



Ethnography of Sanitation in Small Towns

A Study of **Angul** and **Dhenkanal**, Odisha

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1. INTRODUCTION

A global study (UNICEF&WHO 2012) reported that by the end of 2011, there were 2.5 billion people in the world who still did not use an improved sanitation facility. Of these, 761 million used public or shared sanitation facilities and another 693 million used facilities that did not meet minimum standards of hygiene. About 1 billion (15% of the world population) still practise open defecation (OD), out of which 626 million live in Indian. The Census of India, 2011 reports that 46.92% (Rural-30.74% and Urban-81.36%) of households have latrine facilities, 53.08% (Rural- 69.26% and Urban-18.64%) of households have no latrine facility and 49.84% (Rural-67.32% and Urban-12.63%) of households practise open defecation. A disaggregation of the data by city size reveals that the smaller the size of the city, the greater the prevalence of open defecation. In cities with a population of less than 20,000 households, open defecation is practiced by 68% of the population.

As per the 2011 Census, the state of Odisha with a high decadal population growth and an urban population of 42 million lacks toilet coverage for 35.2 % of its urban residents. It is second only to Chhattisgarh where 39.8 % of urban population lack toilet. More than 33% of Odisha's urban population defecate in the open. Septic tanks and pit latrines predominate in the urban areas. In the absence of regular Faecal Sludge Management in small and medium towns, most of the faecal sludge remain untreated and pollute the environment.

Sanitation is a state subject in India and the states are allowed to make their own sanitation policy following the national guidelines. The National Urban Sanitation Policy 2008 was one of the first to focus on sanitation; it directed the cities to make city sanitation plans. Sanitation was partially addressed through housing programmes under the Jawaharlal Nehru National Urban Renewal Mission (JNNURM, 2005) with its two pro-poor reforms - Integrated Housing and Slum Development Programme (IHSDP) and Basic Services for Urban Poor (BSUP) and the Rajiv Awas Yojana (RAY 2010). Swachh Bharat Mission (SBM) Urban was launched in 2014. One of the objectives of SBM is to make India open defecation free by 2019. In addition to national policies, Odisha has its WATSAN policies and strategies such as Odisha State Water Policy 2007, Odisha

Urban Sanitation Strategy 2011 which was revised in 2017, Odisha State Urban Water Supply Policy 2013, Odisha Urban Sanitation Policy that deal with provisioning of water and sanitation facilities for the urban poor.

A UNICEF & WHO (2012) study reveals that OD is neither related to education and literacy status nor is related to poverty. In the poorer part of rural sub Saharan Africa, only about 35% of households defecate in the open and in rural Bangladesh only 5% of people defecate in the open. Studies of rural societies in India indicate the significance of socio-cultural factors of caste, purity and pollution influencing sanitation (Khare 1962; Dube 1958; Srinivas 1952; Beans 1981; Luthi 2014; Coffey et al 2015). However, it is not known to what extent the same socio-cultural factors affect sanitation in urban areas. These factors are particularly pertinent in the context of small cities like Angul and Dhenkanal that are located close to villages and are characterized by the rural-urban continuum. The economic spaces of a city depict the social groups of the inhabitants as slums and informal settlements are mostly inhabited by low castes and tribal groups. The spatial socio-economic segregation of a city provides sites for studying existing sanitation facilities or their absence, and the perception and behaviour of the residents towards sanitation. Besides, regional cultural behaviour pertaining to sanitation is also a dimension that provides insights into the sanitation practices in small cities.

This study attempts to provide an ethnographic understanding of urban sanitation in two small cities. The overarching question the study addresses: to what extent and in what ways do socio-cultural norms, behaviour and practices influence sanitation in small towns? The study gives special consideration to perceptions and practices of the poor relating to sanitation, particularly human excreta. As the study shows, culture is not an isolated phenomenon; culture interacts with other aspects of sanitation such as infrastructure, technology, and governance, influences them as well as gets influenced by them. Angul and Dhenkanal are caught in the cusp of tradition and modernity where they coexist, and that determines much of sanitation practices and behaviour.

2. CITY PROFILE

Angul is an industrial city surrounded by a number of public and private sector mining companies. The district, however, is predominantly rural with only 17% of its population residing in urban areas. Angul town became a Notified Area Council (NAC) in 1955, and was extended in 1977 to include two villages- Hulurisingha and Baniabahal and part of Turanga forest. Angul became a municipality in 2008. It is spread over 19.24 sq.km and has 23 municipal wards.

Dhenkanal is an administrative city. Dhenkanal district is predominantly rural with a few mining based industries. Dhenkanal municipality was constituted in 1951 covering the village Nizigarh i.e. Dhenkanal town. Subsequently, 12 more revenue villages were included in the municipality in 1975. Dhenkanal municipality has 23 wards.

Both Angul and Dhenkanal are two small cities in Odisha with an urban population of 43,794 and 67,414 respectively, which includes 5,039 Scheduled caste (SC) population and 1,473 Scheduled tribe (ST) population in Angul, and 1,1105 SC population and 4,095 ST population in Dhenkanal (Census 2011). The slum population in Angul is 10,950 and 7,821 in Dhenkanal (ibid).

The Census 2011 data reveals a dismal situation of sanitation in both these towns with OD as high as 35% in Angul and 39% in Dhenkanal. 64% of households in Angul and 59.8 % of households in Dhenkanal have latrines within the premises. About 43% of these households in Angul have onsite sanitation facilities such as septic tanks and other onsite systems, and in Dhenkanal 48% of households which have latrines within the premises depend on onsite sanitation facilities.

42% urban households in Angul and close to 23% in Dhenkanal have access to tap water from treated sources and 58% households in Angul and 53.4% in Dhenkanal have drinking water source within the premises.

Angul municipality has 27 slums, out of which 13 are unauthorized and 14 are authorized. Dhenkanal has 17 slums, all of which are authorized.

3. METHODOLOGY

3.1 Sample selection

The urban poor in Angul and Dhenkanal live in slums and mostly belong to low castes and tribal groups. The spatial and socio-economic segregation of the spaces of a city thus provides sites for studying existing sanitation facilities or their absence, and the perception and behaviour of the poor towards sanitation.

The slums were selected through purposive sampling method. The slums were selected to include authorized/ unauthorized slumsⁱ, slums inhabited by Scheduled Castes (SC), slums inhabited by Scheduled Tribes (ST), slums inhabited by mixed castes where the low castes live with upper castes and other backward castes (OBC), slums located on canal banks, slums having forests in the vicinity and slums where people have houses provided under the Integrated Housing and Slum Development Programme (IHSDP).ⁱⁱ

Out of 27 slums in Angul, 10 were selected for the study. Out of 17 slums in Dhenkanal, 11 were selected for the study.

The study covers 10 slums in Angul out of which 5 are unauthorized and 5 authorized. The authorized are formally recognized as slums. The unauthorized slums are not formally recognized, and the residents, therefore, have no record of rights to the place where the slums are located. The majority of slum households and respondents covered in this study belong to the Scheduled Caste (SC), the majority among the SCs are lowest of the low in the caste hierarchy and belong to the untouchable castes. Out of the 10 slums studied, 4 are inhabited by SCs, 4 by mixed caste groups inhabited by high castes, OBCs and SCs one slum is exclusively inhabited by the tribal (Kandha), and one other slum by a caste (Tiara) that is listed as SC but is slightly above SCs in social status.

The study includes interviews of a few non-slum households to juxtapose sanitation practices, particularly related to location and use of toilet, with the slum dwellers. These non-slum households include middle class as well as wealthy households whose income puts them far higher the slum dwellers.

The study covers 11 authorized slums in Dhenkanal out of which five are inhabited by Juang and Saar (Sabar) tribes; 6 are inhabited by SCs which includes the castes that are considered socio culturally untouchables. Out of six SCs slums, four are inhabited by the untouchable castes and two by mixed castes

i. The authorized slums are formally recognized as slums. The unauthorized slums are not formally recognized, and the residents, therefore, have no record of rights to the place where the slums are located.

ii. IHSDP is one of the sub components of Jawaharlal Nehru Urban Renewal Mission, which is an urban housing programme.

where the untouchable castes live with other SCs, high castes, OBCs, and tribal groups. Besides, interviews were conducted with women in the Sweeper Colony, which is not a full-fledged slum, but has a few houses constructed by the government to provide housing to municipal sweepers. Interviews with manual scavengers were conducted in another small cluster of houses where they live.

Altogether, the study covered 21 slums, out of which ten are SC slums, six are tribal slums, and five slums are inhabited by both, upper and lower castes.

3.2 Methods of data collection

The study used ethnography to explore cultural behaviour, perception and practices. The sanitation infrastructures were physically surveyed. Additionally, the study carried out discussion with municipality officials and representatives of a Non-Government Organisation (NGO) working on sanitation in the two cities.

The following methods were used for data collection:

- Focus group discussion with the Presidents and Secretaries of Parimal Committees formed by Project Nirmal. Each slum has a committee. The participants represented seven slums in Ward#8.
- Group discussions with slum residents in all the slums studied
- 20 Individual interviews with: slum leaders, mostly women in Angul, and both men and women in Dhenkanal; sweepers; manual scavengers, beneficiaries of the HSDP scheme.
- Interview with the city municipality staff – Executive Officer, Sanitation In-charge, Community Mobilizer, Assistant Engineer, Tax Collectors, and Councillors.
- Discussions with Project Management Unit (PMU) staff of Project Nirmal (A pilot demonstration of decentralised sanitation system in Angul and Dhenkanal by Centre for Policy Research, Practical Action, Arghyam and Bill and Melinda Gates Foundation).
- Interview with the managers of two public toilets in Angul.
- Survey of the houses constructed under IHSDP scheme in two slums in Dhenkanal.
- Observation of the quality of physical infrastructure related to sanitation, the location of toilets, and the location of water sources.

The fieldwork for the study was conducted during 2016-17.

TABLE 1 :

Angul - The slums and their social composition

Name of the Slum	Caste/tribe
Hadi Sahi	SC
Ghasi Shai	SC
Subhagya Nagar Hadi Sahi	SC
Paan Sahi	SC
Tiara Sahi	SC
Radha Madhav Pada	Upper and lower caste
Radha Raman Pada	Upper and lower caste
Silpanchal	Upper and lower caste
Women's Hostel Backside	Upper and lower caste
Kandha Sahi	ST

TABLE 2 :

Dhenkanal - The slums and their social composition

Name of the slum	Caste/tribe
Kathagada Juang Sahi	ST
Kathgada Saar Sahi	SC
Banamali Prasad Juang Sahi	SC
Korian Juang Sahi	SC, ST, OBC
Alasua Saar Sahi	SC
Murudangiya Danda Sahi	SC
Murudangiya Godi Sahi	SC
Murudangiya Harijan Sahi	SC
Banamali Prasad Hairjan Sahi	SC
Alasua Dam Sahi	SC
Khamar Bila Sahi	SC, ST, OBC

4. DESCRIPTION OF THE SLUMS STUDIED

4.1 Tribal slums in Dhenkanal

Banamali Prasad Juang Sahi and Kathagada Juang Sahi are two slums inhabited by the Juang tribe. The slums are quite old, inhabitants trace them back to more than sixty to seventy years ago. Kathagada Juang Sahi was settled in 1953. A person named Parashu Mahapatra played an instrumental role in settling the Juangs through a lease agreement made for five years. No lease has been made subsequently. As a result, none of the households own their homestead land. Banamali Prasad Juang Sahi was settled on the private land of a person named Banamali Prasad. Here too only a few households have ownership of the homestead land. Kathagada Saar Sahi and Alasua Saar Sahi are inhabited by the Saar/Sabar tribe. There is a confusion about the name as the original Sabar has been misspelt in official documents as Saarⁱⁱⁱ. In both the slums, some households own land and some don't. These two Saar slums have IHSDP houses. Korian Juang Sahi, known as Kurumdipi among the inhabitants, is a slum where the Juang and the Sabar live together. There are a few OBC and Harijan households in the slum. As with all tribal slums, landownership is an issue as there are households that do not possess land. Non-ownership of land partly comes from the tribal way of life- people treat nature as part of their life, and the legalities often escape them. All tribal slums are situated close to forests, and they are members of the Van Suraksha Samiti that is given the responsibility of protecting the reserved forests. They, however, have limited rights on forest produces.

Banamali Prasada Juan Sahi, Kathagada Juang Sahi and Korian Juang Sahi have no toilet and people defecate in the open. Even those who have an IHSDP house with a toilet practise open defecation in the forests. Most tribal families live in mud houses. One striking feature of tribal slums is the garbage disposal system. They gather garbage at the outskirts of the slum or behind the backyards and burn waste periodically. Only the big slums- Kathagada Saar Sahi and Alasua Saar Sahi have drains. Despite the fact that the other slums have no drainage, we did not see water accumulating on the streets. Compared to non-tribal slums, the tribal slums are quite clean. People share a common understanding of keeping their environment clean.

4.2. SC slums in Dhenkanal

Six slums are inhabited by SCs out of which four are inhabited by a single caste and two are inhabited by mixed castes. The single caste slums- Murudangiya Dam Sahi, Murudangiya Godi Sahi, Murudangiya Harijan Sahi, Banamali Prasad Harijan Sahi, and the sweeper colony are inhabited by Hadi, Ghasi, Mehtar- the lowest of the low, who work as sweepers in the municipality, industries, hospitals, and hotels.

4.3 Mixed caste slums in Dhenkanal

In mixed- caste slums, the sweeper castes live with other SCs. In Alasua Dam Sahi, the Ghasi caste lives with the Paan caste, the basket and mat weavers, who are SC but not untouchables. In Khamar Bila Sahi, the Hadi caste lives with Paan. There are also a few Sabar households within the slum. Even though different castes live in a single slum, they have their separate segregated sub-hamlets. Other SCs consider the sweeper castes untouchable, and practice untouchability in the social interaction of sharing cooked food and matrimony. It is pertinent to note that untouchability is practiced with a caste as a whole, that is, even though a low- caste person is not working as a sweeper, she/he is still considered untouchable.

4.4. SC slums in Angul

All six caste slums are exclusively inhabited by a single caste as their names suggest- Ghasi Shai, Haadi, Sahi, Paan Sahi, Tiara Sahi, and all are part of Hulurisingha, which was a village before it became a part of the municipality. Saubhagya Nagar Hadi Sahi is a separate slum that came up later. Hadi and Ghasi belong to the sweeper caste and practice the traditional caste occupation. Tiara are listed as a SC though they are slightly above in the caste hierarchy due to their traditional occupation of fishing; they still continue to sell fish in the market.

iii. Personal communication with the residents

4.5 Mixed caste slums in Angul

Out of the four mixed- caste slums, three slums - Shilpanchal, Radha Raman Pada and Radha Madhav Pada are located on the canal bank. One slum is situated behind the women's hostel, and is thus named Women's Hostel Backside . These slums are inhabited by high castes, OBCs and SCs. Due to constraints of space, the households are in close proximity, and their everyday social interaction is not hampered due to caste. Yet, untouchability is practised. The SCs are not supposed to enter the kitchens of the high castes or touch their utensils. Social restrictions in marriage and food are practised. Caste rigidities are relaxed in public spaces of festivals.

4.6 Tribal slum in Angul

Angul has only one tribal slum- Kandha Sahi, which is part of Hulurisingha, and is exclusively inhabited by the Kandha tribe.

4.7 Occupation of slum households

Slum residents (male) in both the cities are engaged in a variety of occupation: construction worker, painter, auto driver, trolley driver, mason, weaver, fish seller, daily wage worker in shops and markets, municipal and privately hired sweeper and some of them have small businesses. The slum residents in Dhenkanal also work as agricultural labour and cultivate land as share croppers. In Angul, many slum residents work in industries. Slum women work as daily wage workers and domestic help; some have their own small shops where they sell grocery and snacks. Tribal women in Dhenkanal do not work as domestic help. They gather wood and twigs from forests, which they sell in the market.

4.8 Poorest among the poor in the slums

In some slums a few households are located at the periphery of the residential area. These are the poorest households. In Radha Madhav Pada, houses are on the side of the canal while

other houses are located at a distance from the canal and on the other side of the road that separates the houses from the canal. In Ghasi Sahi, people live close to the space used for open defecation. In Murudangiya Danda Sahi, people live in the low lying part of the slum. In Radha Raman Pada, they live close to the open drain. Compared to other slum residents, their houses look dilapidated, and they seem to be living in isolation without regular interaction with other residents. Not only is there lack of social interaction, in some cases there is active rivalry. In Radha Raman Pada other slum residents are advocating for the demolition of the houses of the poor so that the drain can be cleaned.

4.9 Spatial geography of the slums

The spatial geography of the slums is determined by both economic and social relations. In Angul, the slums that have come up due to migration of labour to the city accommodate the poor in the peripheral spaces of the city, spaces that are either abandoned or not used for habitation such as canal banks and drain sides. These are unauthorized slums, which, to use official language, are illegally occupied by people. While basic services such as ration card, road, water and electricity are provided to the unauthorized slums, the right to land is not recognized.

The very geography of their habitat excludes slum residents from other city residents, setting them apart as a group that has no possibility of inclusion in the liveable areas of the city inhabited by most of the city population. In the slums that co-exist with the non-slum areas, it is not uncommon to find homes of the well-off population close to a slum. However, these buildings punctuating the slums mark them as different in social and economic status rather than integrate. The poor, low-caste and tribal people live in bounded areas, boundaries marked by social and economic exclusion and marginalization. The slums set off their population as distinct, eligible for certain municipal services but not all.

5. PURITY AND POLLUTION

The traditional norms of purity and pollution have been crucial in determining sanitation practices in India. Though rural areas are still governed to a large extent by these norms as the studies indicate, some of these are relaxed in the urban context due to constraints of physical space within which the cultural norms are practiced. There is also adaptation as modern notions and technologies of sanitation begin to influence the sanitation practices in cities.

Douglas (1960) views pollution as intrinsic to cultures and there are norms of prohibition revolving around pollution. The Hindu cultural norms of pollution and purity have many dimensions that revolve around the connotations of dirt and pollution, purity and cleanliness, physical spaces as pure or impure and the human body as a site of purity and impurity.

Dirt

There are two connotations of dirt: actual physical dirt, for example, human excreta and garbage, and cultural dirt, for example, menstruation, birth and death. Dirt is viewed as a pollutant and a sign of disorder; consequently, cleanliness is considered pure and orderly (Beans 1984; Luthi 2014; Srinivas 1958). A Hindu household has to keep dirt away for both physical and cultural reasons. Sometimes the boundary between physical and cultural dirt is thin. Human excreta is considered physical dirt. However, even when modern toilet technologies make the dirt invisible and destroy the toxic potential, excreta is still considered dirty, and toilets are to be at a distance so as not to pollute the pure such as food cooked in the kitchen and sacred spaces such as the places where deities are kept for household worship.

Not only is human waste defiling and impure, the body also becomes impure during the process of defecation and release of the dirt. Hence adults, both men and women, have to change into separate clothes when they go for defecation. Since the female body is seen as the carrier of purity of the inner space, women have to take bath in order to be ritually pure to enter the kitchen or place of worship as they begin their morning household chores. It is a morning ritual for both men and women to bathe after defecation so that their bodies are purified. A child's body is not considered ritually impure; a child's excreta can just be thrown into the drain or covered with soil.

Space

The inner space of the house which is the personal/family space is to be kept pure and well-ordered whereas the outer space which is communal can be impure and chaotic (Gupta 2003; Luthi 2014). The purity of the inner space must be guarded by

assigning separate spaces to different kinds of dirt—the toilet is to be kept outside the house, shoes to be kept outside the entrance, menstruating women are to stay away from the spaces of worship and cooking. The inner space of the house has to be ritually purified after the polluting period of birth/ death is over. The body has to be purified through ritual bath after the menstruating period is over.

The living space of the house is sacrosanct because it constitutes two sacred spaces: the space of worship and the space of cooking, and both spaces are to be kept pure by following prescribed norms. As women are assigned the responsibility of maintaining purity of the inner space, they have to take a morning bath to be ritually pure to worship or to cook.

Caste

Caste is at the heart of pollution and purity among Hindus (Dumont 1970; Srinivas 1958; Khare 1962; Beans 1981). The castes that deal with what is considered polluting—human waste, dead body, dirty clothes, human hair, skin of dead animal are considered impure and untouchable. Those who deal with human waste and dead bodies are considered the 'lowest of the low' and they work as sweepers and scavengers. They are the traditional bearers of night soil. The untouchable castes live in the outskirts of villages in separate hamlets away from the upper castes. In cities they live in peripheral, common places such as railway lines, river banks, close to morgues and slaughter houses (Guru 2000).

The pure castes risk the danger of pollution if they accidentally touch the impure castes. Traditionally, upper castes never cleaned their own toilets, and this practice still continues in different forms. In a Rajput village in Jaunsar Bawar, the toilets were abandoned because the untouchable Kolta caste lived at a distance from the village, and could not come regularly to clean the toilets (Khare 1962). In an instance that is quite revealing, the untouchable sweepers had to be brought from another city to handle dead bodies in the aftermath of the Tsunami in Nagapattinam, Tamil Nadu (Dutt 2016).

Caste also assigns differential physical substance to the human body. The low caste bodies are considered impure, filled with tamaguna (tama-evil /dark, guna- element) whereas the upper caste bodies are pure in substance (Davis 1976). The untouchables are thus not only prohibited entry into the inner spaces of upper caste houses, they are also prohibited from the bodies of the upper castes through restrictions of food and marriage. The upper castes do not eat food cooked by low castes; they do not marry the low castes. The concept of cleanliness is thus more social than physical (Milner 1987) as social order is to

be maintained through ritual cleanliness, and cleanliness may not necessarily be a matter of hygiene (Srinivas 1958). In caste connotations of purity and pollution, physically pure may not be ritually pure and vice-versa (Khare 1962).

Norms and practices of purity and pollution are followed by the castes residing in the slums of Angul and Dhenkanal though they have been relaxed to a certain extent due to constraints of physical space, adaptation to modern technologies and the imbibing of modern notions of sanitation. Even though the caste system renders them impure, the untouchables observe the norms of purity and pollution in their sanitation practices. They change clothes when they go out for defecation. They do not perform puja until they have taken bath. They also try to keep the inner space of the house pure. This indicates that the performative aspects of caste (Srinivas 1962) are practiced by the low castes to keep themselves ritually clean even though the barrier of ritual purity and impurity between the castes continues.

Life in mixed caste slums makes it difficult for upper castes to strictly practice the caste norms of purity and pollution, and they find ways to adapt to the physical setting. Living in close proximity to low castes means that physical contact is not only unavoidable, it is an everyday interaction within the same physical space. In spite of this, the two restrictions of food and marriage are strictly practised. A low caste neighbour can visit the upper caste, but will not touch the cooking utensils; likewise, an upper caste person can visit the low caste, but will not eat cooked food. In the collective celebration of festivals such as Ganesh Puja, Durga Puja and Lakshmi Puja, all households contribute money. Hence, the low castes and upper castes celebrate at the same place which makes it difficult to avoid physical contact. The upper castes, if they feel impure by such contact, take purification bath once they return home.

The connotations of physical dirt and ritual dirt influence sanitation behaviour in urban spaces, though there are varying degrees of compromise and adaptation in the urban environment. However, even the urban environment cannot make people compromise on what can be called the 'non-negotiable' aspects of culture. For example, even when people construct a toilet within the house, and the toilet co-exists with the pure spaces, the space for defecation has to be barricaded from the living inner space of the house. While the middle class can construct separate rooms as puja ghar (place of worship), kitchen and lobby that are barricaded from the toilet, which too is a separate room, for the poor, the physical space is too small to construct separate barricaded spaces for what is considered pure. Hence, people in slums prefer to construct the toilet outside the main living space, where they worship, cook, and

eat. While the well off households have toilets within the house, the septic tanks, unlike the pit toilets of the poor, keep the dirt away thus keeping the inner space both physically and ritually clean, whereas for the poor, having a toilet inside the house or too close to the house means that the inner space becomes impure both physically and ritually.

Regardless of the location of the toilet and the technology used, the toilet carries the connotation of being ritually impure. Hence toilet behaviour remains the same for both the better resourced households as well as for the poor. Women keep a separate sari that is used only in toilets. Men do not have separate toilet clothes; they often use the same towel they use for bathing, and wash the towel every day. The upper castes, even if they have no hesitation in cleaning their own toilets, still take a bath after cleaning the toilets. All castes, and rich and poor alike, employ manual scavengers from untouchable castes to clean the septic tank and pit.

In the absence of a separate puja ghar that the better off sections have, the slum residents in the two cities place the deities on shelves. The shelves are accommodated in the living spaces of a bedroom, which is sometimes the only room they have, and use for multiple purposes. The wall becomes the sacred space, co-existing with the profane of the bedroom. In some houses the shelves are placed in the kitchen.

A household kitchen in Odisha is not merely a space for cooking; it is also a space for worshipping ancestors called the Ishaan. The ancestors are placed in kitchen only when the kitchen is a separate space. The lack of adequate physical space means people either leave the Ishaan in their village homes if they continue to have relatives in the village, or they simply abandon the practice. The Ishaan is the most sacred among the sacred, and the sanctity of spirits, that are worshipped and that shower wellbeing on the family, cannot be compromised by locating

Sacred space of Ishaan





Deities placed on a shelf on a wall

them in a space that is not pure. The middle class homes have the Ishaan in the kitchen whereas for many slum residents living in congested houses the practice is just not possible.

Traditionally, women have been the custodians of the inner private space of the house. The slum women continue to perform that role. They keep the space physically clean by removing dirt and household garbage. They ensure that the inner space is not polluted by dirt that must remain outside such as shoes. The sacred in the inner space- deities and food- are touched only after women have their morning bath and change into fresh clothes. Even though men may perform puja, the daily ritual of purity is still assigned to women. Women change into separate clothes when they go for defecation; regardless of whether they go out for open defecation or use a toilet, the clothes have to be different from the one they wear in the house. Women refrain from puja during the time their bodies are considered impure such as during menstruation and post-delivery. The inner space is not only the space inside the house; it includes the outer space attached to the house. Every household worships the basil plant (tulsi) that is grown just outside their house. Women are assigned the responsibility of keeping the space clean.

Even though the outer space is considered masculine, women are still responsible for keeping it clean. That is why it is easier to organize women to keep the slums clean. Women predominate as members in the slum committees that have been formed by an NGO. The slum committees takes responsibility for keeping the streets clean and regulate the use of drains by restricting their use for defecation or disposal of household garbage. They

check the attendance of municipal sweepers assigned to the slum and lodge complaints if there is any irregularity. These outer spaces surrounding their houses or neighbourhood are considered an extension of the space that women must keep physically clean, even though the extent of their involvement, visibility and control over the space is regulated by men.

The tribal communities residing in the slums of Angul and Dhenkanal practice the Hindu cultural norms of purity and pollution in varying degrees. Anthropologists have classified tribes according to the degree of their assimilation into Hindu caste society and peasantry (Roy-Burman 1972; Vidyarthi 1977; Elwin 1944). However, it is beyond the scope of this study, to measure the extent to which the tribal communities in the two cities have been assimilated into Hindu caste society. There is no caste system among the Kandha, Sabar and Juang tribes. The strict rituals of purity and pollution governed by the caste system therefore are not followed. The tribes have their own rituals of purity and pollution, however, and some of these resemble those of the caste system, perhaps because of cultural assimilation due to living in close proximity. For example, the tribal people in Angul and Dhenkanal regard the Hadi, Ghasi, Mehtar- the castes that work as sweepers- as untouchable. They too follow the caste norms of social interaction such as avoidance of food and marriage with the low castes. 'They do the dirty/unclean work' is the reason the tribal people cite for considering the sweeper castes untouchable.

Sacred, or what is considered pure, is largely governed by tribal cultural systems of totemism and animism. The world of sacred is



Tribal goddess in a temple located in a tribal slum



Women perform puja in open spaces

comprised of natural objects such as trees and animals. Usually, the totem constitutes the symbol of the clan to which a sub-group of a tribe belongs. The totem is the sacred object that the tribal people worship, that they strive to protect from any harm. Like Hindus, tribal people too worship the tulsi (basil) plant.

Tribal communities have their own deities that are mostly goddesses. Besides, the tribal people worship other gods and goddesses that are worshiped by Hindus such as Laxmi, Durga, Ganesh and Jagannatha^{iv}. Tribal communities have their own

festivals such as Nua Khai and Push Parab. Tribal festivals are observed at the time of harvest or at the beginning of a season. Manabasa, the festival to rejoice new harvest, is celebrated by both Hindus and tribal communities.

A tribal household, much like a Hindu household, keeps their deities, mostly Hindu deities, inside the house. Tribal people worship the Ishaan much the same way as Hindus in Odisha do. The ishaan is kept in the kitchen; hence, the kitchen in a tribal household is considered the sacred space. The inner space of a household is considered pure because the sacred – the deities and the ishaan – resides inside the house. Hence, a toilet inside the house is considered impure unless the spaces are barricaded. If the living space is small and open, people refrain from constructing a toilet inside the house. This explains why people do not use the toilets constructed as part of the Integrated Housing and Slum Development Programme (IHSDP) dwelling units in Dhenkanal.

Tribal women, like Hindu women, are the custodians of the inner space, responsible for maintaining the physical and ritual purity of the space. However, unlike Hindu women, tribal women do not strictly follow the daily ritual of puja in the house. They do follow the ritual of having a bath as a purification ritual to enter the kitchen. They too change their clothes when they go out for defecation. They also follow purity/ pollution rituals related to birth and death.

iv. Legends say that the Sabar tribe is the original worshiper of Jagannath.

6. OPEN DEFECCATION

The OD sites used by the slum residents in the two cities comprise a variety of land: government land, private land, and land belonging to a temple. In Angul, the OD sites include the bank of a canal, a privately owned wasteland, the field of a government institute, and a piece of private land that was not in use until recently. Forests, canal banks, ponds, agriculture fields, road sides (highways) and temple land^v are used as OD sites in Dhenkanal.

The OD sites are governed by an informal understanding between the owner(s)- the government/private owners/ temple trust- and those using them for OD. While occasionally people are threatened and abused, and at times non-slum residents of the area barricade the spaces, people continue to use the sites until such a time when the space ceases to exist as in the case of Angul where OD on a private plot of land could no longer be practised due to the construction of new houses or the land of a college where a hostel for women has already been constructed (the slum ironically or appropriately is called Women's Hostel Backside). There is also a discreet choice of spaces for OD as not every open space available can be used; for example, parks are not used for OD while roadsides are used. There is a tacit understanding about the space that can be used for OD; spaces that will definitely invoke public rage, or are not accessible because they are marked for a certain kind of use, such as parks, are not used for OD. The OD spaces are thus governed by an

understanding about what is permissible and what is not. OD is based on the traditional understanding of open /outside spaces as communal, accessible to all, and which can be used without any regulation. The slum residents, however, also imbibe the notion of public space as civic space with meanings of health and hygiene attached to it. The public spaces that are regulated by government norms as civic spaces are not to be violated.

OD exposes people to shame; people thus try to minimize this by using the sites early in the morning or later in the evening so as to avoid coming under the direct gaze of the public. However, certain spaces, particularly if they are not totally open such as the lower edge of a canal, are used even during the day time. In specific situation, such as illness, people are forced to go out for OD even during a time of the day that they would not prefer otherwise.

The OD spaces are often gender segregated – the spaces for men and women are usually different. The segregation occurs informally, governed by norms of shame, avoidance and kinship on the one hand, and on the other restrain men from appropriating the space for OD. The absence of such segregation has the potential of restricting women's access to OD sites, and consequently leading to social conflicts. The segregation of spaces, however, does not imply that the spaces are 'safe' for women. The social understanding of spaces is violated by the risk of physical abuse women face. OD is practised not only by

Open defecation fields



v. The temple has agricultural land that belongs to the temple trust. This land is used for OD.

those who do not have toilets; even those who have toilets go out for OD as they use the toilet selectively: during the night, during illness, during the rainy season, and often it is only the old people and women, particularly pregnant women, old women and adolescent girls, in the family who use the toilets. There are many reasons why those who have toilets at home do not use them: they fear the pit will get filled too soon; the cost involved in cleaning the pit; the feeling that dirt, though underground, is too close to the living space as people have small dwellings; cultural reasons of purity and pollution as the toilet is too close to spaces of worship and cooking; and the social norms of shame and avoidance that restrain defecation in the presence of the elderly, males, and guests. Water is a major constraint in using toilets at home as the water supply in the slums is erratic and inadequate.

In deciding priorities, slum dwellers prefer to spend their money on a house than on a toilet because a house is for safety and shelter whereas there can be alternatives to a toilet. The construction of a toilet at home is determined by many considerations ranging from financial resources and availability of physical space to reasons of purity and pollution that becomes particularly constraining due to the small dwellings in which people live. A baseline study^{vi} too reports the constraints the poor face:

“Toilet aspiration among urban residents is high, but challenges with land tenure system, lack of space, gender constraints and high cost of available toilet technologies limit the construction of household toilets. Households face many competing demands when it comes to spending; the lower the income, the more these competing demands will influence behaviour. Households with strong financial pressures will often place a lower priority on sanitation. Poorer families with big family size might more often give priority to an extra room instead of a latrine.”

There are instances, however, that indicate that even the availability of space and resources may not necessarily make people choose to construct household toilets. In one such case, we found that the head of the household had preferred to construct a two storeyed house, a floor each for his two sons, but did not consider a toilet as essential. However, he had attempted to construct a toilet outside his house, at his backyard, on his neighbour's land, this resulted in conflict, and he had to withdraw. The women in the family stressed the need for a toilet. When asked why he did not consider their need, he shrugged it off saying, “My responsibility was to provide them a good house to live in. My sons are responsible for providing

what their families need.” This may be an isolated case, but this indicates that while deciding priorities male members of family may not necessarily consider the needs of female members.

As OD sites are closed down or become difficult to access, people come under pressure to construct toilets. Incidentally, the slums that have close to 100% toilet coverage are unauthorized where people do not have records of the right to land, yet due to difficulties in accessing OD sites they have invested in toilet. This indicates that as long as OD sites can be accessed, the poor are less likely to construct and use toilets. However, having a toilet in the house premise does not automatically mean that the practice is hygienic. As mentioned above, due to the small size of the houses and insanitary pit toilets that are often wet and emit foul odour, people live in an unhygienic environment.

OD is inconvenient for all but specifically challenging for women. Women have to maintain a certain time for it, usually either early morning or after dark. There is no formal prohibition that regulates OD during day time, but women feel ashamed because open spaces are for men, and public gaze is to be avoided. The connotations of the masculinity of open space on the one hand, and sexuality and shame of the female body on the other, regulate the OD time for women. While OD at night is risky for all women due to physical violence they might face^{vii}, it is an added burden for pregnant women, sick women, and old women. Menstruating women face risks of hygiene when they go for OD because the water they carry is limited to have an adequate wash, or they have to wash in public ponds and canals.

In the absence of toilets or due to the practice of using toilets selectively, OD is a common practice even though people find it inconvenient, and there are physical risks at night, particularly for women. The practice can also pose health threats due to the space that is being used for OD. For example, the open field that is used by residents of Ward No. 8 is inundated with wastewater from a hospital. Though people are aware of the risks, they still continue the practice.

Human excreta is perceived as physically dirty and ritually impure, and OD is regarded as the natural way of releasing it. It does not pollute the fields; it is turned into fertilizer through the natural processes of sun and soil. In people's perception, OD per se does not appear to be a problem. As migrants from villages they are used to OD. What they find difficult is the distance, lack of privacy, and the physical and health risks. While men don't feel strongly feel the need for toilets at home, particularly for themselves, women almost unanimously express the benefits of household toilets.

vi. A baseline study (i-concept 2015) was conducted in Angul and Dhenkanal in 2015.

vii. Studies (Bapat and Aggarwal 2003; Srinivasan 2015) show sexual violence and the fear of such violence in Indian cities.



Women's voices

Young women in Dhenkanal said that when they go for OD they are watched by men who are always lurking behind the bushes.

A woman in a slum situated just below a forest said, "We go to the forest for OD, but when it rains, our houses get inundated with water from upstream, and it is filthy water."

When asked why she does not like to go out for OD she said, "Earlier we didn't know the health risks posed by OD, now we are aware and would not like to go out".

Women in a meeting collectively said that OD in Angul is difficult. Villages have more open space and no one is watching them whereas in the city they feel they are constantly being watched.

Many women in both the cities said they cannot go alone at night

A newly married woman in Dhenkanal said, "I eat less so that I don't have to go out to defecate at odd hours."

Many women expressed that it is shameful to shit in the open when people are passing by.

People don't perceive OD as a cause of environmental pollution unless they are close to a source of drinking water or human habitat. "The open field organically turns the night soil into compost / fertilizer, and it is good for the soil", they say. We heard from the retired staff of Dhenkanal municipality about the practice of composting sludge that was practiced by the municipality. Farmers from nearby places used the compost as fertilizer. However, not many have awareness about it. Perception towards mechanized processing of human waste varies. Not only people are unaware of such processes, they are also sceptical about its use in their homes, whether as fertilizer or as a source of energy, because even when it is sanitized, it still remains impure.

7. INFRASTRUCTURE

The majority of slum households use pit and improved pit toilets. Many of these toilets are poorly designed and lack adequate technology. Some households have connected their toilets directly to drains /canal thus discharging effluent into open drains and the canal. Not all toilet structures used for defecation have superstructure- some are without the superstructure, and some have half-erected ones covered with clothes, rags and plastic bags.

Slums located on canal banks have toilets as the canal banks have parallel roads that are quite busy during the day thus exposing people to public view; in another slum, people have constructed toilets as the field they were using for OD is no longer an empty space. Even though these slums are unauthorized and people do not have rights to land that make them vulnerable to eviction, they have still invested in toilet construction. In other slums where OD sites previously used are getting difficult to access, people are contemplating construction of toilets.

Those who have toilets have invested their own money to construct toilets. The design and construction of toilets are often done by people from within the slum, particularly by the construction workers and masons who are hired at a low and affordable cost.

As is evident in the two cities, the poor can only afford low cost insanitary toilets, and they don't use these until they are forced by health conditions, toilet timings or closure of OD sites. Even when they use toilets, many of them still use insanitary pit toilets. It thus seems that the poor have no choice but to resort to unhygienic practices whether they go for OD or use toilets within their houses.

In deciding priorities, slum dwellers prefer to spend their money on a house than on a toilet because a house is for safety and shelter whereas a toilet can have alternatives. The construction of a toilet at home is determined by many considerations ranging from financial resources and availability of physical space to reasons of purity and pollution that becomes particularly constraining due to the small dwellings in which people live. As OD sites get closed down or become difficult to access, people come under pressure to construct toilets. However, having a toilet in the house premise does not automatically mean that the practice is hygienic. Due to constraints of physical space and the insanitary toilets the people use, the boundaries of ritual and physical dirt gets blurred for the urban poor. The poor therefore prefer to construct toilet outside the house and outside the living space. When a house is too small and a toilet is located inside the house, people are more likely to refrain from using toilets.

Those who have toilets in the cities (other than IHSDP) have invested their own money to construct toilets. The design and construction of toilet are often done by people from within the slum, particularly by the construction workers and masons who are hired at a low /affordable cost. In Silpanchal, we met a female

Types of toilet in Angul slums



Types of toilet in Dhenkanal slums



mason who has constructed toilets for the slum residents. Only in the instance when a mason is not available from within the slum do people hire from other slums.

Slums on canal banks such as Silpanchal, Radhamadhav Pada, Radha Raman Pada have toilets as the canal banks have parallel roads that are quite busy during the day thus exposing people to public view; in another slum (Women's Hostel Backside) people have constructed toilets as the college field they were using as OD is no longer an empty space. Even though these slums are unauthorized and people do not have right to land making them vulnerable to eviction, they have still invested in toilet construction. In other slums such as HadiSahi and Saubhagya Nagar, many are contemplating construction of toilet as the two OD sites previously used are getting difficult to access.

As is evident in the two cities, the poor can only afford low cost insanitary toilet, and they don't use it until they are pushed by health conditions, toilet timings or closure of OD sites. Even when they use toilets, many of them still use insanitary pit toilets. It thus

IHSDP in the tribal slums

The IHSDP is being implemented in the slums in Dhenkanal since 2008. The scheme is comprehensive and provides each select household a dwelling unit, and each select slum is provided with water supply, drainage, road, electricity, community centre, solid waste management / garbage bin, plantation of fruit sapling. Drainage, road and community centre were undertaken first followed by dwelling units. Under the scheme 908 dwelling units were sanctioned, out of which 300 were surrendered by the department. Out of a target of 608 dwelling units, 497 have been completed. The construction of IHSDP houses are outsourced to private contractors.

A dwelling unit comprises of a room, kitchen, bathroom, toilet and veranda. The plot size is 25 sq meter. The dwelling unit can only be sanctioned to a household that has patta/ record of homestead land. The beneficiary is required to make a contribution of 10 % of the total cost either in cash or as construction material. These two conditions have prevented many from getting a IHSDP house. The size of the homestead land in the slums is usually small, and that itself disqualifies the households. The slums where people do not have any ownership of land are as such not eligible. Then there are cases where the land patta is not yet transferred from the father to the children for the simple reason that the division reduces the size of the plot to an extent where none will be able to construct separate houses. If not barred by the conditionality of land ownership, there are households who could not opt for an IHSDP house due to their inability to pay 10% of the cost.

How effective are the toilets constructed as part of the IHSDP dwelling unit? To find out, we physically surveyed two slums, Alasua Saar Sahi and Kathagada Saar Sahi, where IHSDP houses have been constructed. In Alasua Saar Shai, there is pipe water supply to the houses; in Kathagada Saar Sahi, there is no piped supply. However, we find that the availability of water near the house has no bearing on toilet use.

Toilets in the IHSDP houses are not in use. The toilets are used mostly as storage areas or to keep kitchen utensils, wood etc. In some houses the bathroom adjacent to the toilet is used as puja ghar. In most houses the small open space (see pic) in front of the toilet and bathroom is used for cooking. It is thus obvious that the toilets are not in

use. The toilets being inside the house, particularly when the house is small, is not considered hygienic and culturally appropriate. "Who would use a toilet that is right in front of the kitchen? We cook here, we eat here, and we worship here. How can we ever use this toilet?" Some said that they had asked the toilet to be constructed outside, but it could not be done. The dwelling unit structure was pre-determined, hence could not be changed.

The IHSDP beneficiaries are not allotted toilets under SBM.

IHSDP toilets



seems the poor have no choice but to practice unhygienic practices whether they go for OD or use toilets within their houses.

Sanitation practices of the poor as far as the toilet is concerned are influenced by multiple factors. Lack of financial resources and low priority accorded to toilets prevent people from constructing toilets. The constraints of physical space force people to construct toilets close to their living space thus resulting in the selective use of it. For some households a toilet is simply ruled out because the house is too small to accommodate a toilet.

The reluctance to construct and use toilets in a constrained physical space can be explained by the dual connotations of dirt – physical and ritual purity /impurity- and how the boundaries of the types of dirt get blurred in the context of the urban poor. The ritual connotation of dirt requires it to be away from the pure inner space of the house that accommodates spaces of worship and cooking. Unlike people who have the financial resources to live in houses where toilets are separated from the pure spaces such as living space, kitchen and spaces for worship, the poor live in small houses where sometimes the living space functions as a kitchen and a kitchen functions as a space for worship leaving no or little extra space. Unlike the resourceful, the poor construct mostly insanitary toilet and use it without adequate water which makes them physically dirty. There is thus no separation between what is ritually impure and what is physically impure. People, therefore, prefer to construct toilet outside the house and outside the living space. When the house is too small and the toilet is located inside the house people do not use the toilet. The IHSDP houses illustrate why people do not use toilets inside the house.

Given the insanitary toilets that most people use, whether constructed voluntarily or under duress, when OD sites become inaccessible, having a toilet is hardly any consolation or an indication of a better choice, except that to those vulnerable to OD such as women, old and the sick it provides some kind of an alternative. In this context, physical space and the nature of infrastructure determine sanitation practices, and like the better off in the city who have separated the ritual pure and impure within the premise of the inner space, the poor could transcend the unsanitary choices and practices if only they had space, resources and the infrastructure to do so.

Besides, the poor, unlike the well off, compromise on social/ kinship relations of avoidance and shame that is traditionally practised by Hindus. To what extent such relations can be practiced is dependent on physical space. When the house has only a room or two, purda practice between daughter-in-law and father-in-law or between sister-in-law and brother-in-law becomes highly impractical. While the better off can have separate toilets for the use of male and female members in the family along the line of avoidance, the poor have no choice but to share a single toilet among its members.

New choices

The new scheme for toilet construction promoted under Swachh Bharat Mission (SBM) Urban has provision for financial assistance to those who do not have toilets or have insanitary toilets. Unlike in rural area, the urban scheme does not cover the total cost of an Individual Household Latrine (IHHL); it provides partial fund as 'incentive' for an individual toilet. Septic tank and soak pit technology has been promoted for people to use sanitary toilets - residents can construct individual/ household tank or opt for a shared tank with neighbours if they lack space to construct an individual tank. In addition to personal sanitation, environmental safety is given consideration by locating the IHHL 60-70 ft away from water sources

There are two kinds of funds available to urban residents in Odisha under SBM: Rs. 5500 and Rs. 8000. The latter targets specific vulnerability among the applicants: SC and ST (slum dwellers) household, women headed household, differently abled, widow-headed household, construction labour, sanitation labour, rag picker, street vendor, senior citizen, minor (below 18 years of age) without guardian, and those suffering from leprosy, Tuberculosis (TB) and cancer. The scheme makes provisions for an advance of Rs.2000 to approved applicants; the remaining amount is to be transferred to the applicants only after the construction of toilet is verified by the municipality.

Angul municipality has a target of 1425 IHHLs to be completed by 2019. There is flexibility to increase the number if more applications are received. Applications have been received and verification process is being conducted by municipal officials supported by Project Nirmal staff. Five community toilets, each with a unit of four toilets, are sanctioned under the revised scheme in five wards^{viii}.

The Dhenkanal Municipality has a target of 4093 IHHLs to be completed by 2019. So far 984 IHHLs have been approved, out of which 200 have been sanctioned the first instalment of Rs2000. Only 19 IHHLs have been completed^{ix}.

Many slum households have put in applications for an IHHL. However, it is not certain that they will be able to construct toilets, because they have to invest their own money first. The poor households would need assistance either in the form of loan that they would pay back once they receive the government fund. An alternative is they are provided ready-to-use toilet by outsourcing the construction to an agency. As far as loans are concerned, people indicate two sources- from SHGs of women or through banks. As for outsourcing the construction, the choice is not available from the municipality side, and seems possible if people take the initiative to approach an agency/ contractor on their own or through an NGO. Project Nirmal is seen as an agency to support them in negotiating with a contractor or accessing loan from existing SHGs in their hamlets.

viii. Data collected during May, 2016

ix. Data collected during September, 2016

8. MANUAL SCAVENGING

Within the municipality there are contrary views about the success of the new scheme: some are of the opinion that the poor can invest and construct toilets; others think that the current scheme will not succeed, that the poor will simply appropriate the initial sum of Rs. 2000, and nothing can be done to retrieve it.

Manual scavenging is widely practiced in both Angul and Dhenkanal. In Angul, people prefer to get their containment structures cleaned by manual scavengers because they believe the suction pump used by the municipality does not clean properly. Currently, the municipality service is suspended as there is no dumping ground for the sludge thus making manual scavenging a better option than the private services which cost more. In Dhenkanal there is one cesspool service available on hire from the municipality. Many residents, however, prefer to get the tanks cleaned manually. Municipal sweepers are contracted privately for the purpose. Despite the legal restrictions of manual scavenging, the practice continues. The scavengers do not seem to be aware of the legalities, or even if they are aware, they know that the legalities are not a restriction in a setting where the municipal officials do not restrict such practices.

The city residents avoid the question about legality, often remarking that they are not the only ones who are using manual labour, or that it is not imposed; some even say that the scavengers are willing to do the work, that they do not view manual scavenging as degrading. The municipal staffs avoid talking about it shrugging off the question with a brief answer that it is a deal between the people and the scavengers, and they, the municipality, is not involved.

The sweeper castes work as manual scavengers. Since all the sweepers come from the untouchable castes of Hadi, Ghasi and Mehtar, even in the urban centres, sanitation of private toilets is dependent on traditional caste practices. Though modernized by technology, sanitation of private spaces is still dependent on caste occupation. Not only the middle class and wealthy, even the slum residents get their toilet cleaned by manual scavengers. It thus appears that sanitation of private spaces in small cities like Angul and Dhenkanal is heavily dependent on traditional caste practices.

Payment for the cleaning of private septic tanks depends on the size of the tank. A 5 ft tank fetches between Rs.1000 to Rs. 1200, Rs. 5000-5500 is paid for a 14 ft tank, and around Rs.15000

for a 25 ft tank^x. However, as the scavengers work in a group specifically for the cleaning of the tanks as well as dumping the sludge, the payment is divided among the members.

The sweepers take the contract privately and work during their free hours. They usually work at night. Though people who get their tanks cleaned manually say that they pay for gloves and nasal band/cover, in most cases there is no separate payment for these safety equipment; it is included in the payment for cleaning the tank. Sometimes the house-owner provides them with these items, that is, if they have old ones. Sometimes they are paid for a bottle of alcohol as the tank-cleaners drink alcohol before they begin cleaning; sometimes they spend their own money to buy alcohol. The stench is so strong that they have to numb their senses before they open the tank.

Disposal of the sludge is often the responsibility of the sweepers as most households do not want to dump the sludge in their backyards. The sweepers have to take the waste away discreetly on their trolleys so as not to annoy the neighbours with the smell. They usually empty them into the drains, water bodies, or wastelands / forests away from the city. There are incidents, however, as in Saubhagya Nagar Hadi Sahi, where the sludge is regularly dumped close to the slum where the sweepers live.

Manual scavenging is not a forced occupation in the cities but one of choice. Yet, given the caste determination of the occupation, it is the sweepers, the lowest of the low, the caste traditionally ascribed the role of cleaning, who take up the work. They don't like the work, they find it dirty and degrading, but it is a way to earn some quick money.

Across the road from Alasua Dam Sahi, the habitat of the Hadi and Pana, where we had just finished meeting and interviewing people, there is a cluster of small houses. The sweepers live in these houses constructed by the government in the 1960's. It is 1 p.m. We are told that the sweepers are at work, but we can meet their families. We approach the houses with trepidation, inhibited because we are outsiders. We don't find anyone outside the houses. We stand there waiting. After a few minutes, an elderly woman comes out from one of the houses. We ask if we could talk to her. "What is the matter?" she asks. We tell her. She says the men will return by 2 pm and if we come around that time, we could talk to them. She probably thinks we have come to hire them to get the toilet tanks cleaned. She does not ask.

x. Based on discussion with manual scavengers

Case study of a manual scavenger

Anand works as a sweeper in the Angul municipality. He privately works as a manual scavenger. He is educated up to class IV. He is married with three children-, one son and two daughters. His children are studying in a government school.

Though born in an untouchable caste, Anand did not inherit the caste occupation from his parents as his father was working as a havaladar in the army in Punjab where Anand was born. Later when his father retired from his services they moved back to Angul.

Anand was not interested in studies, he expressed regret about this throughout the conversation: if he had studied he could have got any other job, maybe a job like his father. He wanted to do work that is not considered 'unclean' such as loading /unloading sacks or having a trolley business. However, such work did not pay well, he thus fell back on the assured livelihood of caste.

He works as a sweeper in Ward No. 5. His work includes collection of household garbage, sweeping streets and cleaning drains. Recruited through a private contractor, he gets a monthly payment of Rs.6000.

He prefers working as a sweeper than as a construction worker. Construction work pays a little more, Rs.250 per day, but it involves a full day's work and the work is not available every day. He prefers the timing as well as the regularity of his work as a sweeper. As a sweeper he works half a day and gets back home by 3 p.m. Like other

sweepers, he takes on manual scavenging to make little extra money.

Would his children work as sweepers? He thinks if his children study well, they can get other jobs, respectable jobs like a peon in an office. Can they do business? Open a grocery shop, for example? "They can, but except for people in our hamlet no one will buy from their shop because no one comes from other hamlets to Hadi Sahi (sweepers hamlet) to get grocery. If they can open one in the daily market, they might get some business. Still, they cannot sell food on the cart that you see in the daily market. People will not eat food from the cart of a Hadi. This is a small place and people know each other, they will get to know about him, his caste", he says.

He adds: "People have an image about our caste- we are seen as dirty, alcoholic, badly behaved and wayward. That is why they don't trust us. That makes it difficult for our children to get good jobs even when they are educated. So my children have to really prove that they are well mannered and trustworthy to get a good job. They have to get acceptance if they want to escape this dirty work I am doing. I don't want them to do this work."

His remarks reiterate the fundamental schism between the high castes and the untouchables: the purity and impurity of body, that is, the physical substance of the body of the untouchables not only makes them ritually impure, it also fills them with tamaguna.

We return a little past 2 pm. The men are back, some of them are sitting outside. Two of them come forward to talk to us. They work as sweepers in a private jute mill adjacent to where they live. The houses they live in were built by the then Chief Minister of Odisha, Nandini Satpathy, for the guards of a kanji house (for lost cattle). The kanji house is no longer existing, but the quarters, as they are called, are still there, partly improvised, and accommodating more people than they did earlier. We talk about their work. They are

not educated, they say; so, they can only do manual work, and this job, the job of a sweeper, is readily available. They clean the toilets for more money. They would not like their children to work as sweepers. They think that their children should take on other works such as job of taxi drivers or purchase their own auto rickshaws.

We meet Anand (name changed to protect the identity), a municipal sweeper and manual scavenger at Hadi Sahi, Angul.



Trolleys and Drums used by manual scavengers to carry faecal waste



Open site close to human habitation used for dumping faecal waste

Hadi Shai in Subhagya Nagar is inhabited by the sweeper caste, among who a few work as manual scavengers. Conflict erupts in the hamlet because the scavengers have been dumping sludge close to the habitat. Adjacent to the hamlet is a field with tall grass. Since the field is not in use, the scavengers find it a convenient place to dump sludge. In the absence of a designated dumping site and the scavenger's responsibility of getting rid of the sludge, they have found the place convenient, and even

when occasional conflicts erupt, they find it non-threatening. The residents complain that the stench is very strong and the filth is too close to their houses. "Why should we tolerate other people's shit?" they ask. Even though they all belong to the same caste, there is a rift between the households who practice manual scavenging and those who do not.

Manual scavenging though prohibited legally is still in practice; it is practiced through informal contract.

9. GOVERNANCE OF SANITATION

State intervention in sanitation began during the colonial period. Open and outside spaces such as markets and fairs were seen as spaces of disease and disorder; they were feared as threatening for the health of the Europeans. The colonial government tried to control the open spaces through sanitary measures by attaching the connotation of health and hygiene; civic consciousness was attached to open spaces thus turning them into public spaces that required adherence to regulatory norms. State intervention in sanitation did not remain confined to public spaces; the colonial state began the practice of intervening in private sanitation practices. The toilets of privileged areas were connected to sewers through water-carriage system. The natives were seen as dirty, unclean, malevolent, and a threat to both health and civility. The colonial state sought to modernize sanitation by critiquing the traditional practices as dangerous and disorderly. State practices of intervening in sanitation post-independence have extended the modernist discourse. Policies, laws and technologies have been deployed to regulate sanitation of public and private spaces.

The National Urban Sanitation Policy 2008 prescribed for City Sanitation Plan to modernize urban sanitation infrastructure. However, at present, both Angul and Dhenkanal do not have a formal sanitation plan; the plan is under preparation. Without a plan, the governance of sanitation seems ad hoc, piecemeal, and without adequate consideration for the needs of the city population, particularly the poor and vulnerable. The modernization of sanitation infrastructure is not only incomplete, it also co-exist with traditional sanitation. The absence of infrastructure and technology has implications for the sanitation choices and practices of the poor.

The cities, for example, do not have covered drainage system; the drains are mostly open, crossing the streets and habitats. Household waste, waste in the market place, garbage dumped by people, household toilet waste (from the drains connected to the drains), and sludge collected by the scavengers are all dumped in the drains. City residents in certain places, particularly in slums and low-income areas in non-slums, live too close to open drains, and are vulnerable to the risk of pollution and contamination. Though they are also in no less measure responsible for polluting the environment, they are also the victims of the lack of drainage infrastructure.

Open drains often give rise to contentious claims. While some households consider it legitimate and an extension of urban informality to use the drain to throw household garbage, others protest. The conflict has the potential to escalate to the extent that can be physically threatening. For example, in

Radha Raman Pada, the cleaning of an open drain requires that houses close to the drain are demolished. This has given rise to conflict between those who want the drain to be cleaned and those who face the risk of eviction.

Water is a major constraint in the use of toilets as water availability in slums is erratic. In Angul, the authorized slums have tap connections though not adequate to cater to the water demand of the population. There is piped water that allows people to get water supply to their homes by paying for the connection. The unauthorized slums have a few hand pumps, and are dependent on occasional acts of charity—the industry, the backyard of which Silpanchal has grown provides a piped water supply to the residents. Many years ago, a politician has provided the residents of Radha Raman Pada with a water boring that they continue to access, and around which they have formed a committee to oversee the distribution of water to 40 households which get water from this source. In Dhenkanal, slums have water points such as hand pumps and taps, the water supply to slums is erratic and inadequate. In Kathagada Saar Sahi, there is a water tank close to the slum, but pipe lines have not been provided for the slum residents to get supply. In Alasua Saar Sahi, Sai Baba Trust, a charitable organization, has been instrumental in supplying water. In Korian Juang Sahi, a water point has been provided by Shakti Sugar Mill as part of its CSR activities. The water tank provided to the community centres constructed under IHSDP caters to the water demand of many slum residents.

While collection of household garbage as well as garbage in public places takes place on daily basis, garbage disposal remains a critical issue. There is no designated space to dump garbage in Angul. The space that was selected by the municipality became disputed as residents living close to it protested. Currently, the garbage is dumped ward-wise. In Dhenkanal, there is a designated space for dumping garbage as well as sludge. Yet, garbage is disposed randomly in the city as well as along the highway. The dumping ground is located at a distance from the city, hence even the municipal services find it difficult to dump garbage in the designated place.

Both the cities practices onsite sanitation of septic tanks and pit toilets. The municipality has a cesspool vehicle for cleaning of toilet tanks, but it is not in operation because there is no space to dump sludge. Even when it was in operation, many people preferred manual cleaning of the tanks over the municipal vehicle. Now though there is a private service provider, many still prefer manual cleaning. In Dhenkanal, there is one municipal cesspool vehicle for cleaning toilet tanks; there is a kind of designated dumping ground to dump sludge. Yet, the

Sanitation and social conflict

Everyday sanitation for the poor in fact is fraught with conflicts – among their own social groups and neighbours, as well as with the institutions of governance. The conflicts emanate from the existing sanitation practices as well as their absence. Disposal of sludge in the field adjacent to houses have pitched the manual scavengers against the other residents in Saubhagya Nagar Hadi Sahi. Drains have given rise to conflict in several ways- connection of household toilets to drains is resented as much as using drains for household garbage disposal; there is intra-slum conflict in a slum in Angul because the drains cannot be cleaned without evicting people living close to the drain; there is inter-slum conflict in Dhenkanal because a slum has been waiting for long to get a drain constructed while an adjacent slum is provided with a drain. The slums remain internally divided on the issue of garbage disposal. Such conflicts have pitched the marginalized against each other leading to resentment, competition and adversarial relations.

city residents prefer manual cleaning of the tanks, and sludge disposal is left to the cleaners, who hardly ever dump sludge in the designated space.

The practice of manual scavenging continues in both the cities, and without a dumping space, the scavengers have to take the responsibility of finding a suitable place to dump sludge, they often empty it into drains, water bodies or find a wasteland/forest land away from human habitation. Sometimes they dump sludge close to slums and habitats of the poor. In one of the slums (Saubhagya Nagar Hadi Sahi), this has given rise to conflict between the sweepers and the slum residents as the sweepers continue to dump sludge in the field close to the slum.

City sanitation comes under the purview of the municipality. The municipality employs sweepers both directly and through contractors. The sweepers collect garbage door-to-door as well as garbage from the market and public buildings, they sweep the streets and clean the drains, cut bushes, spray

mosquito oil, chlorinate open wells, collect unclaimed dead bodies, both human and animal. Sweepers are provided uniform twice in a year, on 26th January and 15th August. Besides, they periodically get equipment such as a broom and basket, glove and boot, and washing soap.

While the sweepers are provided with gloves and boots- gloves to handle the garbage and cleaning of the drain, boots to prevent contamination when they step into the drain to clean- the sweepers don't use them. The officials are of the view that sweepers find these accessories an obstruction to free movement of their hands and feet. Given the risks involved, the officials can enforce the service rules that make it mandatory for sweepers to take the precautions. But that perspective is missing from the official discourse.

All the municipal sweepers are from the untouchable castes of Hadi, Ghasi and Mehtar, who live in their separate hamlets in the city. People from nearby villages are also recruited as sweepers, but no one other than the sweeper caste is willing to work as a sweeper. It thus appears that city sanitation rests heavily on the shoulders of caste even as the city prepares a sanitation strategy to modernise the infrastructure. The caste dimension completely escapes the municipal officials. They do not see this as an anomaly; it is rather expected: those who know the best are in the job is the rationale thus attaching a professional skill dimension to what otherwise could be viewed as consolidation of the caste status quo.

Municipal services such as garbage collection, sweeping of streets and cleaning of drains are provided in the slums. However, the services are irregular. While the privileged areas are ensured of municipal services, the poor have to mobilize for it. They have to exert pressure on the municipality to send sweepers to their hamlets. Members of the slum sanitation committee constituted by Project Nirmal in Angul and Dhenkanal take up such issues, and women are at the forefront of mobilization. In the absence of regular services from the municipality, slum committees have to rely on their own members and slum residents for the sanitation of public space.

SBM, as described earlier in the report is being implemented in both the cities. However, it is uncertain whether the programme can achieve concrete results; whether people, particularly the poor, will be able to construct by investing their own resources first before they get government assistance. Opinion varies among municipal officials, some are confident that the strategy will work; some express scepticism. Yet there is no dialogue within the municipality, and no coordinated effort to address the issue.

Challenges of toilet infrastructure for women

Her house is the first house we walk to when we visit Kahamr Bila Sahi in Dhenkanal. Being active in the community, she was perhaps informed about our visit. She was waiting on her veranda. Newly married, she is understandably interested in having a toilet at home so that she does not have to go out for defecation. She says she has already constructed a pit latrine with her own money, but she has been told, as have many others, that they would not receive funding until they build a septic tank with soak pit. But they did not tell us in the beginning, she says. It is easy to understand her anxiety.

She lives in a mud house, though the house is bigger than a standard slum house. But, she does not have a separate puja space. Her deities adorn the walls of her bedroom. She has a separate kitchen to house the ishaan.

The slum where she lives uses two OD spaces- a field that belongs to a temple, the other is roadside space. She expresses visible disgust while talking about OD. "I have a toilet, I wanted to upgrade it and put in my own savings, had I known about the septic tank I would have built that. What can I do now?" She accompanies us in the survey of households. After we finish, she insists we return to her house and have tea. We then get a view of the interior of the house. We ask if we can take a picture of the ishaan. She laughs and says, "You can take, but what will you do with that?" She tells her mother-in-law that these visitors want to take a picture. She laughs again as we adjust the camera.

We meet another young married woman in Tiara Sahi in Angul. She lives in a one room house that, has no toilet. Her one room works as the bedroom, dining place, TV room, the deities are placed on the shelves on the wall. There is a small kitchen space and a bathing space in the corridor. She goes out very early in the morning to the canal to defecate and bathe. Her house is almost on the road, there are people who often play cards outside her door, she does not open the door except to go to the tailor shop where she works for couple of hours. She says she misses her village, the open space, the privacy women have. "Life is full of shame in towns", she says, "but we have got work here. There is no space to build a toilet". Only if a community toilet is built then will she have a toilet. "But who is going to manage the community toilet", she asks, "Who will clean it"

Community Participation

Community participation in government schemes is almost absent in Angul and Dhenkanal. Municipalities have given short-shrift to participatory processes, thus turning the schemes top-down even though there are provisions for participation in the scheme. The IHSDP and SBM, two major schemes that provide for household toilets, have moved forward without community consultation. Participation has remained confined to a initial meeting held by the municipal officials at the wards to inform inhabitants about the schemes. As a result, IHSDP houses have toilets within the house that most people don't use. Despite the SBM's call for a jan andolan to make the country open defecation free by 2019, participation as the crucial link between people and governance is missing. As a result, while SBM has given rise to anticipation, anxiety and confusion about the schemes persist. There is no discussion and consultation to provide clarity or find solutions for those who have small houses or have no financial resources to construct toilets.

In the absence of formal structures of community participation, the slum committees of Project Nirmal seem to be the only forum of participation. They disseminate information, create awareness, and inform the municipal officials about community grievances. However, in the event of implementation hurdles in s SBM, Project Nirmal staff who act as mediators between the community and the municipality too feel helpless.

Women play a significant role in both private and public sanitation. As the sanctity of the inner space of the household rests on them, they keep it clean both physically and ritually. As sweepers in the municipality they keep the city clean; as community mobilizers for NGOs and Project Nirmal they take the responsibility of keeping their environment clean by keeping a watch on drains, garbage and streets. As members of Arogya Samiti constituted by National Health Mission, women take the responsibility of maintaining standards in hygiene and disease prevention in the community.

There is policy recognition of women as a vulnerable group, and thus extra fund is provided for women and widow headed households from state share under the scheme. Of the many advertisements of SBM urging people to construct toilets, some target women – a family must construct toilet for young women, for bahu and beti. In the implementation process, however, there is seldom any consultation with women about their needs and choices, let alone taking their opinion whether the fund is adequate for them.

10. CONCLUSIONS

Sanitation perceptions, practices and behaviour of the poor in Angul and Dhenkanal are characterized by both tradition and modernity. We find the practice of open defecation co-existing with toilets based on modern technology. The same sets of people practice both without seeing the anomalies. They have easily adapted to technology without forsaking the rituals and practices based on tradition such as changing of clothes after defecation. The space between tradition and modernity is not fraught with contradiction but becomes a way of life. Different segments of the population – high caste, low caste, tribal- find their own in-between spaces.

In this 'in between' space constituted by tradition and modernity, the influence of the socio-cultural factors of caste and purity/pollution on the sanitation behaviour of the poor can be classified as: continuity, adaptation, and retaining certain practices as non-negotiables. The ritual practices related to caste and untouchability as well the ritual practices of everyday sanitation behaviour continue. The purity of the inner spaces is maintained, and women continue to be the custodians of the inner spaces of the household. People in the urban physical space adapt in various ways. They construct toilet inside the premise as well as very close to the living space in the house thus compromising the purity of the inner space. We also find the poor accommodating the deities they worship on the shelves of their bedroom wall, a practice they would avoid if they had extra physical space for worship. The ritual impurity of castes is compromised when the high castes live in close proximity to the low castes. Then there are practices that are non-negotiable, and are to be continued despite the constraints. For example, the Ishaan cannot be compromised by being placed the Ishaan on the bedroom shelves. The Ishaan has to be kept in the kitchen, and the kitchen has to be a barricaded space, a separate room, for the Ishaan to be placed there.

In this cultural behaviour reflecting continuity, adaptation and non-negotiation, culture interacts with a host of other factors- physical space, infrastructure, technology, institutions, and governance. Culture influences them as well as gets influenced. Hence, we find that among the households having toilets inside the house premises, the use of toilets is determined by adequacy of physical space, technology used, and availability of water. The better off sections have more physical space, modern technology with soak pit and septic tank, and availability of water. The poor use toilets selectively for the same reason- lack of physical space, toilets being close to the living space, lack of access to better technology, and non-availability of water to keep the toilets clean. The poor, therefore, prefer building toilet outside the main living space because the living space is far

too small to barricade the pure spaces of worship and cooking from the impure space of the toilet. It is for this reason that the owners of IHSDP houses do not use their toilets. The preferences of the poor cannot be dismissed as mere cultural preferences. In the absence of adequate physical space and lack of access to hygienic technology, the difference between physical dirt and ritual dirt, in this case human excreta, gets blurred.

The practice of OD in the urban space cannot be interpreted merely as a cultural choice or preference over using a toilet. There is a high demand for toilets under SBM and it contradicts the popular myth that people prefer OD or do not want to use toilets. The poor, understandably, allocate their limited resources to more pressing needs- food, health care, children's education. If they have more resources at their disposal they prefer to invest in something that provides safety and security- such as a house. However, we find that they have invested in toilets in situations where they can no longer access OD sites. What this illustrates is how poor people allocate their limited financial resources. In the official discourse of the municipalities in Angul and Dhenkanal, the poor look quite capable of investing in toilets, but they want more funds from the government. This perspective misses how the poor use their own money. While some are willing to add their own resources to the SBM fund, others find the amount too limited.

The caste system is a visible presence in the sanitation practices of the two cities. It is not confined to the social practices of the high castes vis-à-vis the low castes. Caste is also appropriated and consolidated in the current sanitation practices in Angul and Dhenkanal. Without caste, sanitation in Angul and Dhenkanal will become paralyzed. Both the cities rely completely on the untouchable castes of Hadi, Ghasi and Mehter for city sanitation. The municipal sweepers are from the lowest of the low caste replicating their traditional caste occupation in an urban setting. They clean the streets, collect garbage, clean drains, dispose off dead animal and unclaimed human bodies. It seems the low castes are the only applicants for these jobs because other castes consider the work polluting. The sweepers say this work is readily available to them because there is not competition. This is viewed as appropriate by officials, some even point to the professional skill that the untouchable castes already have. Manual scavenging though legally prohibited is widely prevalent. The sweepers work as manual scavengers. The practice is not a secret, and it is allowed to continue in the absence of limited mechanised ways of disposal of excreta as well as the preference of city dwellers for getting the toilet tanks cleaned manually. The high-income households, though well equipped with modern sanitation technology, use the traditional ways of toilet waste-disposal by employing the

traditional scavenging caste. The poor, constrained by resources, use the sweeper castes for cleaning the toilet pits. There is thus hardly any difference between the behaviour of the rich and the poor as far as caste is concerned.

Due to the Swachh Bharat Mission's emphasis on physical targets such as a specific number of toilets to be constructed within a specified time period, any localized, complex and nuanced understanding of culture escapes the current policies. There is no scope in the policies to accommodate the manifestation of culture in the local contexts. There is little understanding that

aspects of culture that people find difficult to compromise with are closely related to physical space, cost of technology and availability of resources. Lack of community consultation and participation obstructs information about specific needs of people. The absence of scope to adapt to local requirements further restricts the implementers in customizing the policy. The local implementers hardly understand the complexities of culture. However, if policies create scope for understanding how culture works in such situations, it is likely that the governance of sanitation at the local level will follow.

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SCALING CITY INSTITUTIONS FOR INDIA: SANITATION (SCI-FI: SANITATION)

The Scaling City Institutions for India: Sanitation (SCI-FI: Sanitation) Project falls under the urbanisation vertical at CPR. The project aims to inform and support the formulation and implementation of the Government of India's urban sanitation programmes and investments. The research programme will study cities and states to understand the reasons for poor sanitation, and inform and support the state and city governments in modifying their urban sanitation programmes so that they are supportive of alternative technologies and service delivery models, with the goal of increasing access to safe and sustainable sanitation in urban areas.

