population
1	Adilabad	468	503	18	708,972	356,407	352,565	541,226	167,746
2	Kumarambheem	335	428	15	515,812	258,197	257,615	428,828	86,984
3	Mancherial	311	371	18	807,037	408,272	398,765	453,190	353,847
4	Nirmal	396	423	19	709,418	346,721	362,697	557,736	151,682
5	Nizamabad	530	440	29	1,571,022	768,477	802,545	1,106,272	464,750
6	Jagtial	380	286	18	985,417	484,079	501,338	764,081	221,336
7	Peddapalli	267	198	14	795,332	399,325	396,007	491,319	304,013
8	Jayashankar	241	222	11	416,763	207,998	208,765	374,376	42,387
9	Bhadradri	481	363	23	1,069,261	532,390	536,871	730,178	339,083
10	Mahabubabad	461	284	16	774,549	388,058	386,491	698,173	76,376
11	Warangal	401	226	16	718,537	360,315	358,222	668,324	50,213
12	Hanamkonda	130	95	11	1,080,858	541,301	539,557	340,351	740,507
13	Karimnagar	313	204	16	1,005,711	504,620	501,091	696,727	308,984
14	Rajanna	255	170	13	552,037	274,109	277,928	435,145	116,892
15	Kamareddy	526	470	22	972,625	478,389	494,236	849,003	123,622
16	Sangareddy	647	572	27	1,527,628	777,235	750,393	997,663	529,965
17	Medak	469	378	21	767,428	378,654	388,774	708,574	58,854
18	Siddipet	499	379	24	1,012,065	504,141	507,924	873,013	139,052
19	Jangaon	281	173	12	534,991	267,875	267,116	463,634	71,357
20	Yadadri	421	306	17	770,833	390,492	380,341	647,668	123,165
21	Medchal	61	88	15	2,460,095	1256883	1203212	209,828	2,250,267
22	Hyderabad	0	0	16	3,943,323	2018575	1924748	0	3,943,323
23	Rangareddy	560	497	27	2426243	1243967	1182276	1,026,113	1,400,130
24	Vikarabad	566	489	18	927,140	463,350	463,790	802,171	124,969
25	Mahabubnagar	442	308	15	919,903	462,870	457,033	653,452	266,451
26	Jogulamba	255	202	12	609,990	309,274	300,716	546,813	63,177
27	Wanaparthy	255	220	14	577,758	294,833	282,925	485,470	92,288
28	Nagarkurnool	461	353	20	861,766	437,986	423,780	773,936	87,830
29	Nalgonda	845	552	31	1,618,416	818,306	800,110	1,250,113	368,303
30	Suryapet	475	276	23	1,099,560	550,974	548,586	928,521	171,039
31	Khammam	584	372	21	1,401,639	699,124	702,515	1,084,811	316,828
32	Mulugu	174	335	9	294,671	146,205	148,466	283,178	11,493
33	Narayanpet	280	251	11	566,874	282,231	284,643	525,122	41,752
	Total	**12770**	**10,434**	**594**	**35003674**	**17611633**	**17392041**	**21395009**	**13608665**

Source: Statistical Abstract of Telangana State (2017); Telangana State Portal (2022) and various latest government orders (GOs).

In the recent past, Telangana has made significant progress in a number of areas, including agriculture and information technology. Mission Kakatiya, Mission Bhagiratha, Kaleshwaram lift irrigation, IT-related projects, new industrial policies, urban development, and other initiatives in Telangana have all aided in the state's development. The state is also one of the top-performing states in the country under the SBM (G) campaign, with 100% IHHL coverage.

4.3 IHHL Status in the Erstwhile Andhra Pradesh

The erstwhile AP encompassed the eastern half of the Deccan plateau as well as a large portion of the Eastern Ghats. It comprised three important regions based on historical and geophysical considerations: Telangana, coastal Andhra, and Rayalaseema, each with 10, 9, and 4 districts, respectively, and population shares of 41.6%, 40.4%, and 18%, respectively (Census Report 2011). In the erstwhile AP, from 2001 onwards, as part of the TSC, Rural Sanitation Department began tracking the use of better sanitation technology by rural families (Dinesh and Kishan 2012). The erstwhile AP had roughly 50% sanitation coverage, according to the WASH Cost CESS working paper 2 (2009). Among these, roughly 30% of rural HHs had IHHLs. The paper also states that AP got 10 NGP awards from 2005 to 2006 and 143 NGP awards from 2006 to 2007. In the 2007–08 financial year, 1,447 GPs and 1 *mandal parishad* applied for the NGP grant. This indicates that previous governments pushed the construction of toilets throughout the state of Andhra Pradesh but their efforts were concentrated in urban areas where toilet coverage was high (more than three-quarters of HHs).

As per the 2011 data, the erstwhile Andhra Pradesh had 1.68 crore HHs. Of this, 67% (1.12 crore) of HHs did not have access to a toilet within their home, with 82% (1.03 crore) of rural HHs and 22% (9.1 lakh) of urban HHs lacking access to IHHL facilities. During the 2010–11, the former Andhra Pradesh built almost 10.5 lakh IHHLs, 27 sanitary complexes, nearly 4,000 school toilets and 816 AWC toilets under the TSC programmes. During the 2011–12 fiscal year (which ended in December 2011), the AP government built 3.8 lakh IHHLs, 14 sanitary complexes, 4,698 school toilets, and 837 AWC toilets spread across 23 districts. During 2005–10, the state got 1,131 NGP awards at the GP level while one block received an NGP award. As per the Ministry of Drinking Water and Sanitation, Government of India annual report (2012), about 51.0 lakh IHHLs were built on HH premises in AP (up to 31 December 2011). IHHLs in SC homes accounted for 16.2%(8.2 lakh) of these while IHHLs in ST homes accounted for 5.2% (2.65 lakh).

In the erstwhile Andhra Pradesh, half of the people in rural HHs used the toilet on a regular basis, which implies that a large percentage of people still defecated in the open. Therefore, we can estimate that toilet coverage across the state was not good but it was particularly bad in high-density areas such as cities and semi-urban areas. In terms of sanitation facilities, the coastal area of AP is superior to the Rayalaseema region. Telangana too had a higher coverage of IHHLs than the other two regions in the undivided AP state. In the Telangana region, half of the families (52%) had IHHLs in their houses. If the Hyderabad district was excluded, the IHHL coverage within HHs was quite low in the rest of the territory (Anjaneyulu 2016).

Table 4.3: Region-wise IHHL Coverage in Undivided Andhra Pradesh (2011)

District Name	Population Share	Total Number of HHs	HHs with Latrine Facility	Percentage
Coastal Andhra	40.6%	9,040,273	4,611,468	51.0
Rayalaseema	17.6%	3,563,599	1,404,340	39.4
Telangana	41.6%	8,420,662	4,559,973	54.1
Total erstwhile AP		21,024,534	10,575,781	50.3

Source: Census Report (2011).

4.3.1 Initiatives and Programmes

Growing access to regular and assured water supply also contributed significantly to the growth of sanitation in the state. The cleanliness of the surroundings was improved under other programmes, such as *Shramdhan* and tree plantation (*Pachadhanam–Parishubrata*). The erstwhile AP state government also implemented the following programmes across the state, resulting in a significant increase in sanitation coverage.

Shubhram (Clean) Award (2007): The cleanest GPs, MPPs, and ZPPs would get the *Shubhram* Award in the erstwhile AP. *Panchayat* bodies at all levels had to achieve safe solid and liquid waste disposal in order to receive this award. Under this, the top GP received Rs 2.5 lakh, the second received Rs 2.0 lakh, and the third received Rs 1.5 lakh as incentives. The top three *mandals* each received Rs 5 lakh, Rs 4 lakh, and Rs 3 lakh, respectively. Five people in the villages who provided sanitation services also received Rs 5,000.

Water Soft web application (2012): In 2012, the erstwhile National Informatics Centre Andhra Pradesh developed the Water Soft application, a web-based application for the automation of work at the level of subdivisions. This application examined the following components: habitat status, works/projects monitoring, asset management, water quality management, school assets, and fund account management system.

4.4 Sanitation Status in Telangana

In the state, the RWSS department is the state's nodal agency for rural drinking water and sanitation. Its primary goal is to ensure that all uncovered, partially covered, and quality-affected habitations (like; florid affected etc) in rural areas of the country have access to safe and sufficient drinking water and to provide safe drinking water to all schools and *anganwadis*. The state has 83.6 lakh HHs, of which 52.5% have access to IHHLs, while the remaining 47.5% were using community latrines, sharing neighbour's toilets, or practising open defecation (Census Report 2011). The majority of HHs (36.0 lakhs) used a flush/pour-flush latrine connected to a piped sewer system (17.7 lakh) or a flush/pour-flush latrine connected to a septic tank (18.3 lakhs). There was a rural–urban divide, with the number of latrine facilities in rural Telangana being very low. According to Census Report (2011), the majority of IHHL coverage (90%) was in urban areas and the rate (81%) was higher than the country average for India. The remaining 10% of HHs used open spaces for defecation (12.6%) but the rate was lower than the country average.

Table 4.4: Rural and Urban Variations in IHHL Coverage in Telangana

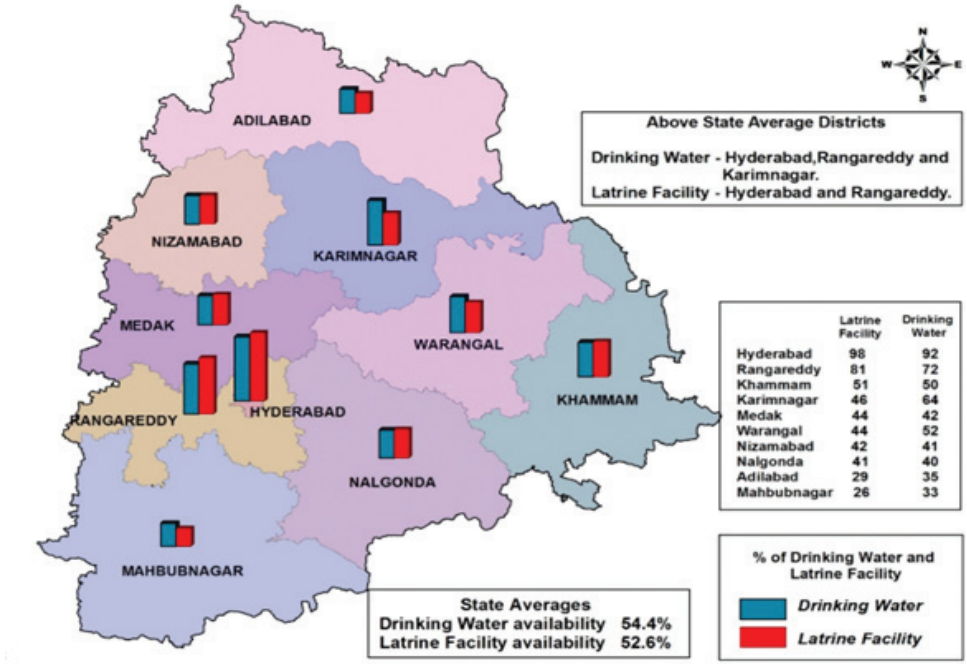
Area	Total Number of HHs	HHs with IHHLs	Percentage	HHs without IHHLs	Percentage
Total	8366623	4,408,195	52.7	3,958,428	47.3
Urban	3171376	2,868,004	90.4	303,372	9.6
Rural	5195247	1,540,191	29.6	3,655,056	70.4

Source: Census Report (2011).

4.4.1 Availability of Water and IHHL Facilities in the Districts

Both the erstwhile Hyderabad and Rangareddy districts in Telangana had excellent IHHL coverage. But Hyderabad had a higher (>90%) coverage for drinking water (92%) and sanitation (98%) services among the 10 districts. In the Rangareddy district, 81% of HHs had IHHLs while only 72% had access to water.

Figure 4.2:District-wise Drinking Water and Sanitation Facilities in Telangana (%)



Source: Census Report (2011).

The majority of the urban settlements in the Rangareddy district were within the city limits of Hyderabad. IHHL coverage was greater than drinking water coverage in both districts. Half of the HHs in the Khammam district had access to sanitation while the same percentage of HHs had access to water. Only 3 of 10 districts in Telangana, Hyderabad, Rangareddy, and Khammam had 50% or more of both facilities (Census Report 2011). Nearly half of the houses in the Karimnagar district (46%) had latrines and drinking water coverage was relatively higher as well (64%). Due to the high urban population, this district had superior drinking water facilities whereas the sanitation coverage was relatively low due to poor infrastructure in rural areas. In other districts, such as Medak, Warangal, Nizamabad, and Nalgonda, between 40% and 45% of the HHs had toilet facilities on their premises. The HHs in Adilabad (29%) and Mahbubnagar (26%) had the lowest coverage for both IHHL and water facilities.

4.4.2 IHHL Connectivity to a Sewer or Other System and the Disposal Process

In terms of hygiene and human health, the construction of IHHLs alone is insufficient (Census Report 2011) –toilet accessibility and waste disposal are equally critical. Only

about one-fifth (21%) of Telangana IHHLs (of 84.2 lakh) were connected to a piped sewer system and the same percentage (21%) to septic tanks.

Table 4.5: IHHL Connectivity to Sewer or Other Systems and the Disposal Process in Telangana (%)

District	Total Number of HHs*	Flush/Pour-flush Latrine Connected to			Pit Latrine withSlab/ Ventilated	Pit Latrine without Slab /Open Pit Improved Pit	Night Soil Removed by Humans/Animals and Disposed into Open Drains
		Piped Sewer System	Septic Tank	Other System			
Adilabad	651,770	4.8	18.9	1.4	2.8	0.3	1.0
Nizamabad	590,733	4.8	26.8	1.7	5.0	0.6	2.6
Karimnagar	980,739	7.1	25.8	1.3	9.1	1.1	1.7
Medak	666,764	8.9	19.9	1.3	11.2	1.1	1.6
Hyderabad	881,512	91.4	4.3	0.6	1.0	0.1	1.1
Rangareddy	1,263,714	51.5	20.0	1.0	6.3	0.5	2.0
Mahbubnagar	873,859	3.4	16.2	1.2	3.6	1.1	1.0
Nalgonda	875,432	3.2	28.5	1.4	5.2	1.4	0.9
Warangal	888,553	4.2	22.1	2.2	9.8	2.1	3.3
Khammam	747,586	4.0	37.9	1.0	4.1	0.9	0.4
Total	**8420662**	**21.0**	**21.7**	**1.3**	**5.9**	**0.9**	**1.6**

*Source: Census Report (2011). *Includes data from the 7 mandals of erstwhile Khammam district merged with AP.*

In addition, 6% of the state IHHLs were closed-pit latrines and 1% were open-pit latrines. Hyderabad had the highest number of IHHLs linked to piped sewers, followed by Rangareddy and Mahbubnagar while Nalgonda had the lowest. In general, rural HHs had more space than urban HHs, but most of the houses lacked drainage connections. As a result, IHHLs were only connected to septic tanks, with the highest numbers in the Khammam district, followed by the Nalgonda, Nizamabad, and Karimnagar districts, where nearly one-fourth of the total HHs used septic tanks. Pit latrines with slab IHHLs were more prevalent in the Medak district where night soil is removed by scavengers.

Table 4.6: IHHL Status in the Telangana by Districts (%)

District	Total Number of Households*	Number of Households Having Latrine Facilities	No Latrine Within Premises: Alternative Source, Public Latrine	No Latrine Within Premises: Alternative Source, Open
Adilabad	651,770	29.3	2.3	68.4
Nizamabad	590,733	41.6	1.1	57.3
Karimnagar	980,739	46.2	1.0	52.9
Medak	666,764	44.1	1.4	54.5
Hyderabad	881,512	98.5	0.6	0.9
Rangareddy	1,263,714	81.4	0.9	17.8
Mahbubnagar	873,859	26.4	2.5	71.1
Nalgonda	875,432	40.6	0.9	58.5
Warangal	888,553	43.7	0.9	55.3
Khammam	747,586	48.2	1.0	50.8
	8,420,662	**52.4**	**1.2**	**46.4**

*Source: Census Report (2011). *Includes data from the 7 mandals of erstwhile Khammam district merged with AP.*

The Census Report (2011) reveals that more than 1% of the state's HHs used public restrooms/community toilets, with the largest number in the Mahbubnagar and Adilabad districts and the lowest in the Hyderabad and Rangareddy districts. According to the report, roughly 46% of HHs in the state practise open defecationand nearly 70% of HHs from Mahbubnagar and Adilabad defecate in the open (2011).

4.4.3 Mandal-wise IHHL Status and Categorization

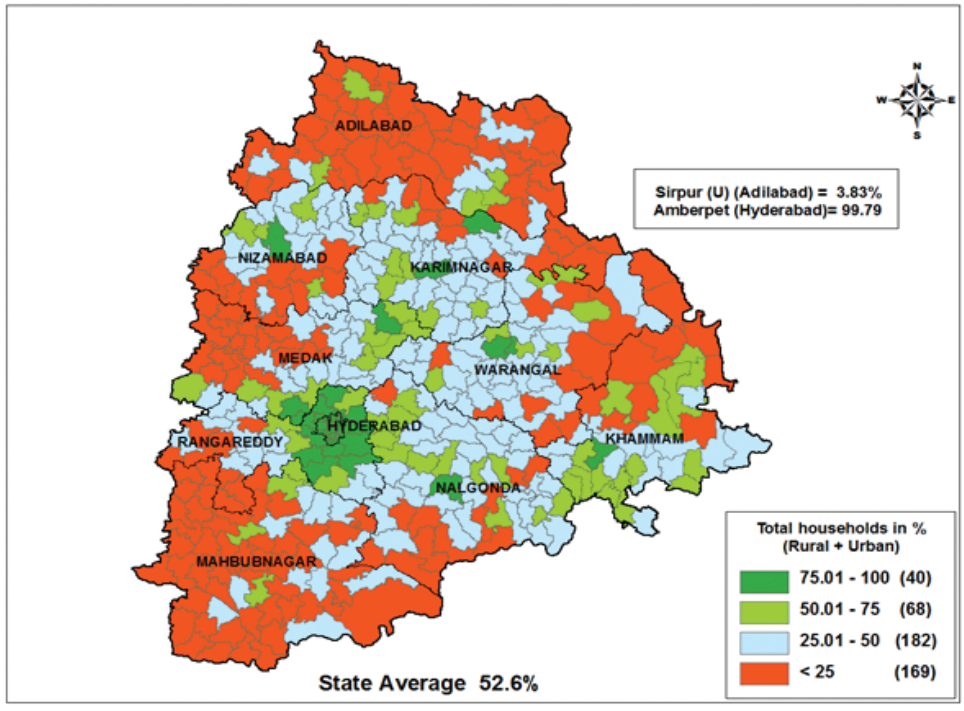
Despite long-standing efforts by various levels of the government and communities to improve coverage, sanitation conditions in Telangana remained poor until 2014. In the 2000s, there was an increase in investment in sanitation, which was previously quite low by international standards. After the reorganization of the state in 2014, Telangana consists of 459 mandals, of which only 4% (20) are fully urban. About a quarter of the mandals (24% or 112) have a mixed population (rural and urban) while the remaining 72% (327) are entirely rural.

As per the WHO/UNICEF JMP (2010) classification, *mandal*-wise sanitation coverage can be divided into four categories (within the HH premises) as follows: (a) >75%, (b) 50%–75%, (c) 25%–50%, and (d) <25%.

According to Census (2011), only 26 of 459 *mandals* had sanitation facilities in excess of 90% while 14 had toilet facilities in the range of 75% to 100%. The major portion of *mandals* in this category was found in the Hyderabad and Rangareddy districts. In 68 (14%) other *mandals*, IHHL coverage in HHs ranged from 50% to 75%. A total of 182 (40%) *mandals* had between 25% and 50% IHHL coverage while nearly a third (169 or 36%) had extremely inadequate (less than 25%) sanitation coverage. A total of 31 (20%) of the 459 *mandals* had a very low coverage of less than 10%.

The coverage percentage varied across districts. In the Hyderabad district, Amberpet had the highest percentage (99.8%) among all the *mandals*. Ameerpet (99.7%), Charminar (99.7%), Himayathnagar (99.5%), Golconda (99.4%), Bahadurpura (99.3%), Khairatabad (99.2%), Musheerabad (99.1%), Bandlaguda (98.9%), Maredpally (98.6%), Asifnagar (98.5%), and Nampalli (98.3%) were others that had a very high coverage. Malkajgiri, Balanagar, Saroornagar, and Uppal were among the *mandals* in the Rangareddy district that had more than 97% IHHL coverage. In contrast,*mandals* with less than 5% coverage were found in the Mahbubnagar and Adilabad districts.

Figure 4.3: *Mandal*-wise Latrine Facilities within the HHs in Telangana (%)



Source: Census Report (2011) (map not to scale).

Table 4.7: Categorization of *Mandals* with IHHL Coverage in Telangana

Erstwhile District	Total Number of *Mandals*	>95%	75%–95%	50%–75%	25%–50%	10%–25%	<10%
Adilabad	52	0	0	5	7	25	15
Hyderabad	16	16	0	0	0	0	0
Karimnagar	57	0	2	8	36	11	0
Khammam	41	0	1	16	14	9	1
Mahbubnagar	64	0	0	4	12	37	11
Medak	46	0	3	9	16	16	2
Nalgonda	59	0	1	12	34	12	0
Nizamabad	36	0	1	4	19	12	0
Rangareddy	37	7	7	4	11	7	1
Warangal	51	0	2	6	33	10	0
Grand total	**459**	**23**	**17**	**68**	**182**	**139**	**30**

Source: Census Report (2011).

Similarly, Sirpur (U) (3.8%), Narnoor (4.3%), Tiryani, and Bazarhathnoor of the Adilabad district and Daulatabad (4.1%), Ghattu (4.2%), Damaragidda (4.9%), and Maganoor of the Mahbubnagar district had very poor sanitation conditions with less than 5% IHHL coverage. Although the Rangareddy district was second in terms of sanitation facilities, it also had some pockets of very poor coverage –Basheerabad with 9% and Doma, Yelal, Dharur, Kulkacherla, and Gandeed with less than 15%.

Karimnagar and Ramagundam accounted for more than 75%of the IHHLs in the Karimnagar district. In total, 36 (63%) *mandals* had decent coverage, ranging from 25% to 50%. While 9 (15%) *mandals* had 50%–75% coverage, 3 *mandals*–Sarangapur, Mutharam, and Mahadevpur – had less than 15% coverage. Only Khammam (U) had more than 75% (83.4%) IHHL coverage in the Khammam district out of 39 *mandals*, while in 41% (16) of *mandals*, more than half of the houses had IHHLs. The lowest-performing *mandals* were Wazeed (5.3%) and Dummugudem (12.2%).

In the Medak district, R.C. Puram (93.8%), Patancheru (78.8%), and Siddipet (77.5%) *mandals* had>75% IHHL coverage. However, if these *mandals* are excluded, the district's coverage rate falls. Only one-fourth (12) of the 46 *mandals* had coverage of more than half. IHHL coverage is good in Gajwel (56%) and Medak (42%) *mandals*. Nearly a third of the *mandals* lack basic sanitary facilities (<25%). Kangti (9.7%) and Manoor

(7.0%) *mandals* have less than 10% IHHL coverage. Out of 51 *mandals* in the Warangal district, more than 82% in Warangal *mandal* and Hanamkonda *mandal* have IHHLs. In total, 90% (43) of *mandals* had less than 50% coverage. Jangaon (65%), Geesugonda (58%), Narsampet (52%), and Bhupalapalli (50%) had good sanitation coverage. Regonda, Narmetta, Venkatapur, Kodakandla, Maripeda, Kuravi, Nellikudur, Gudur, Tadvai, and Kothagudem are the ten *mandals* that lacked appropriate facilities (less than 25%). The lowest-performing *mandals* in the district were Kothagudem (10.4%) and Tadvai (13.7%).

Nizamabad district had more than 40% IHHL coverage. Of 36 *mandals*, only Nizamabad *mandal* (78%) and Kamareddy *mandal* (70%) had facilities amounting to more than 70%. *Mandals* such as Yedapalle, Armur, and Bodhan had coverage ranging from 50% to 60%. Balkonda, Ranjal, Banswada, and Mortad had IHHL coverage of over 40%. Another 33% (12) of *mandals* had IHHL coverage of less than 25%. Gandhari (10.4%), Lingampet (11%), and Jukkal (11.3%) *mandals* had the lowest IHHL coverage (15.0%).

The IHHL coverage in the Nalgonda district was also low (41%). Only Nalgonda had facilities in excess of 75% among the 59 *mandals*. In Suryapet (65%), Bhongiri (60%), and Yadagirigutta (54%) *mandals*, more than half of the HHs had IHHL facilities. Another 54% (34) of the *mandals* were underserved, with coverage ranging from 25% to 50%. The remaining one-fifth of *mandals* (12) had less than 25% coverage. The two lowest-performing *mandals* were Pedda Adiserlapalle (14.2%) and Chandampet (12.5%).

The district of Adilabad had the lowest IHHL coverage (29%). Mancherial (69%), Mandamarri *mandal* (65%), and Bellampalle *mandal* (58%) were the three *mandals* with the most latrine facilities. IHHL coverage was good in 13% of the *mandals* (25%–50%), while the majority of *mandals* (76%) had less than 25% coverage. The deep forest area comprises the majority of the backward *mandals*, which also lagged in sanitation. Tamsi, Nennal, Bejjur, Inderavelly, Dahegaon, Kotapalle, Bhimini, Vemanpalle, Wankdi, Tanoor, Kerameri, Bazarhathnoor, Tiryani, Narnoor, and Sirpur (U) were among the *mandals* with IHHLs amounting to <10%. Sirpur (U), with only 3.8% of HHs having sanitation facilities, was the lowest performing in the state.

Mahbubnagar district had the lowest IHHL coverage in the state (26%). The census data (2011) shows that 70% (49) of the 64 *mandals* had less than 25% latrine coverageand 18% of them (11) had inadequate sanitation (less than 10% coverage). In the Mahbubnagar district, the highest coverage was recorded in Mahbubnagar *mandal* (71%)

followed by Kothur and Shadnagar *mandals*. *Mandals* with 40% to 50% IHHL coverage include Kalwakurthy, Nagarkurnool, Jadcherla, and Gadwal. IHHL coverage was poor in the *mandals* of Maddur, Maganoor, Damaragidda, Ghattu, and Daulatabad (5%). The lowest-performing *mandals* were Daulatabad (4.1%) and Ghattu (4.2%).

4.4.4 Constituency-wise IHHL Status

The legislative council (*vidhana parishad*) and the legislative assembly (*vidhana sabha*) are the two legislative bodies in Telangana. The lower house is also known as the assembly. According to the 2014 reorganization bill, the assembly has 119 members and the legislative council has 40 seats. The members of the legislative assembly are elected by people in a direct election. Each constituency elects one assembly member who is called a member of the legislative assembly (MLA), and their term is five years. In total, 72% (86) of constituencies are assigned to the general category, 12% (14) to the SCs, and the remaining 16% (19) to the STs. A constituency might be made up of one or more *mandals*.

The Hyderabad district has the most number (15) of constituencies (119), followed by Rangareddy (14) and Mahbubnagar (14). The districts of Karimnagar, Warangal, and Nalgonda have 12 constituencies each. There are 30 (10 each) constituencies in the Medak, Khammam, and Adilabad districts, with the lowest (10) number of constituencies in the Nizamabad district. Since this study also analysed sanitation services by constituencies, MLAs and policymakers will find this analysis useful.The constituencies were grouped into four categories based on the JMP 2010 classification: (a) better coverage (>75%),(b) good coverage (50%–75%),(c) average coverage (25%–50%), and (d) poor coverage (<25%).

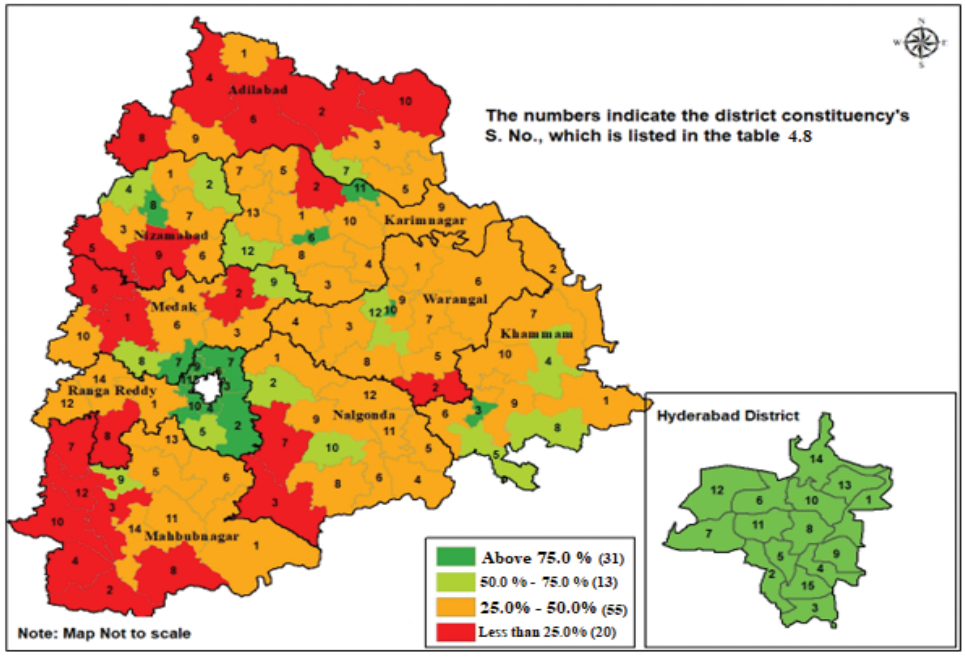
Better coverage (>75%)*:* The constituencies in the Hyderabad district did exceptionally well in providing IHHLs in the state. The Hyderabad, Warangal, Karimnagar, and Nizamabad districts had urban constituencies with 75%–100% IHHL coverage. The Charminar, Yakatpura, Karwan, and Bahadurpura constituencies in the Hyderabad district had the highest IHHL coverage (99.8%). Malkajgiri, Kukatpalli, L.B. Nagar, Uppal, Serilingampally, and Quthubullapur, all in the Rangareddy district, had IHHL coverage of more than 96%. In the state, constituencies such as Warangal East and West (86%), Khammam (83%), Karimnagar (82%), Patancheru (81%), Nizamabad (U) (78%), Ibrahimpatnam (77%), and Ramagundam (75%) performed well. Nalgonda

(62%) and Mahbubnagar (61%) were the two major towns with the lowest percentages. District headquarters in districts such as Adilabad (40%) and Medak (33%), for example, did not have adequate IHHL facilities.

Good coverage (50%–75%): Only 13 of the 119 constituencies – Mahbubnagar, Siddipet, and Sangareddy (Medak); Wardhannapet (Warangal); Maheswaram (Rangareddy); Kothagudem, Madhira, and Sathupalle (Khammam); Mancherial (Adilabad); Nalgonda and Bhongir (Nalgonda); Sircilla (Karimnagar); and Bodhan (Nizamabad) – had good coverage.

Average coverage (25%–50%): IHHL coverage ranged from 25% to 50% for about half (54) of the 119 constituencies. Karimnagar district has eight constituencies, Nalgonda has seven, Mahbubnagar has seven, Khammam has six, Nizamabad has five, Medak has five, Adilabad has four, and Rangareddy has three. The constituencies or main towns like Suryapet, Jangaon, Kamareddy, Adilabad, and Bhupalapalli (new districts headquarters) had inadequate IHHL coverage. Bhadrachalam, Nirmal, Medak, Vicarabad, Nagarkurnool, Wanaparthy, Mulug, and Mahabubabad fall under this category.

Figure 4.4: IHHL Coverage in Constituencies of Telangana, 2011



Source: *Election Commission of Telangana, Hyderabad.*

Table 4.8: District-wise Constituencies in Telangana

District	*Mandals*	Constituencies	Names of the Constituencies
Adilabad	52	10	1)Adilabad, 2) Asifabad, 3) Bellampalle, 4) Boath, 5) Chennur, 6) Khanapur, 7) Mancherial, 8) Mudhole, 9) Nirmal, 10) Sirpur
Hyderabad	16	15	1) Amberpet, 2) Bahadurpura, 3) Chandrayangutta, 4) Charminar, 5) Goshamahal, 6) Jubilee Hills, 7) Karwan, 8) Khairatabad, 9) Malakpet, 10) Musheerabad, 11) Nampally, 12) Sanathnagar, 13) Secunderabad, 14) Secunderabad Cantt., 15) Yakatpura
Karimnagar	57	12	1) Choppadandi, 2) Dharmapuri, 3) Husnabad, 4) Huzurabad, 5) Jagtial, 6) Karimnagar, 7) Koratla, 8) Manakondur, 9) Manthani, 10) Peddapalle, 11) Ramagundam, 12) Sircilla, 13) Vemulawada
Khammam	41	10	1) Aswaraopet, 2) Bhadrachalam, 3) Khammam, 4) Kothagudem, 5) Madhira, 6) Palair, 7) Pinapaka, 8) Sathupalle, 9) Wyra, 10) Yellandu
Mahabubnagar	64	14	1) Achampet, 2) Alampur, 3) Devarakadra, 4) Gadwal, 5) Jadcherla, 6) Kalwakurthy, 7) Kodangal, 8) Kollapur, 9) Mahbubnagar, 10) Makthal, 11) Nagarkurnool, 12) Narayanpet, 13) Shadnagar, 14) Wanaparthy
Medak	46	10	1) Andole, 2) Dubbak, 3) Gajwel, 4) Medak, 5) Narayankhed, 6) Narsapur, 7) Patancheru, 8) Sangareddy, 9) Siddipet, 10) Zahirabad

Nalgonda	59	12	1) Alair, 2) Bhongir, 3) Devarakonda, 4) Huzurnagar, 5) Kodad, 6) Miryalaguda, 7) Munugode, 8) Nagarjuna Sagar, 9) Nakrekal, 10) Nalgonda, 11) Suryapet, 12) Thungathurthi
Nizamabad	36	09	1) Armur, 2) Balkonda, 3) Banswada, 4) Bodhan, 5) Jukkal, 6) Kamareddy, 7) Nizamabad(R), 8) Nizamabad (U), 9) Yellareddy
Rangareddy	37	14	1) Chevella, 2) Ibrahimpatnam, 3) Kukatpalle, 4) LB-Nagar, 5) Maheswaram, 6) Malkajgiri, 7) Medchal, 8) Pargi, 9) Quthbullapur, 10) Rajendranagar, 11) Serilingampally, 12) Tandur, 13) Uppal, 14) Vicarabad
Warangal	51	12	1) Bhupalapalli, 2) Dornakal, 3) Ghanpur (ST), 4) Jangaon, 5) Mahabubabad, 6) Mulugu, 7) Narsampet, 8) Palakurthi, 9) Parkal, 10) Warangal East, 11) Warangal West, 12) Wardhannapet
Total	***459***	***119***	

Source: *Election Commission of Telangana, Hyderabad.*

Poor coverage (<25%): Except for the Hyderabad and Khammam districts, a total of 20 (17%) constituencies in eight districts had less than 25% IHHL coverage. Low IHHL coverage was found in the Rangareddy district (Pargi), Warangal district (Dornakal), Karimnagar district (Dharmapuri), Nalgonda district (Devarakonda), Nizamabad district (Yellareddy, 17.6%), Jukkal (15.5%), and Medak district (Narayankhed, 12%). The Adilabad (5) and Mahbubnagar (7) districts each have 12 constituencies, out of a total of 20.

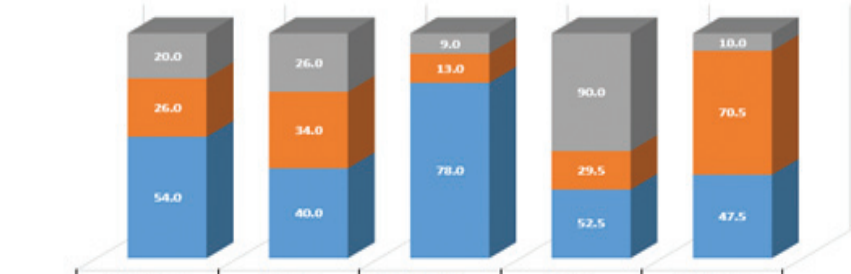
4.5 Reasons for the Low IHHL Coverage

Because of a lack of sanitary facilities, a total of 120 crore people around the world, including roughly 56.8 crore Indians, practise open defecation in their agricultural fields,

forests, and other open spaces (UNICEF 2015). There are four types of barriers that emerge while making a sanitation transition. They are financial, perceptual, water availability, and institutional barriers (Kumar and Karippal 2015).The following concerns were encountered during the implementation of sanitation schemes in India as well as the state.

a) Water availability: Running water is essential while using the toilet, yet nearly half of the houses in the state (46%) did not have access to it prior to 2011. As a result, in rural areas, people did not use or build toilets. Barriers to water availability to meet the needs of the average HH did not receive adequate attention from the authorities till 2014. Several schemes of the government emphasized people's participation and contribution to building toilets in their houses without effectively addressing problems related to running water and storage of water required for proper maintenance and use of the IHHLs.

Figure 4.5: Household-wise Drinking Water and Sanitation Facilities in Telangana (%)



	Within the premises	Near the premises	Away from the premises	Having	Not Having
	Drinking water			Toilet	
Urban	20.0	26.0	9.0	90.0	10.0
Rural	26.0	34.0	13.0	29.5	70.5
Total	54.0	40.0	78.0	52.5	47.5

Source: Census Report (2011).

In 2011, half of the families in the state (54%) had water brought into their houses, followed by 26% fetching water from less than 500 metres away, and the remaining 20% fetching water from more than 500 metres away. Only 40% of rural HHs have access to water on their premises. However, Census (2011) sanitation data revealed that around 30% of Households have IHHLs. It shows that approximately 10% of rural HHs did not install and use toilets, despite having the opportunity to do so. Hence, the gaps in access to sanitation facilities were not only affected by the physical aspects – that is, water and toilets – but also by the behavioural aspects and traditional practices that

were holding them back from adopting safe and hygienic practices. Achieving the goal of 100% IHHL adoption in rural HHs in Telangana depends on effective support strategies and measures to motivate the remaining 60% of HHs to install toilets.

However, motivation could overcome physical barriers,as revealed in the sanitation practices of urban HHs,where the non-availability of water does not become an insurmountable impediment to the use of IHHLs. For instance, in urban Telangana, the majority of the HHs (90%) have IHHL coverage, although access to water is limited to 78% of HHs, with the remaining 12% of HHs carrying water from nearby water sources. The government should also concentrate on the other 10% of HHs who have to carry water from sources that are sometimes more than 500 metres away. In this context, it is hoped that the Telangana "Drinking Water Grid" programme or Mission *Bhagiratha* programme will address these deficiencies and help achieve the goal of 100% IHHL coverage.

b) Awareness and perception: The advertising initiatives of the sanitation programmes lasting about 15 years, from 1986 to 2010, were not effective and the participation of elected representatives was low. Elected representatives were not adequately informed or motivated by these schemes, and their role in taking it to the people was also minimal. There was a need for awareness programmes on health- and hygiene-related disorders to be conducted through print and electronic media, which could not be done in remote communities.

Community perception: People's perceptions of IHHLs were different before NGP in 2003. Intensive propaganda and financial incentives built great visibility and provided direct motivation for more people to adopt good hygiene practices and improve sanitation facilities. The majority of rural people believed that if they used the toilets, they would immediately fill up or smell and the toilet wastewater would contaminate the groundwater. As a result, only a few people, such as women, children, and those who were unable to walk, used it, or it was used for emergency purposes. People also believed that open defecation provided health benefits such as a morning walk and exposure to fresh air.

Priority level: Sanitation was not accorded priority by the elected representatives and the governments, compared to the attention paid to other essential infrastructural facilities such as housing, electricity, drinking water, roads, and agriculture. It is only in the past two decades that sanitation started receiving attention from both the government and the people.

c) Financial constraints: Financial allocation has an impact on any sector, andlow financial allocation was also a major constraint for the district's poor IHHL coverage. The Mid Term Evaluation of TSC Programme report (2004) showed that BPL HHs had a higher adoption rate and that financial constraints were the most frequently cited reasons for not getting toilet facilities.

Budget allocation: Studies show that the TSC funds are insufficient to cover all the costs of sanitation systems over their entire life cycle. Even according to official reports, there are insufficient funds to meet capital maintenance and support costs. The private investments made by individual HHs for upgraded toilets considerably outnumber the government's allocation (Snehalatha et al. 2010). Budgetary contributions to the rural WASH sector are not only insufficient to satisfy the needsbut are also decreasing in relative terms, with actual needs being 4 to 10 times higher (Reddy and Jayakumar 2011).

Low incentives: The importance of the IHHL was recognized by the central government in the 1980s, and programmes such as the CRSP were implemented in 1986. The rewards in this case were 2.5 quintals of rice and Rs 750. Later, as part of the TSP, this was increased to Rs3,600 (2011). Because the number of toilets being constructed was still insufficient, the government increased the amount to Rs 4,100. The incentives were increased to Rs 9,100 under the NBA, with a beneficiary contribution of Rs 900. The creation of toilets was influenced by people's contributions during this time. In April 2012, the government increased the incentives once more, declaring a grant of Rs 10,000 for each toilet constructed. It offered Rs 12,000 in incentives for the construction of IHHLs under the SBM (G). According to the World Bank Development Indicators2013 report, the country's per capita monthly income was very low, making it prohibitively expensive for rural Indians to build toilets on their own.

Incentives transfer method: Prior to the SBM, the process of transferring incentives was ineffective because the incentive amount was sent to the village or the GPs. Therefore, there was a risk of leakage or misuse of funds.

d) Other causes: There were other reasons for the low IHHL coverage,which are listed below.

Improper monitoring: Monitoring is essential for any programme. However, it was not done effectively in the IHHL programme. Benefits were given even though the toilets

had not yet been finished. Adequate monitoring started only after the introduction of the NGP puraskar.

Density: According to census data (Census Report 2011), the population has increased by approximately 50 lakhs every decade but the land area has stayed constant. Up to 2001, the population density was 270 people per sq. km, up from 176 in 1981. During this time, there was a lot of open space for open defecation. People also believed that toilets were not required in low-density areas but were required in high-density areas.

Agriculture: Routinely, in the morning, most individuals will head to the fields, so they finish their morning activities including defecation right in the fields. As a result, they are not interested in toilet building. Improper sanitation techniques lead to contamination of the soil and water bodies through pests such as flies but the general population is unaware of this.

4.6 Conclusion

According to the 2011 census, access to drinking water within the premises is just 54.4% in Telangana whereas access to toilet facilities is only 29.4% in rural Telangana. Prior to the SBM effort, the state's sanitation situation was alarming. Half of the HHs in the state did not have sanitation facilities, implying that half of the inhabitants defecated in the open. The districts of Hyderabad, Rangareddy, and Khammam had better sanitation facilities (>50%) than the other seven districts. Mahbubnagar and Adilabad were two of the seven districts with poor sanitation coverage. Only a few (5%) of the 459 mandals had an IHHL coverage of more than 95% and they were all in completely urbanized areas. Only one-fourth (24%) of the mandals and one-third (37%) of the constituencies had an IHHL coverage of more than half, whereas one-sixth (16%) of the HHs had a coverage of less than one-fourth. By establishing ties between past, present, and future initiatives and development outcomes, good planning, monitoring, and evaluation could enhance the contribution of every programme.

Monitoring and evaluation can assist the government in extracting important data from previous and ongoing endeavours. Without this, it would be difficult to determine whether work is progressing in the proper direction, whether progress and success can be claimed, and how future efforts could be improved. To increase the chances of success, most common areas of weakness in programmes and projects should be addressed. Four primary areas that are frequently cited are planning and programme and project

definition, stakeholder involvement, communication, and monitoring and evaluation (Sudhakar and Anjaneyulu 2016). This study found that barriers to improving sanitation facilities, indifference among the people, and resulting low IHHL coveragewere related to lack of access to running water, a large section of the population being rural or tribal, illiteracy, residences in forest areas, lack of funds, and poor monitoring.

Table 4.9: Mandal-wise IHHL Coverage in Telangana,2011

SN	Mandal	HH	% IHHL
	Adilabad District		
1	Mancherial	48966	68.9
2	Mandamarri	27074	65.7
3	Bellampalle	20663	58.3
4	Adilabad	44333	52.3
5	Nirmal	31799	52
6	Kagaznagar	26215	45.8
7	Bhainsa	19146	42.2
8	Tandur	8213	33.3
9	Luxettipet	13419	32.8
10	Chennur	14276	27.8
11	Kasipet	8513	27.1
12	Dilawarpur	8888	25.4
13	Dandepalle	13541	24.4
14	Khanapur	14662	24.2
15	Rebbana	8787	23
16	Asifabad	13276	22.4
17	Utnoor	13538	22
18	Jannaram	13715	20.3
19	Mudhole	13005	19.8
20	Jaipur	13399	19.6
21	Laxmanchanda	9398	18
22	Jainoor	6312	16.8
23	Ichoda	11125	16.4
24	Boath	10829	16
25	Mamda	7584	15.7
26	Jainad	11348	15.3
27	Lokeswaram	9005	14
28	Kuntala	8266	13.7
29	Sirpur(T)	7869	13.3
30	Kubeer	11031	12.5
31	Kaddam (Pdr)	12510	12.4
32	Talamadugu	8187	11.9
33	Bela	8910	11.3
34	Gudihathnoor	6645	10.4
35	Neradigonda	6483	10.3
36	Kouthala	11976	10.2
37	Sarangapur	11382	10.1
38	Tamsi	9283	9.9
39	Nennal	6140	8.7
40	Bejjur	12164	8.3
41	Inderavelly	9926	7.6
42	Dahegaon	8697	7.5
43	Kotapalle	8664	6.9
44	Bhimini	6695	6.9
45	Vemanpalle	5030	6.6
46	Wankdi	7794	6.5
47	Tanoor	8202	6
48	Kerameri	6640	5.2
49	Bazarhathnoor	6131	5
50	Tiryani	6541	4.9
51	Narnoor	9889	4.3
52	Sirpur(U)	5686	3.8
	Hyderabad District		
53	Amberpet	37809	99.8
54	Ameerpet	16370	99.8
55	Charminar	45301	99.7
56	Himayathnagar	25222	99.6
57	Golconda	46360	99.4
58	Bahadurpura	87453	99.3
59	Khairatabad	70896	99.3

60	Musheerabad	87557	99.2
61	Bandlaguda	65583	99
62	Maredpalle	45622	98.6
63	Asifnagar	96909	98.5
64	Nampally	37789	98.4
65	Secunderabad	32585	97.3
66	Tirumalagiri	48098	97
67	Shaikpet	63878	96.3
68	Saidabad	74080	96.2
	Karimnagar District		
69	Karimnagar	88039	81.5
70	Ramagundam	71783	75.1
71	Sircilla	35096	66.6
72	Koratla	26161	64.1
73	Jagtial	41222	63.8
74	Vemulawada	20228	59.1
75	Metpalle	20941	57.9
76	Boinpalle	10367	56.2
77	Huzurabad	19530	51.6
78	Koheda	11755	51.4
79	Mustabad	10942	49.7
80	Timmapur LMD	13776	48.6
81	Ellanthakunta	13439	46.9
82	Kamanpur	20460	46.3
83	Gangadhara	12437	45.9
84	Bejjanki	13751	45.2
85	Husnabad	20448	45
86	Ramadugu	12198	43.7
87	Elkathurthi	10787	42.7
88	Peddapalle	26598	42.3
89	Kodimial	11784	41.8
90	Choppadandi	13109	40.5
91	Mallial	12302	40
92	Saidapur	10526	39.7
93	Sultanabad	16591	38.5
94	Chigurumamidi	11193	38.1
95	Bheemadevarapalle	14789	38
96	Manakondur	18018	38
97	Gambhiraopet	11692	37.2
98	Chandurthi	10944	36.2
99	Kamalapur	17150	35.8
100	Shankarapatnam	11808	35.5
101	Odela	13496	35.1
102	Konaraopeta	10989	34.6
103	Yellareddipet	14514	34.4
104	Jammikunta	29713	34.3
105	Veenavanka	13356	32.5
106	Raikal	16655	31.7
107	Manthani	14935	30.5
108	Julapalle	7374	30.2
109	Ibrahimpatnam	13751	29.1
110	Kathlapur	11558	28.5
111	Elgaid	6004	28.5
112	Pegadapalle	12689	28.4
113	Medipalle	13361	27.7
114	Mutharam (Mnt)	9053	27
115	Srirampur	11834	24.8
116	Gollapalle	11639	22.5
117	Mallapur	14078	20.8
118	Dharmaram	14269	20.1
119	Dharmapuri	20533	18.2
120	Velgatoor	14324	18.2
121	Kataram	10025	16.2
122	Malharrao	7419	15.6
123	Mahadevpur	9873	14
124	Mutharam (Mhp)	7711	14
125	Sarangapur	11722	125
	Khammam Distirct		
126	Aswapuram	11659	50.3
127	Bhadrachalam	13333	85.3
128	Khammam U	81207	83.4
129	Wyra	14908	68.7
130	Sathupalle	20327	67.2
131	Kothagudem	48355	66
132	Vemsoor	12383	65.3
133	Palwancha	29134	63.7

134	Madhira	18763	63.3
135	Bonakal	12600	63.3
136	Thallada	15197	59.2
137	Mudigonda	16263	58.8
138	Manuguru	18467	58.8
139	Chinthakani	13981	56
140	Nelakondapalle	17249	55.1
141	Khammam R	24954	50.9
142	Yellandu	25281	50.6
143	Kallur	17746	49.5
144	Burgampahad	15410	48.2
145	Yerrupalem	14191	47.7
146	Penuballi	14059	46.2
147	Konijerla	16776	41.4
148	Kusumanchi	15528	39.8
149	Dammapeta	13926	36.7
150	Aswaraopeta	15429	34.5
151	Kamepalle	11546	32.9
152	Tirumalayapalem	16669	32.2
153	Enkuru	9662	31.6
154	Garla	10115	31
155	Julurpad	8923	30.1
156	Chandrugonda	13045	25.9
157	Singareni	14356	23.3
158	Cherla	10698	22
159	Gundala	7391	21.9
160	Bayyaram	12246	21.8
161	Mulkalapalle	9718	17.4
162	Venkatapuram	8712	17.1
163	Pinapaka	12439	15.5
164	Tekulapalle	12259	14.3
165	Dummugudem	11920	12.2
166	Wazeed	6722	5.4
	Mahbubnagar Distirct		
167	Mahbubnagar	47800	71.9
168	Kothur	15041	61.5
169	Farooqnagar	26995	61.4
170	Wanaparthy	22352	53.3
171	Kalwakurthy	14992	49.9
172	Nagarkurnool	16369	47.9
173	Jadcherla	22167	45
174	Gadwal	24113	43.1
175	Achampet	15664	39.1
176	Amangal	13849	37.8
177	Keshampet	10106	32.9
178	Telkapalle	11137	31.3
179	Kollapur	16677	28.2
180	Kothakota	16850	25.8
181	Talakondapalle	12527	25.4
182	Vangoor	12300	25.3
183	Tadoor	8916	24.7
184	Narayanpet	18855	24.6
185	Uppununthala	7989	23.4
186	Midjil	12107	23.1
187	Veldanda	11850	23
188	Bijinapalle	16363	22.6
189	Alampur	10760	22.4
190	Balmoor	9131	21.8
191	Madgul	11373	21.7
192	Gopalpeta	12630	21
193	Kondurg	13777	20.5
194	Atmakur	13021	20.2
195	Manopad	12397	19.9
196	Bhoothpur	10379	19.9
197	Balanagar	15652	19.5
198	Thimmajipet	8799	18.6
199	Addakal	11129	18.4
200	Waddepalle	15821	18.4
201	Peddakothapalle	12063	18.1
202	Amrabad	12244	17.8
203	Aiza	17218	17.7
204	Ghanpur	9889	17.6
205	Pebbair	15304	17.5
206	Lingal	8041	17.1
207	Kondangal	11151	16.8
208	Peddamandadi	8078	16.2

209	Itikyal	11710	15.8
210	Makthal	14422	15.4
211	Kosgi	12304	15.3
212	Devarkadra	11769	15.2
213	Nawabpet	10338	14.1
214	Pangal	13396	13.3
215	Hanwada	11259	12.2
216	Dhanwada	12731	11.9
217	Chinnachintakunta	10889	11.6
218	Veepangandla	11897	10.9
219	Kodair	9885	10.6
220	Bomraspet	10951	9.8
221	Narva	10247	9.4
222	Dharur	14048	9.3
223	Maldakal	11498	8.6
224	Utkoor	10925	7.1
225	Koilkonda	13145	6.6
226	Maddur	12997	5.4
227	Maganoor	9818	5
228	Damaragidda	11025	4.9
229	Ghattu	14559	4.2
230	Doulathabad	10170	4.1
	Medak District		
231	Rachandrapuram	23694	93.8
232	Patancheru	36448	78.9
233	Siddipet	39403	77.5
234	Sangareddy	31317	72
235	Jinnaram	23879	70
236	Nangnoor	10144	64.6
237	Gajwel	17203	56.43
238	Thoguta	8183	56.4
239	Chinnakodur	21754	55.72
240	Sadasivpet	20116	55.1
241	Zahirabad	32729	52.7
242	Kondapak	10854	51.9
243	Tupran	13452	49.9
244	Kohir	12670	48.6
245	Medak	24492	42.3
246	Jagdevpur	11178	41.45
247	Dubbak	17292	40.2
248	Mulug	10391	39.6
249	Narsapur	11698	36.8
250	Ramayampet	15131	36.7
251	Kondapur	9657	36.5
252	Mirdoddi	9443	34.4
253	Wargal	9808	33.2
254	Andole	13833	33.11
255	Hathnoora	11760	28.86
256	Doultabad	12036	28.72
257	Shivampet	10171	28.4
258	Chegunta	13003	26.36
259	Yeldurthy	9504	24.8
260	Pulkal	11593	21.8
261	Shankpet (R)	10268	21.3
262	Munpalle	8382	21.3
263	Kulcharam	8089	20.7
264	Papannapet	12378	18.4
265	Narayankhed	16457	18
266	Kowdipalle	12334	17.2
267	Jharasangam	9171	16.53
268	Raikode	8134	14.6
269	Alladurg	10374	14.75
270	Tekmal	7802	13
271	Shankpet (A)	9003	12.9
272	Regode	7761	12.8
273	Kalher	11246	11.2
274	Nyalkal	11032	10.4
275	Kangti	9856	9.7
276	Manoor	11641	7
	Nalgonda District		
277	Nalgonda	47214	76.8
278	Suryapet	37035	65.3
279	Choutuppal	17768	63
280	Bhongir	23676	60.1
281	Miryalaguda	44229	59.8
282	Nakrekal	15571	58.3

283	Kodad	34059	57.1
284	Pochampalle	12043	56.2
285	Yadagirigutta	13463	54.1
286	Chityala	14347	53.5
287	Narketpalle	13026	51.6
288	Bibinagar	11317	50.9
289	Huzurnagar	16058	50.5
290	Valigonda	13920	46.9
291	Alair	12435	45.6
292	Atmakur (M)	9914	43.3
293	Kattangoor	11425	42.1
294	Mothkur	14584	41.4
295	Kethe Palle	9878	40.6
296	Chilkur	10664	39.9
297	Thipparthi	12272	38.2
298	Ramannapeta	12840	37.9
299	Rajapet	9167	36.7
300	Bommalaramaram	8565	36.2
301	Sali Gouraram	12324	34.4
302	Narayanapur	10890	33.8
303	Chandur	12213	33.4
304	Munagala	12032	32.5
305	Munugode	10953	31.5
306	Gundala	9556	31.4
307	Anumula	16749	31.4
308	Devarakonda	22233	30.8
309	Mella Cheruvu	20185	30.7
310	Jaji Reddi	10443	29.8
311	Nuthankal	14873	29.8
312	Mattam Palle	11727	29.8
313	Thirumalgiri	12350	29.4
314	Neredcherla	18320	29.2
315	Garide Palle	15390	29.2
316	Nadigudem	10770	28.7
317	Nidamanur	13914	28.2
318	Marriguda	9209	28.2
319	Atmakur	13469	28
320	Penpahad	10355	27.5
321	Thungathurthi	14276	27.3
322	Chintha Palle	11076	26
323	Kangal	10843	25.5
324	Chivvemla	11862	24.9
325	Mothey	11700	24.4
326	Peddavoora	17144	24.1
327	Vemulapalle	12096	24.1
328	M.Turkapalle	8197	22.4
329	Thripuraram	12195	22.2
330	Gurrampode	10470	20.9
331	Dameracherla	17419	19.5
332	Nampalle	9956	19
333	Gundla Palle	10439	17.8
334	Pedda Adiserla	12009	14.3
335	Chandampet	12325	12.6
	Nizamabad District		
336	Nizamabad	89470	78.1
337	Kamareddy	28810	70.4
338	Bodhan	32576	59.7
339	Armur	29334	53.6
340	Yedpalle	9186	50.4
341	Balkonda	19990	45.8
342	Ranjal	9122	44.5
343	Banswada	15099	43.4
344	Mortad	14223	43.3
345	Velpur	10499	39.8
346	Kotgiri	13901	37.8
347	Varni	17670	37.1
348	Kammarpalle	10477	36.2
349	Bheemgal	14860	35.5
350	Jakranpalle	11186	34
351	Dichpalle	17465	33.5
352	Nandipet	17984	33.1
353	Navipet	13310	32.9
354	Domakonda	14100	30.1
355	Yellareddy	10366	29
356	Makloor	14281	28.9
357	Dharpalle	11026	27.6

358	Birkoor	12367	25.7
359	Bhiknoor	14827	25.4
360	Sirkonda	11793	24.3
361	Nagareddipet	8170	23.1
362	Machareddy	13726	20.3
363	Pitlam	10270	17.7
364	Sadasivanagar	13725	17.5
365	Tadwai	11814	17.5
366	Madnoor	12439	17.3
367	Nizamsagar	8233	15.7
368	Bichkunda	14043	15.7
369	Jukkal	11531	11.3
370	Lingampet	10653	11
371	Gandhari	12207	10.5
	Rangareddy District		
372	Malkajgiri	103209	97.9
373	Balanagar	141412	97.8
374	Saroornagar	134926	97.8
375	Uppal	100401	97.5
376	Qutubullapur	120992	97
377	Serilingampally	79672	95.8
378	Rajendranagar	65958	95.6
379	Keesara	44598	93.5
380	Ghatkesar	43572	92.2
381	Hayathnagar	55782	89.4
382	Medchal	20270	79.1
383	Shamshabad	18869	77.9
384	Ibrahimpatnam	16416	75.8
385	Maheswaram	14526	75.1
386	Shamirpet	30023	73.4
387	Moinabad	12815	66.8
388	Kandukur	12722	59.5
389	Shankarpalle	15292	56.8
390	Vicarabad	17975	49.5
391	Chevella	13360	47.7
392	Yacharam	11621	47.5
393	Manchal	10542	47.1
394	Tandur	25536	44
395	Shabad	11975	38
396	Pargi	13363	35.1
397	Marpalle	11197	29.8
398	Pudur	9838	28
399	Mominpet	9569	26.4
400	Bantwaram	8406	25.3
401	Nawabpet	9253	21
402	Peddemul	11920	16.3
403	Gandeed	14657	14.2
404	Kulkacherla	14629	14.1
405	Dharur	9889	13.1
406	Yelal	9967	12.7
407	Doma	9717	11.9
408	Basheerabad	8845	9
	Warangal District		
409	Warangal	71601	86.3
410	Hanamkonda	101525	82.7
411	Jangaon	22189	64.9
412	Geesugonda	15925	58.6
413	Narsampet	17028	52.1
414	Govindaraopet	8445	51.7
415	Hasanparthy	20615	50.5
416	Bhupalapalli	22288	50.4
417	Lingalaghanpur	10013	44.8
418	Parkal	21434	41.5
419	Cherial	16567	40
420	Wardhannapet	19531	39.3
421	Sangam	14011	39.1
422	Dharmasagar	18225	37.5
423	Mahabubabad	27967	37.3
424	Maddur	9548	37.1
425	Thorrur	19095	37
426	Mangapet	12466	36.5
427	Raghunathpalle	14234	36
428	Ghanpur (Stn)	23098	35.6
429	Devaruppula	10524	34.6
430	Bachannapet	10871	34
431	Dornakal	13986	33.3

432	Atmakur	15442	32.9
433	Shayampet	11313	32.4
434	Mulug	15915	31.9
435	Zaffergadh	12058	30.7
436	Ghanpur (Mulug)	9937	30.6
437	Duggondi	11949	30.4
438	Nekkonda	13187	29.7
439	Khanapur	8798	28.7
440	Chennaraopet	13883	28.6
441	Palakurthi	14249	28.4
442	Chityal	16573	27.9
443	Parvathagiri	11482	27.7
444	Kesamudram	16836	26.5
445	Mogullapalle	11112	26.2
446	Raiparthy	14254	25.7
447	Eturnagaram	10421	25.2
448	Narsimhulapet	15075	25.2
449	Nallabelly	10102	25.1
450	Regonda	16417	24.8
451	Narmetta	10441	24.6
452	Venkatapur	10701	22.7
453	Kodakandla	13094	20.6
454	Maripeda	21134	20.4
455	Kuravi	16994	20.1
456	Nellikudur	15132	19
457	Gudur	14677	17.9
458	Tadvai	5688	13.7
459	Kothagudem	10503	10.4

Source: Census of India (Census Report 2011)

Table 4.10: Constituency wise IHHL coverage in Telangana -2011

SN	District	Constituency	IHHL	Rank
1	Hyderabad	Amberpet	99.8	1
2	Hyderabad	Charminar	99.7	2
3	Hyderabad	Yakathpura	99.5	3
4	Hyderabad	Karwan	99.4	4
5	Hyderabad	Bahadurpura	99.3	5
6	Hyderabad	Goshmahal	99.3	6
7	Hyderabad	Jublihills	99.3	7
8	Hyderabad	Khairatabad	99.3	8
9	Hyderabad	Musheerabad	99.2	9
10	Hyderabad	Chandra.gutta	99.0	10
11	Hyderabad	Nampally	98.5	11
12	Rangareddy	Malkajgiri	97.9	12
13	Rangareddy	Kukatpally	97.8	13
14	Rangareddy	L.B. Nagar	97.8	14
15	Hyderabad	Sec'bad Cont.	97.8	15
16	Rangareddy	Uppal	97.5	16
17	Hyderabad	Secunderabad	97.3	17
18	Rangareddy	Serilingampally	97.1	18
19	Rangareddy	Quthubullapur	97.0	19
20	Hyderabad	Sanathnagar	96.8	20
21	Hyderabad	Malakpet	96.2	21
22	Rangareddy	Rajendranagar	91.7	22
23	Rangareddy	Medchal	86.6	23
24	Warangal	Warangal East	86.3	24
25	Warangal	Warangal West	86.3	25
26	Khammam	Khammam	83.4	26
27	Karimnagar	Karimnagar	81.5	27
28	Medak	Patancheru	80.6	28
29	Nizamabad	Nizamabad (U)	78.1	29
30	Rangareddy	Ibrahimpatnam	77.2	30
31	Karimnagar	Ramagundam	75.1	31
32	Medak	Siddipet	69.1	32
33	Warangal	Wardhannapet	68.7	33
34	Rangareddy	Maheswaram	67.8	34
35	Khammam	Kothagudem	65.2	35
36	Nalgonda	Nalgonda	62.1	36
37	Medak	Sangareddy	60.9	37
38	Mahabubnagar	Mahabubnagar	60.5	38
39	Khammam	Madhira	58.1	39
40	Khammam	Sathupalle	57.7	40
41	Adilabad	Mancherial	54.6	41
42	Nalgonda	Bhongir	54.6	42
43	Karimnagar	Sircilla	52.8	43
44	Nizamabad	Bodhan	50.7	44
45	MBNR	Shadnagar	48.5	45
46	Nalgonda	Nakrekal	48.2	46
47	Rangareddy	Chevella	48.0	47
48	Karimnagar	Koratla	47.8	48
49	Karimnagar	Jagtial	47.7	49
50	Medak	Gajwel	46.7	50
51	Nalgonda	Suryapet	46.4	51
52	Khammam	Palair	45.4	52
53	Nalgonda	Miryalaguda	44.4	53
54	Karimnagar	Choppadandi	44.4	54
55	Warangal	Jangaon	44.3	55
56	Nizamabad	Kamareddy	43.5	56
57	Khammam	Pinapaka	43.2	57
58	Warangal	Parkal	43.1	58
59	Karimnagar	Manakondur	42.7	59
60	Karimnagar	Husnabad	42.7	60
61	Nalgonda	Kodad	42.4	61
62	Nizamabad	Armoor	41.9	62
63	Nizamabad	Balkonda	40.8	63
64	Khammam	Wyra	40.7	64
65	Adilabad	Adilabad	40.1	65
66	Nalgonda	Alair	40.1	66
67	Karimnagar	Vemulawada	39.8	67
68	Medak	Zahirabad	39.8	68
69	Adilabad	Chennur	39.4	69
70	Khammam	Yellandu	38.8	70
71	Karimnagar	Huzurabad	38.6	71
72	Nalgonda	Munugode	37.9	72

SN	District	Constituency	IHHL	Rank
73	Warangal	Ghanpur (Stn)	36.5	73
74	Nizamabad	Banswada	36.5	74
75	Medak	Dubbak	36.2	75
76	Karimnagar	Peddapalle	35.7	76
77	Warangal	Narsampet	33.9	77
78	Nalgonda	Huzurnagar	33.8	78
79	Warangal	Bhupalapalli	33.7	79
80	Adilabad	Bellampalle	33.3	80
81	Khammam	Bhadrachalam	33.1	81
82	Adilabad	Nirmal	33.1	82
83	Medak	Medak	32.7	83
84	Mahabubnagar	Kalwakurthy	32.6	84
85	Nalgonda	Thungathurthi	32.2	85
86	Rangareddy	Vikarabad	31.9	86
87	Mahabubnagar	Nagarkurnool	30.7	87
88	Nizamabad	Nizamabad(R)	30.2	88
89	MBNR	Wanaparthy	29.8	89
90	Khammam	Aswaraopet	29.7	90
91	Warangal	Palakurthi	29.7	91
92	Mahabubnagar	Jadcherla	28.7	92
93	Warangal	Mulug	28.2	93
94	Warangal	Mahabubabad	27.3	94
95	Karimnagar	Manthani	27.3	95
96	Rangareddy	Tandur	27.1	96
97	Medak	Narsapur	26.4	97
98	Nalgonda	Nagarjunasagar	25.9	98
99	Mahabubnagar	Achampet	25.5	99
100	Warangal	Dornakal	24.1	100
101	Adilabad	Sirpur (T)	23.8	101
102	Nalgonda	Devarakonda	21.8	102
103	Adilabad	Mudhole	21.7	103
104	Karimnagar	Dharmapuri	21.0	104
105	Mahabubnagar	Gadwal	20.7	105
106	Rangareddy	Pargi	20.5	106
107	Medak	Andole	20.1	107
108	Mahabubnagar	Devarakadra	18.9	108
109	Mahabubnagar	Alampur	18.7	109
110	Adilabad	Khanapur	18.0	110
111	Nizamabad	Yellareddy	17.6	111
112	Mahabubnagar	Kollapur	17.2	112
113	Nizamabad	Jukkal	15.5	113
114	Mahabubnagar	Narayanpet	13.5	114
115	Medak	Narayankhed	12.3	115
116	Adilabad	Asifabad	12.1	116
117	Adilabad	Boath	12.1	117
118	Mahabubnagar	Makthal	12.1	118
119	Mahabubnagar	Kodangal	10.4	119

Source: Census of India, 2011

Section – V

Analysis of the *Swachh Bharat* Mission (G) and Perspectives in Telangana

5.1 Introduction

Three-fourths of India's population live in rural areas, excluded from government incentives and infrastructure. Lack of access to water infrastructure and waste disposal in rural areas is a major barrier to improved and safe sanitation practices in the country. According to census data, the country had only 1% IHHL coverage in 1981 but, by 2011, it had risen to approximately 40%. On 2 October 2014, India's prime minister launched the *Swachh Bharat* Mission (SBM) with the goal of having all villages, *gram panchayats* (GPs), *mandals* or blocks, districts, states, and UTs declare themselves ODF ("open defecation free") by 2 October 2019, as a fitting tribute to Mahatma Gandhi's 150th birthday. They are 1) SBM (*Gramin* – rural areas) and 2) SBM (Urban – urban areas). The local rural bodies are responsible for the implementation of SBM *Gramin* (SBM G), while local urban bodies are responsible for the implementation of SBM Urban.

5.2 Swachh Bharat Mission (G)

SBM (G)'s primary goal is to eliminate bottlenecks that have slowed development in past schemes, such as the TSC and the NBA, and to focus on essential issues that affect outcomes. State and federal governments are focusing their efforts on making IHHL more accessible to all households across the country.The SBM has the following six components:

a) **Individual household latrines (IHHLs):** Under this scheme, eligible BPL and APL households are provided Rs 12,000 as an incentive for building IHHLs in a 60:40 Central:State ratio.

b) Gram panchayat **community sanitary complexes (CSC):** The SBM also offers GPs financial support up to Rs 2 lakhs for a community sanitary complex. In this regard, fund sharing is incorporated, with a 60% contribution from the central government, 30% from the state government, and 10% from the community.

c) **Solid and liquid waste management (SLWM):** The SBM includes solid and liquid waste management in its scope, with financial incentives for the GPs ranging from Rs 7–Rs 20 lakhs based on the size of the *panchayat*. In this case, the central government is responsible for 60% of the cost while the state is responsible for 40%. Up to Rs 7 lakhs is being provided to GPs having up to 150 households, Rs 12 lakhs to GPs with 300 households, Rs 15 lakhs to GPs with 500 households, and Rs 20 lakhs to GPs with more than 500 households.

d) **Information, education, and communication (IEC) and capacity building:** Around 8% of the overall budget is allocated for IEC and capacity building to sensitize rural and urban households to adopt hygiene practices and achieve the goal of ODF. Cost sharing between the centre and state is 60:40.

e) **Administrative expenses:** Administrative costs are envisaged at 2% of the overall budget, which is met between the centre and state in a 60:40 ratio.

f) **Funds that can be accessed at any time:** Up to 5% of the overall district project budget, or Rs 1.5 crores, is also provided to help needy households avail loans from SHGs to meet additional costs, if any, to construct the IHHL. This fund of Rs 1.5 crores per district ensures that no household fails to construct for want of resources to meet additional costs. Additionally, it also enables the local authorities and GPs to enlist the participation of SHGs in encouraging their members to make SBM a success.

Figure 5.1: Component-wise Earmarking and Funding Pattern under SBM (G)

S.No.	Component	Amount earmarked as percent of the SBM(G) project outlay	Contribution Share		
			GOI	State	Beneficiary Household/ Community
a.	IEC, Start Up Activity and Capacity Building	Up to 8% of total project cost, with 3% to be utilized at the Central level and 5% at State level.	60%	40%	0%
b.	Revolving Fund	Up to 5%	60%	40%	0%
c.	(i) Individual Household Latrines	Actual amount required for full coverage	Rs.7200 (60%) [10,800 (90%) in case of NE States, J&K and Special category States]	Rs.4800 (40%) [1200 (10%) in case of NE States, J&K and Special category States]	0%
	(ii) Community Sanitary Complexes	Actual amount required for full coverage	60%	30%	10%
f.	Administrative charges	Up to 2% of the project cost	60%	40%	0%
g.	Solid/Liquid Waste Management (Capital Cost)	Actual amount as per SLWM project cost within limits permitted	60%	40%	0%

Source: Guidelines for SBM (G) (Revised as on October 2017, Ministry of Jal Shakti)

5.3 SBM Implementation Mechanism

A five-tier implementation structure is established to monitor SBM (G) at the country, state, district, block, and village levels. At the country level, the Secretary of Department of Drinking Water and Sanitation of the Mission Director. At the state level, the SBM G (SBM-G) – State Water and Sanitation Mission (SWSM) is headed by a senior state official. The state project director is responsible for facilitating the convergence of line departments, ensuring the creation of the annual implementation plan for each district as required, and consolidating the same into the state's annual implementation plan (AIP). At the **district level**, the District *Swachh Bharat* Mission (DSBM (G)) has been constituted, with appropriate changes to the existing District Water and Sanitation Mission/Committee (DWSM/C). The participation of the District Collector and Chief Executive Officer (CEO) of *zilla panchayat* is crucial in the implementation of the initiative since line departments play an important role.

At the **block/*mandal*** level, the block programme management unit (BPMU) plays a key role, providing direction, support, and monitoring of the sanitation status in GPs. The system at the block/*mandal* level supports a single GP or a group of GPs in the planning and implementation of the SBM by addressing the actual gaps in the village. Village Water and Sanitation Committees or GPs are critical to the programme's success. The GP institution is used by states to channel funds for activities at the GP level. The success of the SBM requires all stakeholders to view sanitation as a top priority and ensure active participation and collaboration of all institutions and committees working within the GP framework.

5.4 Budget Allocation and Expenditure

In terms of financial and technical assistance, the SBM has enlisted the help of the World Bank. Other corporations, state governments (under the Sarva Shiksha Abhiyan -SSA and Rastriya Madhyamik Shiksha Abhiyan-RMSA), and the Swachh Bharat cess (0.5%) all contribute to the SBM. The central government spent a total of Rs 5,820.20 crores on the SBM (G) programme between 2014 and 2020, accounting for 42% of total fund availability. Between 2014 and 2020, the Telangana government spent a total of Rs 221.38 crores on the SBM (G) programme, accounting for 76% of the total available funds.

Table 5.1: Year-wise Fund Availability and Expenditure (in crores) of SBM (G)

Year	Total Fund Availability		Total Expenditure			
	India	Telangana	India	Percentage	Telangana	Percentage
2014–15	5,192.61	133.74	3,082.32	59.4	46.55	34.8
2015–16	8,468.4	215.58	9,370.47	110.7	157.53	73.1
2016–17	9,700.52	193.86	10,027.75	103.4	173.98	89.7
2017–18	16,263.34	501.78	12,227.7	75.2	305.68	60.9
2018–19	27,729.03	764.18	18,320.38	66.1	486.04	63.6
2019–20	22,379.26	400.76	12,249.59	54.7	158.05	39.4
2020–21 *(Dec, 2020)*	13,906.7	290.22	5,820.2	41.9	221.38	76.3
	1,03,639.86	**2,500.12**	**71,098.41**	**68.6**	**1,549.21**	**61.96**

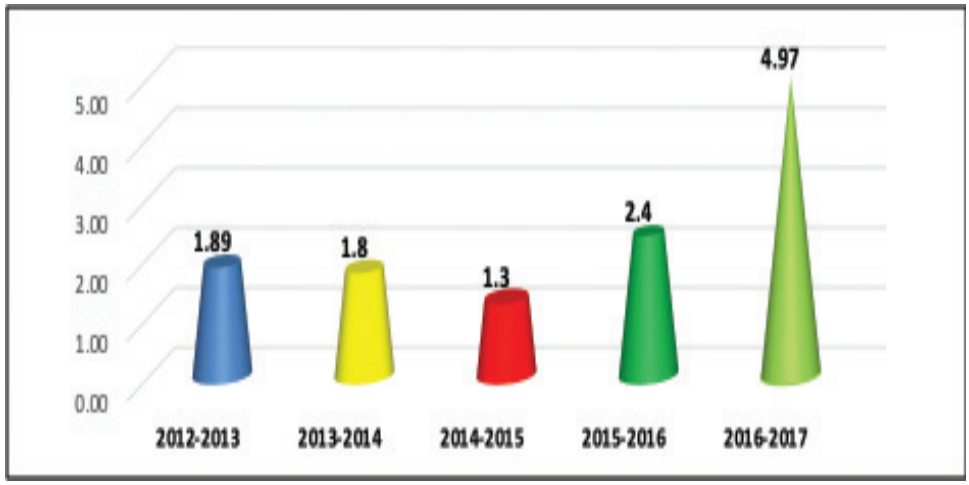
Source: Ministry of Jal Shakti Annual Reports, 2014–20

The largest percentage amount (90%) was spent in the financial year (FY) 2016–17, followed by FY 2015–16 (73%). The state of Telangana spent a total of Rs 1,549.21 crores on the building of IHHLs from 2014–15 to 2020–21, which was 61.9% of the allocated budget. During the same period, the government of India spent Rs 71,098.41 crores, which was 68.6% of the allocated budget.

5.5 IHHL Progress in Telangana

Sanitation is a fundamental requirement of public health, yet the situation in Telangana was dire. Access to sanitation facilities as well as the progress of sanitation programmes in Telangana varied by district in 2011. In addition, the status of sanitation facilities, infrastructure, and IHHLs varied significantly between districts and within districts owing to the level of urbanization or proximity to towns in neighbouring districts. Following the creation of Telangana State, 33 districts were created where there were previously 10 districts. Inter- and intra-district variations then emerged; subsequently, the current ranking of the newly carved districts varied significantly from their earlier ranks with regard to the performance of IHHLs. As per the 2011 census report, rural households in the Telangana had limited access to latrine facilities. IHHL coverage or toilet facilities are available in only 28.5% of rural Telangana households. According to a report by the Centre for Economic and Social Studies (CESS) and UNICEF published in 2015, Telangana had latrine facilities across half the state (52.6%), while rural households had significantly lower IHHL coverage than urban Telangana.

Figure 5.2: Physical Progress of IHHL in Telangana *(From 2012–16, in lakhs)*



Source: Swachh Bharat Gramin (SBM – Gramin), Ministry of Jal Shakti, 2021

One of the reasons for failing to cover every household was due to a dependence on outdated data like 2011 census figures even after a lapse of years. The IHHL's coverage has increased after the introduction of the SBM programme for measuring the actual figures of the population households 2012 was used as the starting point for this programme. In 2012, the SBM data contained information on 44.8 lakh households, both with and without toilets. It also includes left-over beneficiaries (LOB) and households with no LOB.

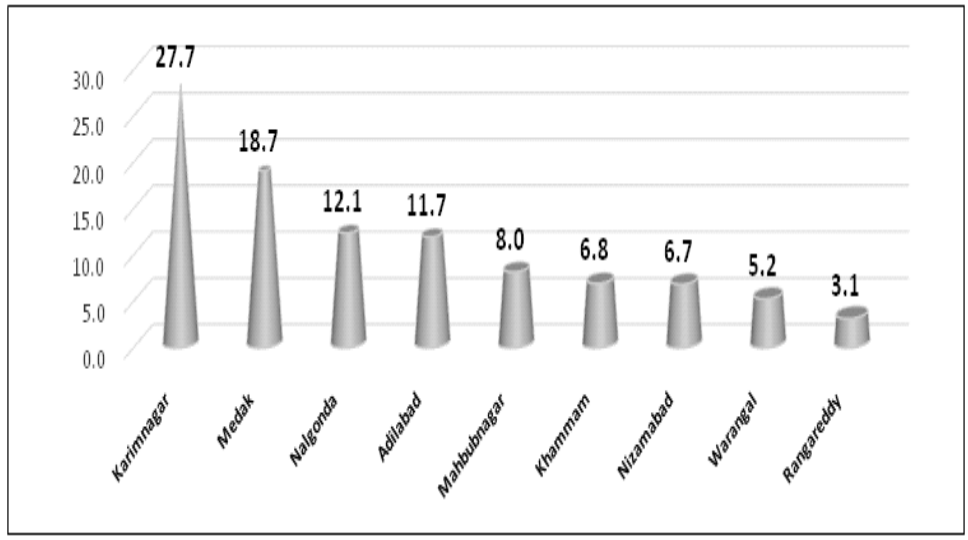
5.6 IHHL Status (2012–16)

The ongoing study is based on financial year-by-year statistics obtained from the Ministry of Jal Shakti SBM (G) website. Construction of IHHLs in Telangana picked up momentum with growing popularity and motivation among the households in favour of constructing individual toilets. Construction of IHHLs from 2012–13 to 2016–17 increased from 1.89 lakhs to 4.97 lakhs. However, there was a decline during 2014–15, with only 1.3 lakh IHHLs constructed because of political instability due to state bifurcation and reorganization.

The progress of IHHLs in Telangana during this period was not uniform across districts, owing to diverse conditions in terms of gaps in sanitation facilities, keenness among the local authorities, and levels of awareness among the stakeholders. The varying performance of districts from 2012–13 to 2015–16 indicates the progress in addressing

the backlog. Districts lagging behind others have caught up with remarkable progress. This period signifies the "catching up phase" whereby all districts reached almost equal levels of saturation by 2015–16 with a state average of 34% of households having an IHHL. During this period, Karimnagar, for instance, improved by 27.7%, while Rangareddy improved by 3.1%. This is because the backlog was high in Karimnagar against a very low backlog in Rangareddy, which is almost part of the state capital and is endowed with a high degree of sanitation infrastructure.

Figure 5.3: Financial Year–wise Status of IHHL Construction in Telangana

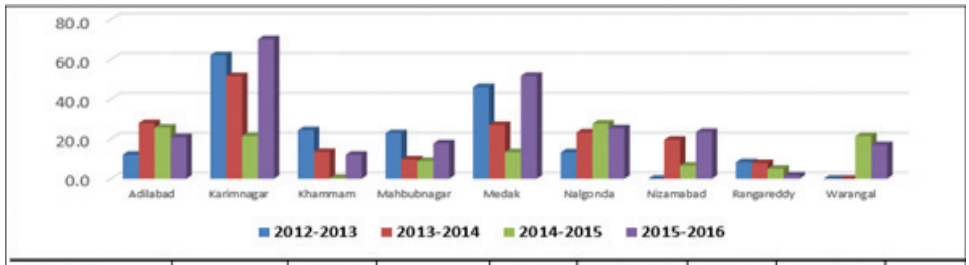


Source: Swachh Bharat Gramin (SBM – Gramin), Ministry of Jal Shakti, 2017

The inter-district variations reveal the diverse conditions of gaps in sanitation facilities and infrastructure. The performance of the districts in reaching the goal of total sanitation is reflected in the trajectory of some districts, with initial large numbers tapering off towards the later years, while other districts start with low performance initially and catch up gradually. For instance, in 2012–13, the Karimnagar district made significant progress in the development of IHHLs within family premises, followed by the Medak district. A large number of IHHLs were built in the districts of Khammam and Mahbubnagar. Around 8,000 to 13,500 IHHLs were built in the Nalgonda, Adilabad, and Rangareddy districts. The districts of Nizamabad and Warangal showed no growth. In terms of the percentage of entire-year progress, Karimnagar had the greatest (32%) while Rangareddy had the lowest (4%).

In 2015–16, the state achieved 35.7% IHHL coverage, having built a total of 2.40 lakh IHHLs. Karimnagar (70,000) stood at the top of the ladder, followed by Medak (51,000). In other districts – such as Nalgonda (25,300), Nizamabad (23,500), and Adilabad (20,900) – toilets were constructed in the range of 20,000–25,000 that year. As per the Ministry of Jal Shakti Annual Report (2016), 1.32 lakh IHHLs were built in Telangana during FY 2015–16 (up to 31 December 2015). Scheduled Caste BPL households accounted for 22.2% (29,551 IHHLs) of the total while Scheduled Tribe BPL families accounted for 8.46% (11,222 IHHLs).

Figure 5.4: Percentage of Share to Total IHHL Construction in Telangana
(2012–13 to 2015–16)

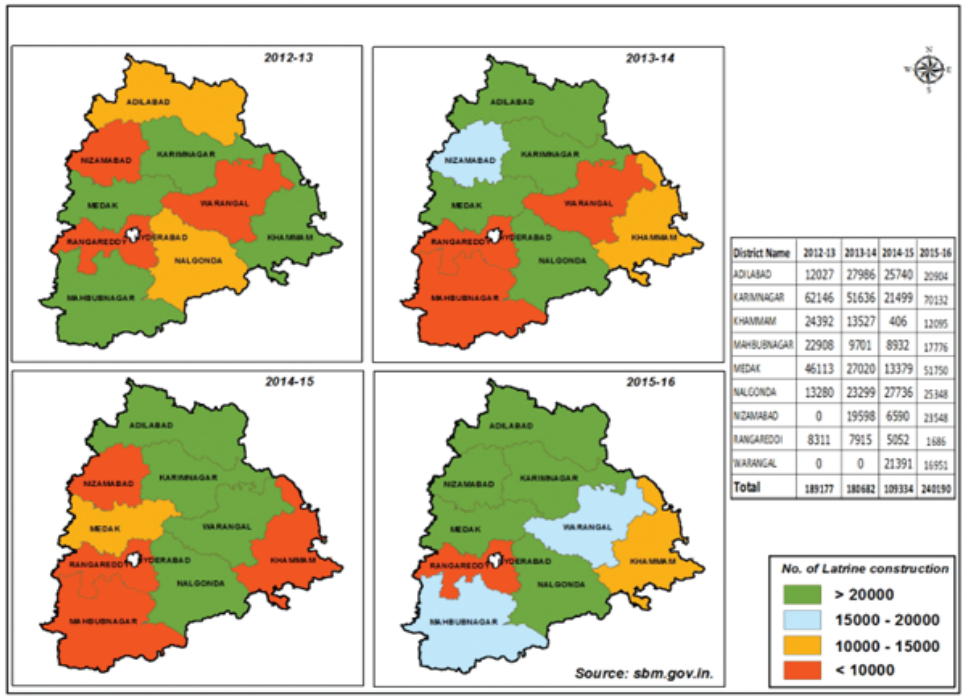


District Name	2012-13	% of Share	2013-14	% of Share	2014-15	% of Share	2015-16	% of Share
Karimnagar	62146	32.9	51636	28.6	21499	16.4	70132	29.2
Medak	46113	24.4	27020	15.0	13379	10.2	51750	21.5
Khammam	24392	12.9	13527	7.5	406	0.3	12095	5.0
Mahbubnagar	22908	12.1	9701	5.4	8932	6.8	17776	7.4
Nalgonda	13280	7.0	23299	12.9	27736	21.2	25348	10.6
Adilabad	12027	6.4	27986	15.5	25740	19.7	20904	8.7
Rangareddy	8311	4.4	7915	4.4	5052	3.9	1686	0.7
Nizamabad	0	0.0	19598	10.8	6590	5.0	23548	9.8
Warangal	0	0.0	0	0.0	21391	16.4	16951	7.1
Telangana	**189177**	**100.0**	**180682**	**100.0**	**130725**	**100.0**	**240190**	**100.0**

Source: Swachh Bharat Mission (G), 2017

5.7 Percentage of Share to Total IHHL Construction (2012–16): From 2012 to 2016, there was a significant increase in growth. The Karimnagar district had the greatest share (27.7%) of latrine building in the state over these four years. Other districts such as Medak (18.7%), Nalgonda (12.1%), and Adilabad (11.7%), contributed a significant percentage (10%–19%) to the total building of IHHLs. Mahbubnagar (8.0%), Khammam (6.7%), Nizamabad (6.7%), and Warangal (5.2%) all had a small number of IHHL constructions, ranging from 5%–10%. The Rangareddy district had the lowest (3.6%) share during the same period (Ministry of Jal Shakti, SBM-G, 2017).

Figure 5.5: Year-wise IHHL construction by District in Telangana *(2012–13 to 2015–16)*



District Name	2012-13	2013-14	2014-15	2015-16
ADILABAD	12027	27986	25740	20904
KARIMNAGAR	62146	51636	21499	70132
KHAMMAM	24392	13527	406	12095
MAHBUBNAGAR	22908	9701	8932	17776
MEDAK	46113	27020	13379	51750
NALGONDA	13280	23299	27736	25348
NIZAMABAD	0	19598	6590	23548
RANGAREDDI	8311	7915	5052	1686
WARANGAL	0	0	21391	16951
Total	189177	180682	109334	240190

Source: Swachh Bharat Mission (G), 2017 (Maps not to scale)

While the state was reorganized in 2014, the districts were reorganized from 10 to 33 (32 rural districts and Hyderabad as an urban district) in 2016 and 2019.[1] The 32 rural districts' data was prepared by the Jal Shakti Ministry (SBM-G). Due to the reorganization of the erstwhile 10 districts into 33 new districts, the rank of districts in regard to IHHL coverage changed significantly compared to other districts or their counterparts in the erstwhile district.

Performance of Telangana between 2012 and 2016 among the 32 districts reveals that the Medchal district has the highest percentage of coverage (90%), followed by Rajanna (84.5%), Karimnagar (71.5%), Siddipet (71%), Peddapalli (60.7%), Hanamkonda (55.8%), and Jagtial (52.7%) – all of which had 50% or more coverage – and Nirmal, Mahabubabad, Jayashankar, Kamareddy, Nalgonda, Mahbubnagar, Jogulamba, and Narayanpet, wherein the coverage was lowest (less than 10%) was observed.

[1] District reorganization launched in 2016 and resulted in 31 districts out of the erstwhile 10 districts. Subsequently, two more districts viz., Mulugu and Narayanapet, were carved out of Jayashankar Bhupalapalli and Mahbubnagar, respectively, in 2019.

Table 5.2: Year-wise IHHL Coverage in Telangana (During SBM to ODF)

Year	BLS HH	IHHL having HH	Constructed IHHL	%
2014–15	3,971,924	1,139,709	125,165	26.6
2015–16		1,369,821	230,112	34.6
2016–17		1,867,702	497,881	47.0
2017–18		3,366,390	1,498,688	84.9
2018–19		3,815,103	448,713	96.2
2019–20		3,971,924	156,821	100.0

Source: Ministry of Jal Shakti, Govt of India reports- 2014, 2015, 2016, 2017, 2018,2019, 2020.

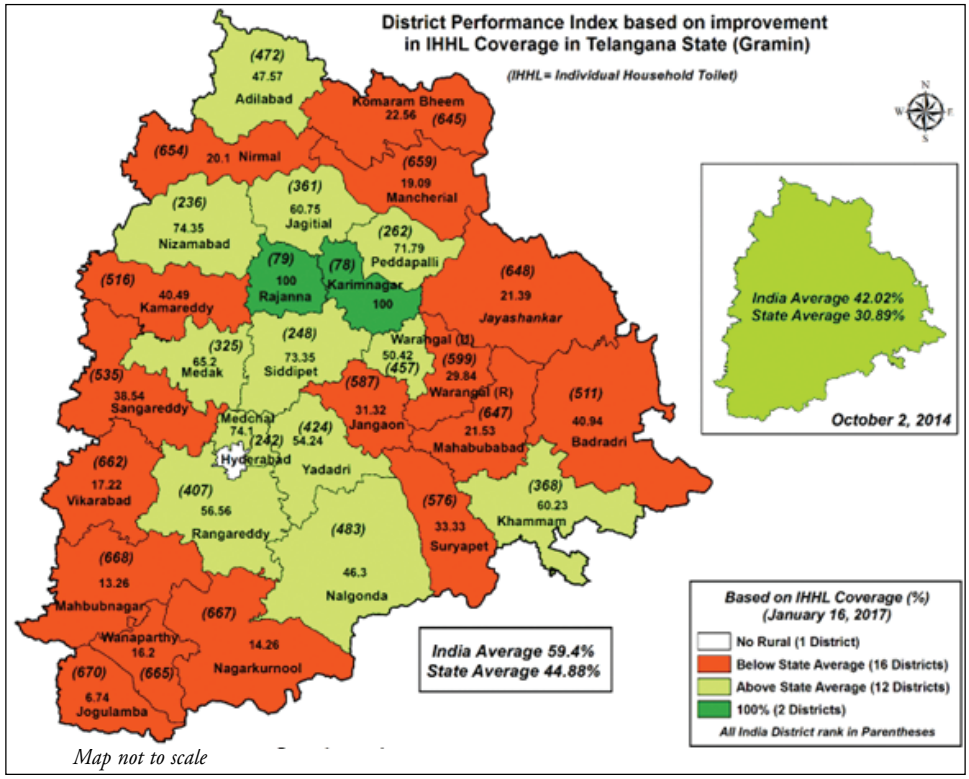
5.8 IHHL Progress in Post-Bifurcation Telangana State (2016–20)

A detailed analysis of the progress from 2016–17 to 2019–20 is necessary, as a result of a qualitative shift in progress that recorded nearly 100% coverage, rural Telangana was declared ODF by 2019–20. During this time, the state government reorganized the former 10 districts into 33 districts. According to SBM data, only 26% of households had toilet facilities prior to the state's formation in 2014. As time went on, it grew faster; by the end of 2016, it had reached half (47%) of all households. The state has experienced high growth following this (see Table 5.2) because of the decentralized approach, which gives the district administration a better chance to concentrate on the development of each village. In order to identify villages with low coverage, the district administration looked into SBM coverage. This led to the creation of plans to completely cover IHHLs. Thus, many districts were designated ODF districts, bringing about significant changes throughout the state. Each financial year's IHHL growth or progress has been discussed from 2016 to 2019 as follows.

During 2016–17, nearly 5.0 lakh IHHLs were constructed, raising the state's coverage to 47.0%. The Nizamabad district constructed the most IHHLs, followed by Jagtial and Khammam. However, 65% (21) of the 32 districts could not construct more than 10,000 IHLLs, with 11 districts constructing more than 5,000, while the Jogulamba (1670) and Medchal (768) districts built the lowest number (< 1700) of IHHLs. In the same year, the Jagtial district's IHHL coverage reached 97.5% – the highest in the state – followed by Rajanna and Medchal. Along with these three, Nizamabad and Siddipet also reached more than 75% IHHL coverage. Despite the improved progress and preparedness in making the sanitation programme an aggressive mission focused on total saturation, about 65% of the districts (21 districts) were yet to achieve 50% coverage. Among the low-performing 21 districts, 10 districts had less than 25% coverage, which

includes Komaram Bheem, Narayanpet, and Jogulamba, which are remote areas and situated on the state borders (see Fig 5.6).

Figure 5.6: Individual Household Latrine (IHHL) Situation in Telangana, 2017



Source: SBM (G), 2017

Compared to the previous year's coverage, actual growth in the construction of IHHLs was not as expected. The tardy progress has been attributed primarily to the administration structures responsible for implementing the programme. The RWSS department was considered inadequate for accomplishing the goals of a mission in enlisting large-scale peoples participation to make SBM a total success in a time-bound manner. Limitations of the RWSS department are explained in terms of limited personnel, lack of connection with the community, and lack of expertise in designing and implementing behavioural change communication strategies.

2017–18 saw coverage improve from 47% to 85% by constructing a total of 15.0 lakh IHHLs across rural Telangana. Long-standing hurdles, both of physical infrastructure and socio-cultural perceptions of the beneficiaries across different communities in the

Table 5.3: District-wise Coverage of IHHLs across the Telangana, 2018

S. No.	District Name	Total HH	Total HH Covered	Uncovered HH*	IHHL Coverage (Percent)	Total Mandals	ODF Declared	Total Villages	ODF Villages
1	Jagtial	193,590	193,590	0	100	15	15	343	343
2	Jangaon	119,885	119,885	0	100	11	2	232	198
3	Kamareddy	161,244	161,244	0	100	17	17	434	434
4	Karimnagar	164,238	164,238	0	100	12	12	269	269
5	Khammam	231,351	231,351	0	100	20	20	468	468
6	Medak	132,470	132,470	0	100	15	15	394	394
7	Medchal	45,985	45,985	0	100	5	5	102	102
8	Nizamabad	227,727	227,727	0	100	19	19	445	445
9	Peddapalli	120,204	120,204	0	100	11	11	228	228
10	Rajanna	107,872	107,872	0	100	9	9	217	217
11	Siddipet	179,818	179,818	0	100	17	17	437	437
12	Hanamkonda	42,336	42,336	0	100	6	6	95	95
13	Warangal	172,162	172,162	0	100	14	14	300	300
14	Rangareddy	188,753	188,486	267	99.86	20	3	539	397
15	Mancherial	112,435	112,147	288	99.74	14	0	344	52
16	Sangareddy	213,245	202,245	11,000	94.84	19	6	584	366
17	Wanaparthy	83,415	74,260	9,155	89.02	9	1	220	149
18	Yadadri	124,081	108,499	15,582	87.44	14	0	354	113
19	Nalgonda	222,105	189,274	32,831	85.22	26	2	598	225
20	Badradri	143,772	121,476	22,296	84.49	17	1	393	39
21	Nagarkurnool	134,990	107,703	27,287	79.79	16	0	344	20
22	Vikarabad	149,162	117,536	31,626	78.8	17	0	494	49
23	Mahabubabad	169,249	133,301	35,948	78.76	12	0	291	25
24	Nirmal	116,016	91,033	24,983	78.47	13	0	389	21
25	Suryapet	158,104	123,345	34,759	78.02	18	0	341	47
26	Jayashankar	158,633	116,836	41,797	73.65	17	0	469	88
27	Mahbubnagar	211,775	146,123	65,652	69.0	21	1	595	72
28	Jogulamba	92,444	61,195	31,249	66.2	9	0	217	4
29	Adilabad	110,303	70,591	39,712	64	13	0	466	26
30	Komaram Bheem	86,460	49,787	36,673	57.58	12	0	407	37
		4,373,824	**3,912,719**	**461,105**	**89.46**	**438**	**176**	**11,009**	**5,660**

Source: SBM (G), 2018

**BLS – baseline survey; HH – households; IHHL – individual household latrines; ODF – open-defecation free*

backward areas, were handled effectively – making remarkable progress due to the special attention paid by the authorities as well as change of the implementing agency from RWSS to District Rural Development Agency (DRDA), which has relatively better wherewithal required for a programme based on a mission mode.

Among all districts, the Warangal (U) district has the most IHHLs (1.12 lakh), followed by the Sangareddy district (1.0 lakh). Compared to the previous year, even aspirational and remote districts, like Jayashankar, Komaram Bheem, Adilabad, and Wanaparthy, made significant progress in the construction of IHHLs. From this year onwards, the government started announcing ODF districts; Karimnagar and Rajanna Sircilla were declared the first ODF districts. Seven more districts were drawing closer to 100% coverage, i.e., Medchal, Khammam, Peddapalli, Nizamabad, Siddipet, Jagtial, and Warangal. Qualitative progress also includes another 15 districts reaching around 90%-or-above coverage. However, the Komaram Bheem and Mulugu districts continued to remain far below the goal of the SBM.

During 2018–19, the state recorded great progress, from 85% to 96%, in IHHL coverage and the government declared 13 ODF districts viz., Jagtial, Karimnagar, Khammam, Medak, Medchal, Nizamabad, Peddapalli, Rajanna Sircilla, Siddipet, Warangal (U), Warangal (R), Kamareddy, and Jangaon. Most of the remaining districts were also close to qualifying for an ODF status. The SBM data explains the impressive coverage achieved during the year. The top priority assigned to the SBM is reflected in making district collectors and other officials responsible for the construction of toilets in family premises. The emphasis was also conveyed in announcing "Swachh India" with a one-year timeframe. Accordingly, a coordinated effort was achieved by ensuring all line departments worked diligently to improve sanitation coverage. The Rangareddy and Nirmal districts were close to claiming ODF district status. Another 11 districts viz., Wanaparthy, Vikarabad, Sangareddy, Nalgonda, Nagarkurnool, Mancherial, Yadadri, Suryapet, Adilabad, Mulugu, and Mahabubabad recorded progress from 92% to 98%. The remaining six districts in the state – Jayashankar, Mahbubnagar, Bhadradri, Komaram Bheem, and Jogulamba – recorded below 90% IHHL coverage despite significant progress during the year. The lowest coverage of IHHLs was 72% in Narayanpet.

During 2019–20, the remaining districts in the state also completed backlogs and were designated as ODF districts, making the entire state free of open defecation. This year, a total of 1.5 lakh IHHLs were built, bringing the overall coverage to 100%. Transforming

the state into ODF was achieved during the year by covering every individual household. While nine districts – Suryapet, Jayashankar, Nalgonda, Sangareddy, Adilabad, Yadadri, Mulugu, and Nagarkurnool – constructed between 2,000 and 5,000 IHHLs, the remaining six districts viz., Narayanpet, Bhadradri, Jogulamba, Komaram Bheem, Mahbubnagar, and Mahabubabad built 10,000 to 20,000 IHHLs each, not only making the state ODF but also joining ODF India or the *Swachh Bharat*.

5.9 Open-Defection Free (ODF) State

As a result of every effort, on 31 July 2019, the state was certified ODF by the central government, following the construction of over 29.0 lakh toilets under the SBM (G) since 2014. Declaration of ODF areas in Telangana started from 2016–17. In Telangana, one district, Rajanna Sircilla, 32 mandals, 1,524 villages, and 1,387 GPs were all included in the first ODF declaration made in 2016–17. In the following years between 2016–17 and 2019–20, 32 districts, 539 rural mandals, 14,200 villages, and 12,751 GPs in the state received ODF status.

Following the success of being declared an ODF state, the Telangana state government launched a new solid and liquid waste management programme named "*Palle Pragathi*". The Telangana government has also accorded improving sanitation facilities to institutions like schools and *anganwadis*. The Telangana government has been building IHHLs under the SBM (G) and school and AWC toilets under MGNREGS. The success of the SBM programme lies in its design, which offers a creative and flexible role to the state government in achieving ODF status. Additionally, the supportive role played by the central government further strengthened the mission.

Table 5.4: Year-wise Achievement of Open Defection Free (ODF) Status in Telangana

Year	ODF-Declared	ODF-Declared Villages	ODF-Declared GPs Blocks	ODF-Declared Districts
2016–17	1,524	1,387	32	1
2017–18	3,686	3,272	115	9
2018–19	6,945	5,799	241	14
2019–20	14,200	12,751	539	32

Source: Ministry of Drinking Water and Sanitation (Jal Shakti) Annual Reports 2016 -20

5.10 Swachh Bharat: Perspectives

The *Swachh Bharat* Mission (SBM) is the largest behavioural change programme in the world. The mission has shifted its focus from production outputs – toilet construction to behavioural outcomes (ODF) in India. Initially, the programmes were unhurried, but later, i.e., in mid-2016, the programme took a sudden upswing and began declaring ODF statuses across the country. The first ODF district was announced in April 2015, i.e., the Nadia district from the state of West Bengal, while Sikkim was the first ODF state in the country, announced in May 2016. The renewed focus on total sanitation and the goal of making the country free of open defecation necessitated special attention to addressing the barriers responsible for exclusion and gaps. Thus, the government started paying attention to issues related to access to sanitation facilities, especially among the vulnerable communities and areas lagging behind the targets. The revised approach focused on Left Over Benificiaries (LOB).

IHHL Coverage in SC and ST Households: The Ministry of Drinking Water and Sanitation (Jal Shakti) has published annual reports on SC and ST household IHHL coverage in addition to the usual SBM data on coverage without specific disaggregated data. Of the total IHHLs, the coverage of the SCs and STs was 19% and 15%, respectively, in the state during 2015–19. The combined contributions of SC and ST account for one-third (34%) of total state IHHL coverage.

Table 5.5: Share in Total IHHL Achievement of SCs and STs in Telangana

Year	IHHL Achievement			Share in Total IHHLs Achievement		
	Total	SC	ST	SC (Percent)	ST(Percent)	Total
2015–16 (31/12/2015)	132,570	29,551	11,222	22.29	8.46	30.75
2016–17 (31/3/2016)	293,654	58,111	39,106	19.79	13.32	33.11
2017–18 (31/12/2017)	1,073,607	211,033	142,381	19.55	13.19	32.74
2018–19 (31/03/2019)	469,799	77,667	96,087	16.53	20.45	36.98
2019–20 (31/12/2019)	155,180	20,313	37,538	13.09	24.19	37.28
Grand Total	**2,124,810**	**396,675**	**326,334**	**18.66**	**15.35**	**34.02**

Source: Ministry of Drinking Water and Sanitation (Jal Shakti) Annual Reports 2016, 2017, 2018, 2019, 2020

Left-over Beneficiary (LOB): During 2016–19, a total of 26.0 lakh IHHLs were built across the state, covering 33 districts. Telangana was declared an ODF state on 2 October 2019. However, there were still some households without an IHHL since the SBM (G)

MIS and the data guiding the planning in this regard were based on the 2012 baseline household data, which ignored the growth of new households every year (at the rate of 1.3% growth). With a 1.3% growth rate since 2012, Telangana has 1.07 lakh left-over beneficiaries (LOB), of which 81,606 received IHHLs, ensuring that no one is left behind (NoLB). Thus, Telangana became an ODF state, covering a total of 41.6 lakh households identified to construct IHHLs.

Present Ground Reality: India has reached 100% IHHL coverage, according to central and state government reports. However, numerous studies on the progress of SBM while highlighting remarkable achievements also draw attention to gaps in certain locations and communities. Similarly, a CESS study by S. Laxman Rao & P Anjaneyulu (2021) reveals that some households are still lacking IHHL. According to the study, the Vaddera community (2021) report revealed that one-third (32%) of all households and 44% of rural households lack access to a toilet. Similarly, a CESS study by S. Laxman Rao & S Harinath (2021) on the Kummari community found that 83% of all households and 80% of rural households have toilets. Both the studies concluded that, one of the causes of the prevalence of open defecation in some areas is a lack of space for constructing a toilet on the property of the home.

The NFHS-5 report, based on 2019–20 data, also revealed that about one-fourth of the households in the state do not have individual toilets. While the progress in access to toilets has covered 76.2% of state households, those without IHHLs constitute 17.2% in urban areas and 27.1% in rural areas. Studies in other states also highlight the gaps despite the country being declared ODF. Aashish Gupta et al (2020) conducted a survey of rural sanitation behaviour in north India and examined households in four states, i.e., Bihar, Madhya Pradesh, Rajasthan, and Uttar Pradesh, and found that while rural latrine ownership grew significantly between 2014 and 2018, open defecation remains quite widespread.

5.11 Drivers of the Success of SBM (G) or IHHL Coverage

Prior to 2014, the country's sanitation situation was dire. To address this, the central government developed a number of programmes at the local level, but sanitation coverage did not improve significantly. With this in mind, the central government replaced the Nirmal Bharat Abhiyan (NBA) with the Swachh Bharat Mission (Gramin). Following this, there was significant IHHL growth all over the state. In addition to SBM, the

following factors also contributed to the state and country achievement of 100% IHHL construction. SBM's major goal is to build toilets in every household to achieve 100% coverage across India by October 2019, for which the central government adopted a campaign mode and established guidelines to ensure that the programme is implemented effectively. In addition to removing the duplication process, the SBM added a photo-upload method and location tagging to each IHHL.

a) **Information, education, and communication (IEC):** Awareness of the importance of hygiene and the schemes assisting the construction of IHHLs were given priority in the SBM. The IEC approach also helped in behavioural change in favour of adopting IHHLs in rural areas. Even households belonging to backward and vulnerable communities have adopted individual toilets. The IEC brochures were crucial in generating public awareness about the IHHLs' construction. The IEC component received a total of 8% of the fund in the ratio of 3% by the central government and 5% by the states. IEC strategy combined conventional methods like posters and modern tools of mass communication like videos, electronic media, and photo uploading to update the MIS for effective monitoring. Awareness campaigns on household toilets were made popular through celebrities promoting the dignity and security of households linked with individual toilets, primarily for the respect and safety of the women folk.The IHHL-developed photo-upload methodology has also improved IHHL coverage. A photo of the beneficiary along with the Global Positioning System (GPS) co-ordinates uploaded by the field supervisor using a mobile also helps speed approvals and prevents duplication. Telangana has reported a total of 17.23 lakh authorized IHHLs from 2 October 2014.

   In the last seven years, technology has been crucial to the success of the SBM. To prevent duplication, the Swachhata App, SBM Toilets on Google Maps, and other important initiatives were also launched. Recently, the SBM U 2.0 initiative saw the launch of the integrated SBM MIS portal and GIS platform, which will not only bring the mission closer to the people, but also enable smart data-driven decision-making, transparency, and robustness in mission implementation (Ministry of Housing & Urban Affairs 2021).

b) **Nirmal gram puraskar (NGP):** Although the NGP was not very effective in inspiring and motivating the people to help achieve 100% coverage under the TSC, it laid the

foundation for the new aspiration of working towards total sanitation. Further, it also demonstrated the path to IHHLs' success. Many localities have achieved 100% IHHL coverage and received the NGP award.

c) **District administration:** The district administration has played an important part in the implementation of centrally sponsored schemes, as has been the case with SBM (G). Many district collectors in Telangana have been encouraged to push government personnel and citizens to build IHHLs. Several collectors have also played critical roles in making the SBM successful by adding a campaign method and lending support to community mobilization. The goal of 100% IHHL coverage was achieved also because of the personal interest of some collectors, pride in getting one's district declared ODF, and an enabling environment. The support of the authorities was also crucial wherein funds from other schemes were also diverted for the timely completion of the SBM works when needed. The progress of the SBM was reviewed regularly at all levels and collectors paid particular attention to SBM targets.

d) **Organizations:** United Nations Children's Fund (UNICEF) played a vital role to create awareness among the people and supported civil society in the mobilization of the community. The UNICEF-WASH programme's support to civil society was holistic, covering water, hygiene, and health, along with sanitation. It supported state measures aimed at improving access to clean and drinkable water, sanitation, and basic hygiene practices in both rural and urban areas. The World Vision, World Bank Groups, Water Aid, TEAR, WASH funders, World Water Council, and the Asia-Pacific Water Forum (APWF) are also working along the same lines.

   At the national level, the Ministry of Drinking Water and Sanitation (presently Ministry of Jal Shakti); at the state level, the Ministry of Panchayat Raj and Rural Development, Water Supply & Sanitation (RWSS), health departments, municipal bodies, district administrative authorities, DRDO, mandal-level authorities, VWSCs, SHGs, and NGOs are all playing active roles and encouraging people to build IHHLs.

e) **Collaboration of departments:** SBM was initially implemented by the RWSS, which was transferred to the DRDA in 2017. The DRDA, compared to RWSS, has a great network in all areas and is well-placed in terms of human resources and connections with the Community Based Organisations (CBO's). The district collector is the

executive chairperson of DRDA, which has been entrusted with the responsibility of implementing SBM. The DRDA has a large number and scope of parallel bodies across the state. Indira Kranthi Patham (IKP) centres, SHGs, and field assistants have played significant roles in declaring ODFs. In villages, the SHGs, anganwadi centres, schools, market yards, railway stations, NGOs, corporates, etc., also influenced and motivated the people towards the construction of individual toilets.

f) **Funding-related initiatives:** The following programmes have been promoted to stimulate the construction of toilets in rural households in India. Budget allocation is critical for the success of any programme. SBM was successful in achieving the goal of constructing toilets across the country also due to adequate financial support from the Central government. The largest sum ever used for sanitation interventions worldwide, approximately USD 20 billion, was allocated to India's rural sanitation programme. Additionally, the budgetary support was reviewed periodically and revised to meet the actual needs rather than following rigidly non-rewarding packages. The incentive for the construction of the IHHL under SBM was increased to Rs 12,000. Transparency and direct transfers of financial assistance to the beneficiaries was another important factor responsible for its success.

g) **Material procurement:** Provisions were made for innovation and flexibility in the procurement process. The SBM also stressed the participation of the beneficiaries and CBOs in the construction of the toilets to eliminate or reduce dependency on contractors. It was also made simple to attain 100% IHHL coverage through the simplified material procurement process, made possible through GO No. 92, the bulk procurement of rings, and the resulting strengthening of the supply chain mechanism. Collectors were encouraged to participate in mason training for women to meet the ODF objective by 2019. For instance, it was a special record for the Mahbubnagar district, which completed training of women masons in just 6 days and successfully built 386 toilets in 48 days.

h) **District panchayat officers (DPO):** The DPOs were also encouraged to build IHHLs in family premises through sarpanch and panchayat secretaries.

i) **Model villages:** The Gangadevipalle village of Warangal district is a model village in India. The Bala Vikasa programme constructed a drinking-water treatment plant, which was followed by the formation of 27 committees to develop the community.

In 2000, the VWSC oversaw the completion of the entire IHHL project. The secret to the success of the village is that everything is recorded by the committees, including the number of buildings, the colour of the walls, and the technique used to motivate people. Because of rain-harvesting techniques, the village was able to supply 100% of the water within the household's premises, which aided in reaching ODF.

j) **Village water & sanitation committee (VWSC):** The VWSC is one of the most important committees in the village. The VWSC is a GP standing committee in charge of village drinking water security planning, implementation, operation, maintenance, and management. In the villages, the VWSC members have also done a wonderful job with IHHL coverage and restricting open defecation.

k) **Public participation and behavioural change:** SBM have raised public awareness of the Clean India initiative. People are inspired by the prime minister, ministers, celebrities, and movie stars, among others, who built a strong campaign and awareness through messages delivered via print and electronic media.

l) **Water supply:** Several studies indicated the important role of running water in the success of sanitation programmes. In the state, the government launched Mission *Bhagiratha*, which aims to provide safe drinking water to all families. Many reservoirs have been built to provide drinking water and irrigation. As a result, the availability of drinking water in households has increased and the IHHL programme is also successful due to the abundant supply of water.

5.12 Government initiatives for high IHHL coverage: Programmes such as *Swachh* Hyderabad and *Palle Pragathi* also helped achieve the goal of ODF status in the state.The state government launched the Swachh Hyderabad programme, which benefits all Hyderabad residents, inspired by the SBM (G) programme. All government workforces, including the state governor, chief minister, other ministers, and IAS and IPS officers, are assigned one area under this programme. They are expected to inspect it regularly, maintain it, and take responsibility for making SBM a successful programme. The "*Swachh* Village Project" of the Society for the Elimination of Rural Poverty (SEPR) was launched in rural areas to eliminate open defecation. A pilot project was initiated in 2015 wherein SERP selected 12 villages across the state for the construction of IHHLs spread across nine districts and three ITDA villages. The pilot project helped revise the strategies for the time-bound completion of the SBM in the state.

Another significant programme of the Telangana state, *Palle Pragathi*, was introduced by the state government on 6 September 2019. The main objective of this programme is to guarantee long-term sustainability in the areas of managing solid and liquid waste, managing waste from plastics, and managing visibly clean environments at the primary level. It also aims to improve village governance, infrastructure, tree cover, and sanitation. This programme's implementation involves both the district administration and panchayat raj institutions.

Conclusion

Considerable progress has been recorded across the country after the SBM (G) was introduced in 2014. According to UNICEF, over 11.6 crore toilets in household premises were built in India between 2014 and 2019. Because the programme was to be conducted as a citizens' campaign, the state and central levels encouraged awareness initiatives, a total of 8% funding was allotted to the IEC, and a 360-degree enormous media campaign was organized, due to which the IHHL coverage grew significantly between 2012 and 2016. The initiative was managed by the district collector, who played a vital role in increasing IHHL coverage by motivating people towards IHHLs construction and offering various forms of support.

The NITI Aayog has also focused on improving sanitation coverage. Research and development (R&D) cells were established at the central level, and an expert committee was formed to analyse innovative technology for IHHLs, which was then uploaded and published on the websites to encourage other individuals in the area to build IHHLs. In 2015, a mobile app was released to help people choose IHHLs based on price and design. The *Swachhta* pledge was also posted on the SBM Facebook page to promote new initiatives and information. The SBM (G) MIS also improved knowledge of each state's status and administrative divisions. Additionally, the MIS also encourages public domains to add voices, videos, and case studies from the field.

Between 2 October 2014 and 1 June 2021, the state constructed over 30 lakh IHHLs, which means one-third (73.3%) of households were covered by IHHLs. Telangana achieved ODF status by building 1.5 lakh toilets across the state between 2019 and 2020. Due to the reorganization of the districts, many districts revealed high IHHL coverage. This occurred as a result of previously covered districts containing both rural and urban *mandals*. The government eventually separated the mandals into urban and rural areas. As a result, urban *mandals*, with districts such as Medchal, Karimnagar, and Siddipet, had the best coverage, while rural *mandals*, with districts such as Mahbubnagar, Jogulamba, and Narayanpet, had insufficient coverage.

Table 5.6: Financial year–wise IHHL Coverage in Telangana by District (from 2012–20)

S. No.	District Name	Total	IHHL Coverage (Percent)		Numbers of IHHL Construction and Total Coverage of the District							
		HH	2012–16	2016–20	2016–17	IHHL (%)	2017–18	IHHL (%)	2018–19	IHHL (%)	2019–20	IHHL (%)
1	Medchal	22,683	90.7	9.3	768	94.1	1,339	100.0	0	100.0	0	100
2	Rajanna	101,672	84.5	15.5	11,977	96.3	3,713	100.0	35	100.0	0	100
3	Karimnagar	152,237	71.5	28.5	3,545	73.9	39,789	100.0	14	100.0	0	100
4	Siddipet	170,431	70.9	29.1	8,265	75.7	41,393	100.0	2	100.0	0	100
5	Peddapalli	109,743	60.7	39.3	9,487	69.4	33,599	100.0	0	100.0	0	100
6	Warangal U	50,574	55.8	44.2	2,496	60.7	19,814	99.9	67	100.0	0	100
7	Jagtial	182,178	52.7	47.3	81,622	97.5	4,494	100.0	4	100.0	0	100
8	Mancherial	101,474	46.0	54.0	7,991	53.9	38,423	91.8	4,137	95.8	4,222	100
9	Yadadri	118,898	45.1	54.9	6,546	50.6	35,671	80.6	18,018	95.7	5,060	100
10	Rangareddy	158,385	42.6	57.4	6,824	46.9	61,758	85.9	22,271	100.0	0	100
11	Khammam	222,962	41.3	58.7	68,836	72.1	62,135	100.0	0	100.0	0	100
12	Sangareddy	195,520	36.7	63.3	4,328	38.9	105,493	92.8	8,045	96.9	5,983	100
13	Nizamabad	217,583	36.5	63.5	96,833	81.0	41,426	100.0	1	100.0	0	100
14	Medak	125,817	35.1	64.9	11,613	44.3	69,969	99.9	99	100.0	0	100
15	Nalgonda	211,213	34.4	65.6	9,387	38.8	59,854	67.2	62,660	96.8	6,684	100
16	Jangaon	105,225	29.7	70.3	5,723	35.2	65,262	97.2	2,956	100.0	0	100
17	Adilabad	83,453	27.2	72.8	2,885	30.7	29,517	66.0	22,521	93.0	5,829	100
18	Suryapet	143,776	26.3	73.7	12,358	34.9	59,911	76.5	24,010	93.2	9,719	100
19	Badradri	140,045	26.3	73.7	17,960	39.1	58,929	81.2	9,699	88.1	16,664	100
20	Warangal R	160,969	21.6	78.4	13,891	30.2	112,379	100.0	9	100.0	0	100
21	Nirmal	97,445	17.9	82.1	2,678	20.6	38,763	60.4	38,559	100.0	28	100
22	Mahabubabad	148,542	17.0	83.0	8,681	22.9	70,371	70.2	32,525	92.1	11,685	100
23	Jayashankar	86,363	16.9	83.1	2,944	20.4	30,591	55.8	28,672	89.0	9,520	100
24	Kamareddy	152,139	16.5	83.5	37,879	41.4	79,505	93.6	9,695	100.0	0	100
25	Nagarkurnool	121,091	16.0	84.0	4,986	20.1	66,410	74.9	25,803	96.2	4,544	100
26	Mulugu	64,286	13.8	86.2	4,074	20.1	14,920	43.3	31,407	92.2	5,028	100
27	Vikarabad	115,215	12.4	87.6	7,991	19.3	61,114	72.3	29,406	97.9	2,473	100
28	Komaram Bheem	78,107	12.3	87.7	4,487	18.1	23,067	47.6	28,567	84.2	12,353	100
29	Wanaparthy	71,709	11.8	88.2	14,954	32.6	29,376	73.6	17,702	98.3	1,246	100
30	Mahbubnagar	106,876	7.6	92.4	17,180	23.6	55,019	75.1	14,327	88.5	12,254	100
31	Jogulamba	76,792	6.0	94.0	1,670	8.1	46,949	69.3	8,567	80.4	15,024	100
32	Narayanpet	78,521	4.0	96.0	7,022	13.0	37,735	61.0	8,935	72.4	21,650	100
	Total	**3971924**	**34.7**	**65.3**	**497,881**	**47.2**	**1,498,688**	**84.9**	**448,713**	**96.2**	**149,966**	**100**

Source: Swachh Bharat Mission (G), 2021

Section – VI

Summary and Conclusion

IHHLs provide users with a private restroom and provide a safer and more hygienic alternative to open defecation in fields, bushes, or on beaches (WaterAid 2018). There are several secure sanitation systems available in India, including the twin pit, septic tank with soak pit, ecosan, and bio-toilets. The primary goal of the IHHL is to eradicate open defecation. Open defecation is defined as the act of someone excreting in a public place, such as a ditch by a road, a field, a forest, a bush, a body of water, or another natural area. According to World Bank data from 2017, proper waste management and disposal are major problems in areas with high open-defecation rates. According to open defecation statistics, areas with the highest percentage of residents who do not use toilets or other facilities for disposing of human waste tend to be those with low levels of education or poverty.

IHHL is one of the primary components of sanitation. Sanitation has been recognized as an important civic amenity and varied systems of construction and maintenance were in trend. Western countries have since implemented techniques to improve their sanitation systems. Global organizations, such as WHO and UNICEF combined report (2021) show that developed countries have good or better sanitation facilities than rural areas especially sub- Saharan Africa. As per the Joint Monitoring Programme's (JMP) 2014 study, 9 out of 10 people in rural areas defecate in the open, with 1 out of every 7 people having a particular site demarcated for open defecation. Rural families in India have the lowest IHHL coverage in the world, which is a grave concern in terms of using toilets to avoid illness and minimize the pollution of water and land. The WHO/ UNICEFJMP report (2021) also reveals that the world population expanded by 1.7 billion individuals between 2000 and 2020 but only 2.4 billion gained access to safe sanitation. WASH facilities in India are insufficient, resulting in malnutrition and poor health.

According to the MDGs, sanitation is a critical component of human life. Sanitation also includes garbage collection and wastewater disposal, as well as the system of regular maintenance of sanitation infrastructure. Improved sanitation facilities have multiple outcomes and significant impacts on health. Several studies emphasize the positive

contribution of sanitation on health, the growth of children, and reduced household expenditure on healthcare. The World Bank (2017) says that children who live in houses without running water are more likely to have stunted growth and anaemia, which is linked to a lack of access to clean water and sanitation. The SDG India Index (2021) reveals that, in India, half of the people receives piped drinking water within the household premises. States such as Telangana and Goa have already reached 100% IHHL coverage, and the SDG India Index also shows that IHHL is present in every household, while the lowest coverage (20.3%) is recorded in the state of Uttar Pradesh.

Findings of the Study

The present study found that, in India, since independence, both state and central governments have been working on improved sanitation. Yet, India has lagged behind the developed world and some neighbouring countries in meeting the standard in terms of sanitation. Recognition of the role of the state in improving sanitation infrastructure and access to toilets at a household level has gained attention since the mid-1980s. In this regard, the central government has recognized the importance of adequate sanitation and implemented a number of programmes to improve sanitation across the country, including the CRSP (1986), TSC (1996), NBA (1999), NGP (2003), and SBM *Gramin* and Urban (2014). Among these, the SBM has been the most effective and successful initiative in the sanitation sector, in its attempt to eradicate open defecation across the country.

There are four main parts to the findings and conclusion section: 1) the IHHL situation prior to SBM, 2) the IHHL situation following SBM, 3) the causes of IHHL coverage success and failure, and 4) the way forward.

1) IHHL situation prior to SBM: The census data in India presents the statistics of sanitation at the village level based on household data covering the entire country. The Ministry of Jal Shakti, NSSO, and NFHS also present sanitation-related data at the district and state levels. Despite the government of India and state governments' best efforts, access to safe and adequate drinking water and individual household toilet facilities remains a serious issue in the country. Constraints in achieving total sanitation were partly also due to a lack of real-time data on the gaps in the access to individual toilets, since the main sources of information remained decennial, the census and sample-based NSSO and NFHS reports merely presenting the broad trends. The nature of

planning and execution of sanitation programmes changed since the SBM was equipped with real-time data on household-level information required to cover all individuals.

This study also found that rural households had limited access to toilets whereas urban households had better access. In erstwhile Andhra Pradesh, 67% of households did not have access to a toilet within their home. A large section of rural India, i.e., 82% of rural households and 22% of urban households did not have access to IHHL facilities. Among three regions – coastal Andhra, Rayalaseema, and Telangana – Telangana had strong IHHL coverage in the erstwhile Andhra Pradesh because of Hyderabad and its neighbouring urban areas. Except for these urban centres, the rest of Telangana also had poor sanitation.

This study concludes that except for the Hyderabad district of Telangana, the rest of the districts lacked sanitary amenities. The drinking water supply in Telangana was also inadequate in addition to sanitary facilities. Both the Hyderabad and Rangareddy districts had acceptable drinking water facilities; however, Mahbubnagar and Adilabad had the lowest, as evidenced by the IHHL coverage of the two districts.

2) IHHL situation following SBM: Narendra Modi introduced SBM and set the goal of achieving 100% sanitation coverage by 2019. Due to the SBM (G) efforts, Telangana stood at the top with the highest number of open-defecation free (ODF-plus) villages under the SBM (G) phase-II programme, until 31 December 2021. The definition of an ODF plus village is "a village that maintains its Open Defecation Free (ODF) status, ensures solid and liquid waste management, and is visually clean." Of 14,200 villages, there are 13,737 villages on the ODF-plus list. Following Telangana, Tamil Nadu and Karnataka hold the second and third positions, respectively.

Before the SBM, Telangana was one of the country's bottom-ranking states. After the SBM, the state received the highest growth rate in sanitation coverage. Telangana expanded its IHHL coverage from 30% to 45% between 2014 and January 2017. The Karimnagar, Medak, and Nalgonda districts have improved significantly through this period. The districts of Adilabad, Khammam, and Nizamabad have high coverage rates, while Mahbubnagar, Warangal, and Rangareddy have low coverage rates. The Karimnagar and Rajanna Sircilla districts were the first to reach 100% coverage after district reorganization in 2018, with a few others coming close in 2019.

3) Causes of IHHL-coverage success and failure: The study has identified the following failure and success factors for IHHL programmes across the nation.

Failure factors of IHHL programmes:

- Poor response of the people in favour of individual toilets was a result of several factors, including perceptions, physical conditions having a bearing on the sanitation facilities, state commitments, and implementation strategies vis-à-vis people's participation, among others. While physical conditions like shrinking open spaces, changing land use with growing non-farm areas, and population density made it less feasible for the practice of open defecation to continue, other changes in terms of growing access to the water brought in major improvements in the attitudes of people. Implementation factors that transformed the scheme into a successful mission include a convergence approach, direct cash transfer, programme planning and targets based on updated data, realistic financial assistance, and effective M&E systems.

- In India, the TSC focused more on IEC, human resource development, and capacity-development activities to raise awareness among rural populations and generate demand for sanitary facilities. This increased people's ability to select appropriate solutions through alternative distribution systems based on their financial circumstances. In acknowledgement of their accomplishments, financial incentives were provided to BPL households for the development and use of IHHLs. The initiative resulted in positive developments in rural and urban areas in the direction of IHHL construction.

- The study concludes that, national and international organizations, and individuals have influenced the common public's attitude regarding toilet construction and use. India is in a favourable position in the world ranking system as a result of this. Despite having a large number of households (almost 25 crores), the country was accorded ODF status, demonstrating our strength to the rest of the world. Fourteen tribal concentrated or backward districts in the state fell below the state average sanitation coverage in 2017 (CESS 2017).

Success factors of SBM:

- Prior to 2011, India was one of the countries with the high rate of open defecation in the world. However, with this major effort through SBM, India became the

model and the world's first largest-populated ODF country or 100% IHHL-coverage country in just five years (2014–19). The fact that SBM (G) increased the incentives from Rs 10,000 to Rs 12,000 is one of the primary reasons for its success. In comparison to earlier initiatives, awareness levels were raised and the water supply in household premises was improved.

- The IEC material contribution to the programme's total cost was also increased to 8%. The construction and maintenance of this programme were both overseen by the relevant authorities (GPs). The SBM eliminated redundancy by integrating the IHHL's coordinates and beneficiary photo-uploading mechanism into a customized app. It is also important to note that the payment procedure is now entirely overseen by the SBM, whereas, previously, the MGNREGA was responsible for a portion of the funds.

- Overall, the SBM's success illustrates that political health and community efforts can yield significant results. Strong IEC materials and activities such as posters, slogans, movies, and messages; NGP awards; departmental collaboration; funding-related initiatives such as budget allocation, fund transparency, and direct transfers to beneficiaries; model villages; VWSCs; running water availability; people engagement; and behavioural changes are all actively involved in achieving the ODF status at the state and country levels.

- The personal interest of the district collector, competition with other districts, and regular reviews contributed to the expansion of IHHL coverage on a country and state level. It occurred as a result of the governments and citizens' active participation, resulting in significant policy accomplishment. The SBM programme has now established itself as a global example for other countries to follow, which has contributed to a huge social revolution by assisting in the construction of toilets.

- Tata Trust first started the "Tata Water Mission" and is also working to improve access to healthy water and environmental sanitation. To make a major difference, the trust partnered with the Ministry of Drinking Water and Sanitation and SBM (G) in 2016 to launch a joint project. In this, young professionals (*zilla swachh Bharat preraks*) have been tasked with assisting district governments in effectively implementing the SBM (G) in rural India to help the mission's on-ground implementation.

- Many national and local NGOs and individuals also helped achieve ODF in the state as well as the country. Dr Bindeshwar Pathak of *Sulabh Sauchalaya* has done tremendous work in the sanitation field and has changed the concept of sanitation in India. He is also well known as a leader and a "sanitation guru" for eradicating manual scavenging. He has dedicated the last few decades to improving the lives of millions of people throughout India and the world.

- According to the World Bank Group (2021), there are many formal and informal mechanisms for learning and adaptation, ranging from peer reviews of progress and monthly leadership video conferences to WhatsApp groups that cross hierarchies and enable almost immediate feedback loops, adaptive implementation, and success recognition. State and local governments have accelerated the adoption of new ideas as a result. The two main areas in the government's 10-year vision, "Realization of *Sampoorna Swachhata* by 2029", are the sustainability of ODF results and the management of solid and liquid waste.

Benefits of IHHL:

- People's attitudes toward IHHLs have shifted as a result of two factors: 1) shrinking open space for open defecation. This implies that, formerly, there was low population density and plenty of open space, but that situation has changed rapidly as a result of population growth; 2) safety of women has become a major concern in both urban and rural areas with the growing incidence of sexual harassment of girls and women without access to individual toilets.

- WHO (2019) reveals that the SBM initiative has helped save the lives of up to 3.0 lakh individuals from water-borne diseases. The SBM raised IHHL coverage from 40% to 71% across the country (NSSO 2018). According to the SBM (G) annual report (2021), the UNICEF revealed that (2017) the progress of toilet use in the country has also improved, and it has also saved people money, which is spent on the health sector.

- Many health and hygiene problems can be avoided by using a toilet. Water and soil pollution, stunting, several water-borne diseases, diarrhoea, and other sanitation diseases are reduced when human excreta is safely disposed of. The NFHS statistics on stunting also show a downward trend across the country, falling from 38% to

35% in the NFHS-4 to -5 report, indicating low educational outcomes. The use of toilets improves both the health of children and the progress of the country as a whole and also reduces the risks to adolescent girls and women.

4) Way Forward

- Although the SBM and other government data suggest that the state has achieved 100% IHHL coverage, reports from UNICEF, WHO, NFHS, and CESS demonstrate that open defecation is still practised in rural areas.
- According to the NFHS-5 (2019–21), improved sanitary facilities were found in 76.2% of Telangana households, with 72.9% of rural households, and 81.8% of urban households. It shows that approximately a quarter of the population in the state still does not have access to a toilet. Sanitation-facility coverage increased from 52.6% to 76% during the NFHS-4 to NFHS-5 period.
- Despite significant achievements, there is a need to address the gaps in order to achieve the goal of universal coverage under the SBM mission because open defecation still exists throughout the country, particularly in rural regions. The total achievement of universal coverage rests on the critical role of the local bodies. Panchayat Raj Institutions (PRIs) should now focus on identifying LOBs in communities and supporting human behavioural changes, like encouraging the most marginalized households to construct IHHLs or motivating those who have an IHHL to use the toilets, which is a big challenge for the government and stakeholders as the target groups are small in number and highly dispersed.
- One of the influencing factors that motivate individuals to use toilets is the availability of water services in all dimensions (CESS 2017). Proper drainage connecting to public sewerage, ensuring adequate water supply – particularly through PWS in the household premises with running water in the toilets, improving toilet structure in terms of ensuring privacy – especially for women, being sensitive to the needs of children and the elderly, and raising public awareness about the benefits of using the toilets can lead to a significant reduction in open defecation.

Recommendations

The following gaps should be addressed in order to encourage individuals to utilize IHHLs:

- Targeted and group-specific IEC strategies should be developed in order to mobilize dispersed households that should be encouraged to adoption the IHHL.
- Rural residents should be taught the value of sanitation (IHHLs) through cultural activities and the use of contemporary technology, such as television, print media, and mobile applications.
- To encourage LOB households to adopt IHHLs, local bodies and community involvement should be strengthened.
- To keep up with escalating material and service labour costs, the government should increase budget allocations.
- The campaign needs to be strengthened to address the needs of the expanding population and new households. Along with improved sanitation facilities in public spaces, the campaign should be strengthened to ensure appropriate behavioural changes from the household level to the community level.
- Due to the identified gap in IHHL statistics and actual values, a systematic study based on SBM statistics at the state level must be conducted.

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