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Waste disposal habits of urban dwellers in chanmari: A sociological exploration

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Abstract

Waste habits have evolved tremendously throughout the past decade in an urban setting like Chanmari, Aizawl. This exploratory research brings out how the progress in structure and function of waste management has a vital effect on the waste habits of the private sphere. The objectives of the study were to study the waste disposal habits of urban dwellers and to examine the methods of waste disposal adopted by Aizawl Municipal Corporation (AMC) and the social habits it entails. Purposive sampling was employed to inquire the 12 families. Structured interview, unstructured interview schedule and participatory observation method were employed for

collecting data.. Results from the first objective have revealed that the ways of waste management of urban dwellers in Chanmari have adapted to the present Aizawl Municipal Corporation's laws. The second objective resulted in finding out how distance of the sanitation points, the timing of garbage trucks, segregation at source method and the distribution of dustbins have transformed waste management habits for these urban dwellers. And in families where full compliance to the AMC's management were more challenging, habits of disposal that are closest to the accepted forms were practiced instead.

Keywords: sociological, exploration, tremendously, AMC's, chanmari

Introduction

The subjectivity of what we term 'waste' renders it hard for a universally shared definition, beneficially this lack of a universal definition can provide insight into different cultures, their concept of waste and want, as well as their social structure and practices. How they react and treat waste shows a lot of their characteristics.

This study on the waste disposal habits of Urban Dwellers in Chanmari had gathered the journey and habits of wastes in our lives. How waste practices were transformed around the rules of administrative structures and how these have a substantive effect on our disposal habits. Are these alterations for the benefit of the society, its ethics, morals and discipline? The exploration into the urban homes of Chanmari have linked the mundane part of our life to a larger collective experience.

Concepts

The meaning of waste usually has a pejorative connotation towards it, as something such as "a matter out of place" which "offends order", as Mary Douglas had said in 'Purity and Danger' (1966). Generally waste can be termed as "discarded, expelled, or excess matter" (Hawkins, 2006) [2]. Solid wastes on the other hand are those "produced by human activities that are in a solid or semisolid form and are thrown away as useless products" (Tchobanoglous et al. 1993).

Habits are the bodily dispositions, they are acquired through repetitions of acts and behaviour. It cultivates itself in time and is influenced and shaped by the environment. Disposal habits mean the habits adopted by individuals in their process of eliminating waste. This can depend on their values and ethics as it is a subjective matter. It is how we manifest our waste habits in the form of what we use for garbage bins, whether we throw them down the drains, whether we segregate them or not. It involves all the bodily disposition of how we try to eliminate waste from our homes.

Urban dwellers in this study referred to the residents of Chanmari locality within the Aizawl Municipal Corporation (AMC). The AMC area includes 83 Local Councils which are determined as urban areas in Aizawl. In an urban settlement, solid waste management process is typically carried out in four stages- collection, transportation, treatment and lastly its treatment which are in the hands of the AMC.

Rationale of the Study

For a society who had nothing to do with the present method of regulated waste disposal, it is important to trace how waste habits have evolved in structure and in process. The course of a society's development includes that of its values and practices.

The Mizo rural habits are different from the urban setting of the present. Waste patterns and our relationship with waste can bring out a lot about a culture's take on cleanliness, hygiene and value.

Although there are a number of studies on the management of waste, there is a lack of study in the social aspects of waste management. Even with the presence of little literature this study pursued the social habits around waste. Several aspects of a society when understood in relation to waste can provide new explanations of knowledge and used to affirm existing knowledge. Social roles, institutions and changes in the society can be brought out through this.

Societies are different and their values and lifestyle differ, this hinders us from relying on another society's waste habits and calling it our own. The aim was to find out how we have formed habits around waste and have learned to adjust our daily habits around the present methods of waste disposal habits.

Knowledge of what is waste from want reflects the characteristic of a society even in its most mundane aspect. Traditional ideas of waste and its disposal habits provide the primitive understandings and help in the tracing of development of the society when it is compared to the present society. In studying the evolution of waste management, a society's value for its disposed waste can be brought out and this study aimed at acknowledging how people have formed their present waste habits and what are the factors that make them adopt to it.

Objectives of the Study

1. To study the waste disposal habits of urban dwellers in Chanmari.

2. To examine the methods of waste disposal adopted by Aizawl Municipal Corporation (AMC) and the social habits it entail.

Methodology

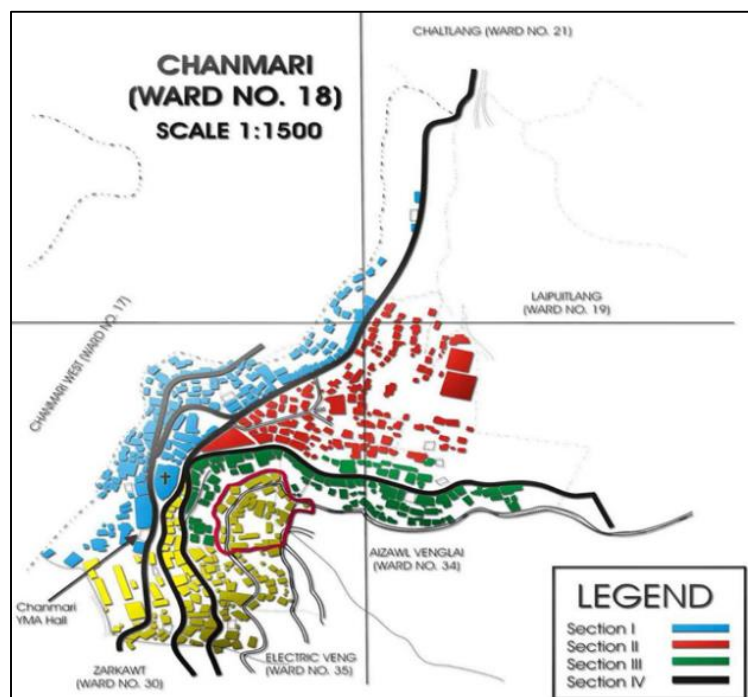
a) Research design

Exploratory research is carried out when there is not sufficient information available about the issue to be studied or in other words the researcher has either no knowledge or limited knowledge (Wilkinson & Bhandarkar, 1998). In the case of Mizoram, it had only been recently that a proper waste management service was introduced. This recent progress in a well-established system of waste management (waste collection, segregation, treatment) also indicates the lack of data in the social domain of waste and the public's waste disposal habits. Therefore there was a need to employ exploratory research to find and affirm new knowledge.

b) Universe and Sample

A sample population of 12 families had been chosen through purposive sampling to explore domestic waste disposal habits of an urban setting. The locality of Chanmari in Aizawl was chosen as the universe of the study. Due to the limitations set by the COVID-19 pandemic during the period of study, Chanmari was chosen for easier access and its closer distance. According to the Statistical Handbook (2018), Chanmari consists of 1262 houses and had a population of 5626.

The locality's pre-existing section wise division was used to select the same number of sample population (i.e. 3 families) from each section. The sections are of four in number according to their geographical location i.e. Section I, II, III, IV. Three respondents had been chosen from each section. Purposive sampling also known as judgemental sampling was employed to select the sample elements. Then, semi-structured interview was made use of in order to gather information from these residents.



Source: <http://chanmari-yma.blogspot.com/>

Fig 1: Chanmari section map

Tools of data collection

Structured interview

Both structured and unstructured interview schedules were employed for this study. A structured interview was used for the sample population by using an interview schedule. The interview schedule was formulated and used as a guideline in the process of interviewing the sample population. A face to face interview provided the insight of the respondent's perspectives, thoughts and experiences which were especially useful in the exploration of their habits

Unstructured interview

Unstructured interviews were conducted for obtaining information from office staffs of waste management administrations. They were interrogated regarding the waste collection, transportation, segregation and treatment and other processes.

Participant observation method

In the study of waste disposal, the act of disposal is an integral part of life. With this reason in mind I had observed the styles and management of what people dispose in garbage trucks and what they consisted of while I carried out the very act of throwing out my garbage.

Secondary Data

Several books, articles, documentaries, surveys were referred to aid in the reviewing and assessing of different interpretations and past records.

Results and Interpretation

Objective 1: To study the waste disposal habits of urban dwellers

Under the objective of waste disposal habits, a household's general waste habits were categorised into 1) Habits of the generation of waste, 2) Habits of waste segregation and storage, 3) Revaluation Habits and 4) Habits of waste disposal.

1) Habits of the generation of waste

Our disposal habits start from our habits of waste generation. This is because waste becomes waste only when the owner decides it to be waste and no longer wants to be connected to it. And this simple separation of the unwanted from the desirable is what John Scanlon terms as a "*separation of world*". This separation of world happens every day in our homes hence, making the domestic realm the defining realm of our social habits.

Generation of dry waste is dominant among the residents of Chanmari. In this study, all the 12 respondents' response of what constituted most of their dry waste was- plastic cover. It was said to be the most common household waste, whether it was from the kitchen in the form of food packaging, or from packaged online goods. Although plastic covers can be reused, most of them are designed for single-use hence, evidently end up in the bin.

A male respondent from Section I addressed the increase of plastic waste to be from the replacement of older forms of packaging like the use of "changel" leaves (a type of palm leaf) in the local vegetable market as well as the transportation of vegetables from rural areas. Since the convenience and durability is undeniable, he proposed that the government should spread awareness to these vendors and shop-keepers on consumption and waste elimination of

plastic packaging.

Another common constituent of domestic waste is paper. In every household one can find common newspapers like: Vanglaini, The Aizawl Post, as well as the locality's newsletters like: Chanmarians, Chhungtin Kantu, Logos. Old notebooks and exercise books are dominant for residents with children. Apart from the commonly generated paper wastes, an interview with an editor of a Mizo magazine revealed how they had been disposing more paper waste than the other residents. Such ownership of printing presses, machineries and shops within the locality of Chanmari played a factor in the increased waste production than an average household, therefore differing in their habits of waste generation.

This study brought out that the lesser constituent of domestic waste were the biodegradable wastes otherwise known as the wet wastes. Wet wastes from homes are usually kitchen wastes like leftover food, vegetable scrapes, fruit peels, etc. It was evident that of the residents who experienced a change in their waste quantity found it in the wet bin. This was because seasonal crops that were consumed at a particular time of the harvest produced seasonal wastes. A mother from Section I stated that in the monsoon season wastes like husks of corn, bamboo shoots, pineapple peels were large in quantity. As wet wastes are more prone to change seasonally, so are the waste habits around them.

2) Habits of waste segregation and storage habits

Chanmari was one of the 58 Local Council Areas that followed the Aizawl Municipal Corporation "segregation at source" in 2018. Since then, there had been method of waste segregation among the residents. The new regulation required the segregation of wet wastes, dry wastes, plastic wastes, e-wastes and hazardous wastes from homes. This is implemented well in the locality as the garbage men at each stop check the disposed waste, allowing only the properly segregated wastes to be collected.

Of the 12 respondents of the study, 11 families segregated their domestic wastes and allotted separate bins for their storage. This habit of segregation even required them to use garbage bags for storage and disposal. Besides their need for the municipal garbage collection, the obligation to follow the segregation rules had changed their habits of waste collection.

It was discovered that habits of waste segregation was strictly followed by respondents who lived nearer to sanitation points where garbage trucks came to collect waste every morning. But for those who lived farther from the appointed garbage stops it was harder to follow suit. One home maker of Saron road said that she decided that it was more convenient to dispose their wastes in the nearby drain as the sanitation point was too far away from their house.

Storage habits:

The study's exploration of waste storage habits found that most of the respondents had the habit of placing their waste bins outdoors. Other than the smaller dustbins around the house, the main dustbins in which they gathered their wastes were seen at the entrance of their houses, verandas or on terraces.

Those residents who placed their waste bins indoors had a separate cabinet dedicated for the storage of their bins or placed them in their storage rooms. When inquired about the indoor placement of their wet bin, a female resident from Section-I told me that they had a double-door cabinet under their kitchen sink where they placed their wet and dry waste

bins. This was because their main bins where they collected the whole of their domestic wastes were up on their terrace and the availability of smaller bins indoors had enabled closer disposal of kitchen refuse.

Another respondent from Section II listed that four of the smaller bins were kept inside their house for dry waste while two big bins were placed outside, one containing the household's wet waste and the other containing leftover food waste. Such a separation of placement was done to ward off insects that are attracted to the wet bins' content. Fragrance and odour are associated with purity and cleanliness, so not only does the sight of wastes inside the house but the odour it gives off has an impact in people's habitual placement of bins. This is why mostly all the families collected their wet wastes in closed containers and placed them outdoors.

3) Revaluation habits

The social life of objects depend on our evaluation of their value, the value we give them does not always depend on their intrinsic property or their utilitarian value. Owners have that defining power and the value of objects depend on this, therefore transformation or a shift in the owner's value can give new meanings to transient objects (i.e. objects that lose their value over time), while durable objects sustain their value.

Most of the waste revaluation in this study were observed in the reusing of garbage. Among the residents, acts of reuse were more in practice than those of recycling. This is because recycled goods in the process of undergoing transformation into new materials costs a lot more money.

Reusing habits were embodied in acts of donations, compost piles, collection of food scraps for domestic feed, selling of old items to local shops, and even in reuse of newspapers etc. This culture of reuse is what Susan Strasser called the "stewardship of objects". The social life of objects are prolonged or even transformed into something newer in value.

Wet waste: Revaluation of wet wastes were carried out mainly for pig feed and composting. Collection of leftover food and other consumable kitchen wastes for feeding domestic animals have been in practice among the Mizos for generations now. This had led to the habitual collection of such wastes which is later collected by stockmen for their domesticated animals, mainly pigs. However, since the beginning of 2018, Chanmari locality in the pursuit of a cleaner environment prohibited the domestication of pigs within the locality. This change in the removal of pigsties had created a chain reaction in the nature and component of the local residents' waste habits.

With the elimination of domestication of pigs in the locality, families who once used to store kitchen wastes in separate containers for the pig feed had stopped this habit. As the local pigsties have been removed, there was no one to collect their kitchen waste. This even led to the change in the nature and storage of wet wastes in the house. Households when they used to collect kitchen wastes for pig feed had relatively cleaner dustbins as the more watery kitchen wastes are stored in the pig feed bin. Now families throw all kinds of kitchen wastes into the wet bin, therefore making the condition of the wet bins dirtier and smellier. This eventually led them to start using garbage bags for the semi-solid wastes.

Although many of the residents still collected their kitchen wastes for pig feed, the pig farmers were usually from other localities. So the collection of these wastes were less frequent

than before. This infrequency was mentioned by a homemaker from Section III who said that a pig farmer from Bawngkawn came to collect from them only once a week.

The practice of composting wet waste into compost was another method of repurposing waste that was seen among few of the respondents. It was in fact the least common type of repurposing waste among the respondents. Only three of the twelve respondents collected compost. This was because the creation of compost pits and compost containers required larger domestic space. Residents with little space for home grown plants do not usually stick to this.

In the analysis of the three respondents' homes, the availability of spacious environment like a family compound and terraces had facilitated the space for such habits. These were the main habits of revaluating wet wastes.

Dry waste: The reusing or repurposing of dry waste materials are proved to be easier as they do not need extra attention in handling them. Dry wastes like newspapers, jars, plastic covers and containers are found to be reused by most residents of Chanmari. Only two of the twelve respondents claimed that they do not reuse domestic refuse. It is good to know that the majority of households collected their waste or refuse instead of throwing them straight away.

Selling of scrap metals, plastic bottles and newspapers and other paper wastes were common too. Clothes that are in good conditions were given to shelter homes like TNT at Zuangtui and orphanages besides hand-me-downs. Jumble sales are conducted by the local Church's Women Front every six months so donations were given there too. Other urban wastes like daily newspapers, beverage bottles, and plastic bags were reused in the household level.

Collective behaviours have restructuring capacities on waste. These habitual reuse of waste when performed as a shared experience can shift the value of such wastes and instead see its utilitarian value. It can even result in the exchange of profit and monetisation of waste.

4) Habits of waste disposal

Disposal is the last stage of connection we have with the things we decide to throw away, it is also the defining stage of our entire waste management habits. Keeping in mind the finality or destination of our waste, we cultivate habits around it.

Different governmental bodies had taken care of the municipal management of solid waste, the Local Administration Department (LAD) started building sanitation points for the collection of people's waste. It was an attempt to organise municipal waste by allowing people to throw their garbage in the allotted place. Years later came the stationary garbage trailers under the management of the Urban Development and Poverty Alleviation Department (UD&PA). Both these methods resulted in the careless disposal of wastes, it affected the city's cleanliness plus the collection of discarded wastes from these sanitation points were irregular and slow.

The introduction of garbage truck collection was an elevation in both the administration part as well as in the disposal methods of the urban dwellers. The systematic collection of waste initiated a collective social experience among the urban dwellers hence leading to the creation of a cultural experience.

This management of Solid waste was again handed over to the Aizawl Municipal Corporation in 2011. And under the Solid Waste Management Rules, 2016 introduced the

implementation of “segregation at source” method which required the public to follow a similar rules. This again created a cultural experience from the comfort of their own homes.

The first objective of the study found that under the systematic management of the Municipal Corporation, most urban dwellers opt to follow the operations of it. Unless it was way out of their convenience, they had altered and adjusted to habits of disposal that were closest to the accepted form of waste elimination put forward by municipal waste managers.

Objective 2: To examine the methods of waste disposal adopted by aizawl municipal council and the social habits it entails

Under a close examination of this study the effects of disposal habits among the residents of Chanmari after the Aizawl Municipal Corporation (AMC) in collaboration with the State Investment Program Management and Implementation Unit (SIPMIU) took over the management of municipal waste from the Urban Development and Poverty Alleviation (UD&PA).

The changes in waste management were

- a. The Public Private Partnership (PPP) Mode,
- b. The process of “segregation at source,”
- c. Distribution of SIPMIU dustbins (wet and dry bins)
- d. Daily collection of waste by garbage trucks at allotted timings,
- e. Discontinuation of the Old dumping ground and utilising SIPMIU’s Solid Waste Management Centre at Tuirial for waste treatment

The social habits it entailed

1) Distance of sanitation points

Distance of one’s house from the sanitation points within the locality plays an important role in the disposal habits of residents. Houses nearer to the appointed sanitation points have an advantage of easier access than those that are far from it. Especially for those who lived in the periphery of Chanmari, it was easier to dispose one’s garbage to the nearest sanitation point irrespective of which locality one belonged to.

A family that lived at the upper side of the hill had always disposed their waste in the Laipuitlang garbage trucks. There was no strict rule which stated that one should only dispose trash in one’s locality garbage truck, it was fine as long as monthly user charge was paid to the respective local council. When inquired the reason, the mother of the household casually said it was because it was nearer to their house.

In the same case, another family living in Section II of Chanmari had also been throwing their garbage habitually in their neighbouring locality due to the shorter distance of the truck stop from their house.

Deprived of a nearby sanitation point, a homemaker from Section-I had expressed how the road connecting their house to the main road was too narrow for the garbage trucks to access. That it would be easier for them to throw their garbage regularly if the smaller garbage vehicles could reach till the end of their road.

Due to this inconvenience they had been throwing their waste in the nearby drain for years then and never once utilised the AMC trucks. Difference in waste ethics was found within this neighbourhood itself, a little closer to the main road was a family of nine who had said that they had been disposing

garbage everyday through the trucks. The father added that they had no other option but to follow the regulated method as they knew no alternate means. Of a family of nine, it was a relief that they utilised the AMC garbage collection method since their generated waste would be too huge an amount to be disposed elsewhere.

2) Timing of garbage collection

Besides distance, the timing of truck stops had also changed the conventional habits of some families. In the previous years of garbage trailers and allotted sanitation points, people did not have a schedule for disposing their waste. This transformed under the new AMC regulations where the garbage man’s bell ringing everyday birthed a new social habit among all urban dwellers.

The truck collection timing in Section-IV seemed to be too early for the family of a middle school teacher. He revealed that it was easier for them to throw their garbage in Electric locality because their garbage collection timing suited their morning routine better although they live very near to both Chanmari and Electric sanitation points.

Not all families found the early truck timing convenient, but there were other households who had adjusted their morning routine around this. Neglect of one’s garbage because of waking up late or missing the garbage truck is common, these effect our habitual timings too. In some urban dwellers it even resulted in the ditching of garbage near the sanitation points and illegal dumping.

We could see that these factors such as distance and timing altered the habitual use of garbage trucks. In the analysis of these residents it was seen that most families in urban areas had the obligation and awareness towards approved waste management. They had tried their best to form their waste habits around regulated waste methods that were closest to their convenience.

3) Segregation at source

Since its implementation in August, 2018 segregation of domestic wastes had been a habitual action for the urban dwellers who dispose their waste through AMC garbage vehicles. This requirement of waste segregation in order to dispose them had brought the transformation of domestic waste storage habits at home.

Waste segregation was never done by any of the previous administrative bodies, AMC too started this only after the Solid Waste Management Centre (SWMC) under SIPMIU could be used. The introduction of an organized and systematic waste management required a systematic segregation from the source i.e. the public. This was never the case with the previous rules of waste disposal since there was no intention of utilizing generated municipal waste for something else. It had always been dumped in the dumping site as a mere pile of ephemera. This was changed with the utilization of municipal waste for fertilizers, compost, recycling and reselling under the waste management. The SWMC has vermi-compost and mechanical compost plants where our wastes are converted into compost, hence given new value.

The new practice of segregation had brought not only a change in the disposal of waste to the public but also a change in how they value their waste. The thought of their waste becoming something new in value has people viewing their discarded waste as waste with potential.

4) Dustbins and garbage bags

The number of dustbins or trash cans had increased in each and every household. Then there were the use of plastic bags, sacks and garbage bags including a separate biodegradable garbage bag (green garbage bag for the storage of wet wastes). Back in the previous method of mixed disposal of both biodegradable and non-biodegradable wastes, there was no requirement for the use of garbage bags as the public could empty the contents of their dustbins straight into the garbage trucks. However, under the newly introduced method of solid waste management this was no longer allowed. The garbage men would check the contents of the waste at every stop.

SIPMIU in the year 2015, had provided medium size wet and dry dustbins in order to encourage segregation of household waste. However, these bins were deemed as too small for the capacity of generated domestic waste. Some have used it till today, others have utilized it for something else like storing things, etc.

A respondent from Section-IV talked about their alternate use of the SIPMIU bin, that the bin was too small for their daily waste so instead used it to store pig feed due to the availability of the lid.

The purposes of these dustbins were challenged by their sizes. This example drew a parallel to Malinowski's Latent and Manifest functions where the intended function of the provided bins were to store waste and spread awareness in segregation. The manifest function was seen in some while in the other households the latent function of using it for storing something else was common. Due to the recurring issue with the size most of the residents I interviewed had resorted to using their own dustbins. Despite its lack of storing waste in most homes, it was a very practical way of spreading awareness and encouragement to the public for waste segregation.

Conclusion

Habits have evolved with the growth of the city. When we talk about waste disposal habits, we mean the habitual actions that evolve in the management of domestic. Of all the varying generators of waste, why domestic waste? This is because "*styles of waste disposal are the styles of self*" as Hawkins had said. (Hawkins, G. (2006). p.4) ^[2] Hence, the domestic realm in the social life of an individual is the most defining realm in the study of a society. The general habits of Chanmari residents are studied.

Through the results of the objectives various disposal habits were explored from the generation, segregation, storage, revaluation to disposal. Disposal rituals are translations of ethics. After the formulation of a socially accepted method of waste disposal, the practice of it gives the public a sense of civic obedience and moral duty. All their habits regarding their disposal of waste had become a cultural experience due to the new rules and regulations.

Here we see a formation of what Bourdieu calls as habitus, how external rules and regulations have embedded bodily dispositions into the daily behaviour of the people. This habitus acquired in the field made them perform a cultural act, i.e. the disposal habits. It had altered their previous lifestyle and adopt to a new one.

The analysis of the second objective showed how rules when they are imposed by management of essential services commonly have a successful outcome. This is because of the public's heavy reliance on them. It had brought huge differences not only in structure but also in social habits.

There occurred increased consciousness about the way the public dispose their waste, it had become more regulated. In addition to that, previous forms of waste disposals like incineration of waste and illegal dumping of garbage were less common after the systematic operations of administrative bodies. It formed new awareness and even changed their waste evaluation process, from a useless pile to a pile having a potential of being reused for compost.

In the advancement of waste practices, terms like 'zero waste', 'plastic free', 'reduce, reuse, recycle', etc. have increased in rhetoric and reality. Nevertheless urban waste management still has a lot of room for improvement. From the administrative body's side to the public's effort in reduction of waste.

Waste habits in the urban areas differ from that of rural areas, how they choose to dispose their waste, their consciousness of the act and ways of elimination are distinct from the rural ways. Therefore, areas beyond the AMC local councils need the same amount of attention and development as waste habit is not an isolated phenomena.

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