

# Impact Analysis of Solid Waste Management Laws (SWM), 2016 on Bulk Waste Generators (BWG) and Urban Local Bodies (ULB)

## Introduction

On 8th April 2016, the Ministry of Environment, Forests and Climate Change, Government of India enacted the Solid Waste Management Laws, 2016 (SWM, 2016) which replaced the Municipal Solid Waste (Management and Handling) Rules, 2000, which had so far regulated the collection, handling and disposal of waste in urban centres.<sup>1</sup> The new law also introduced the term 'Bulk Waste Generators (BWG)' and defined them as, *"buildings occupied by the Central government departments or undertakings, State government departments or undertakings, local bodies, public sector undertakings or private companies, hospitals, nursing homes, schools, colleges, universities, other educational institutions, hostels, hotels, commercial establishments, markets, places of worship, stadia and sports complexes having an average waste generation rate exceeding 100kg per day"*

Following the enactment of the SWM, 2016, the Greater Chennai Corporation (GCC) published its own draft of the Solid Waste Management by-law 2016<sup>2</sup> and the Draft Plastic Waste Management by-laws 2019<sup>3</sup>. In November, 2017, The Ministry of Housing and Urban Affairs, Government of India also published an exhaustive guide<sup>4</sup> that would aid the Urban Local Bodies (ULB) to implement the clauses in SWM, 2016 concerning BWGs.

The SWM, 2016 is an act that could introduce revolutionary changes to the current waste management processes in the country. It attempts to reduce the amount of waste sent to the landfill and make efficient use of the biodegradable waste at the waste generation level itself. The SWM, 2016 also made three types of waste segregation compulsory (biodegradable, non-biodegradable and domestic hazardous) and urged the importance of setting up composting and/or bio methanation plants for biodegradable waste and Material Recovery Facility (MRF) for non-biodegradable waste. It also detailed the responsibilities for brand owners through the Extended Producers Responsibility (EPR), duties of respective State Pollution Control Boards, guidelines to set up solid waste processing and treatment facilities, conditions for operating, closing and rehabilitation of landfills, criteria for water and air quality monitoring around landfills to name a few. The SWM, 2016 also initiated Private Service Providers (PSP) to enter the ambit

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<sup>1</sup> <http://egazette.nic.in/WriteReadData/2016/169079.pdf>, Ministry of Environment, Forest and Climate Change, Government of India, 8th April 2016, The Gazette of India, part II, section 3, sub section II, New Delhi

<sup>2</sup> [http://chennaicorporation.gov.in/images/swm\\_bye\\_laws.pdf](http://chennaicorporation.gov.in/images/swm_bye_laws.pdf). Greater Chennai Corporation, Government of Tamil Nadu, 2016

<sup>3</sup> [http://www.chennaicorporation.gov.in/PlasticWasteManagement/swm\\_by-law\\_2019\\_english.pdf](http://www.chennaicorporation.gov.in/PlasticWasteManagement/swm_by-law_2019_english.pdf), Greater Chennai Corporation, Government of Tamilnadu, 2019

<sup>4</sup> <http://164.100.228.143:8080/sbm/content/writereaddata/Bulk%20Waste%20Generator%20Book.pdf>, Ministry of Housing and Urban Affairs, Government of India, *Bulk Solid Waste Generators, A Step-by-Step Guidance for Urban Local Bodies to implement the Solid Waste Management Rules, 2016*, November, 2017

of waste collection and processing. Of importance were the sections which persuaded BWGs to engage PSPs for their waste collection and disposal needs, thereby trying to relieve the respective ULB of BWG waste collection responsibilities.

The Citizen consumer and civic Action Group (CAG) tried to learn the efficacy of this change of law by focusing on BWGs and their respective ULBs. Qualitative data collection was conducted in February-March 2020 among BWGs and Conservancy Inspectors from the ULB, who have been closely working with the BWGs to aid in this transition. CAG's research tried to understand, how the SWM, 2016 and the conditions prescribed by it, had been impacting BWGs, what behavioural changes it was bringing in them, how the ULB was initiating this change, were they initiating this change by the book or adapting the law, how the relationship of BWGs with ULBs has changed since enactment of the law, its impact on the waste generated, how PSPs - a new player in the waste collection system - work, and how this three-way relationship between the BWG, ULB and PSP was playing out on the field. Though the primary focus of the study has been on the BWG section of the SWM, 2016, data on MRF, EPR, landfills, offender fines, redressal mechanism and almost all sections covered in the SWM, 2016 has emerged in the data collection of the study.

### **Bulk Waste generators in Solid Waste Management Laws, 2016**

Apart from the basic requirement of generating of 100kgs of waste (inclusive of biodegradable, non-biodegradable and domestic hazardous waste), the National Green Tribunal (NGT) also noted that waste generators could be labelled as BWGs if they met any of the following criteria:

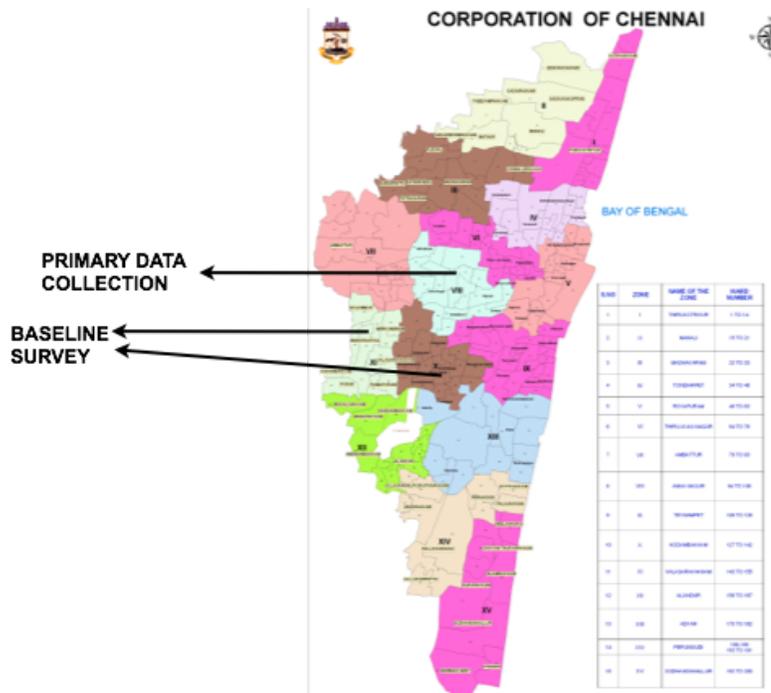


The SWM, 2016, by-laws passed by ULBs and guides<sup>5</sup> released by the Ministry of Housing Affairs, Government of India, all stipulate any commercial/ residential complexes, restaurants, institutions, hospitals which generate 100kgs of waste or have a built-up area of 5,000 sq.metres be labelled as BWGs by their respective ULBs. The guides also lay out steps to identify, prepare and notify the BWGs about this change of law. The procedure to raise disputes with the ULB are also explained. The guides also lay out how the ULBs can hand hold their BWGs to set up composting or bimethanation plants in-house, for processing biodegradable waste and how they can employ a PSP to collect non-biodegradable waste. The guides also lay out how ULBs can conduct periodic verifications from time-to-time to be sure that they are indeed BWGs. The guide also lists various fines that could be imposed on households or BWGs for not complying with the SWM, 2016.

<sup>5</sup> <http://164.100.228.143:8080/sbm/content/writereaddata/Bulk%20Waste%20Generator%20Book.pdf>, Ministry of Housing and Urban Affairs, Government of India, *Bulk Solid Waste Generators, A Step-by-Step Guidance for Urban Local Bodies to implement the Solid Waste Management Rules, 2016*, November, 2017

## Study site

In the state of Tamil Nadu, there are 664 local bodies, which comprise 12 corporations, 124 municipalities and 528 town panchayats. The Tamil Nadu Pollution Control Board (TNPCB) in its annual report of 2018-19 confirmed that some parts of the SWM, 2016 had been implemented in all the 664 local bodies.<sup>6</sup> The TNPCB report also confirms a total of 13,968 tonnes of waste generated in the state out of which 12,856 tonnes of waste is collected. The 12,856 tonnes of waste comprises 7,196 tonnes of waste that is treated in some form and 5,654 tonnes of waste that is sent to the landfills. The treatment of waste, done as per the SWM, 2016 includes actions like segregation at source, initiating vermi- composting, micro composting, windrow composting, on site composting and the generation of manure from biodegradable waste and the installation of bio methanation plants. For non biodegradable waste, MRFs were established to sell waste to recyclers and for domestic hazardous wastes and e-wastes, TNPCB-authorized vendors collected it on a periodic basis. The success rate and challenges of these initiatives are heterogeneous at a state level, which highlights the need to study these changes in waste management laws and its effects, at a micro level i.e at an individual waste generator level and at a municipal ward level in this case.



<sup>6</sup> [https://www.tnpcb.gov.in/pdf\\_2019/AnnuRepSwm1819.pdf](https://www.tnpcb.gov.in/pdf_2019/AnnuRepSwm1819.pdf) Tamil Nadu Pollution Control Board, Government of Tamil Nadu, Annual Report, 2018-19, 12 July, 2019

Owing to its area of operation, CAG chose the Greater Chennai Corporation (GCC) as the ULB to study. The GCC has 200 wards spread across 15 administrative zones. Henceforth it should be noted that GCC will mean the ULB. The research plan included a baseline survey and in-depth interviews, which would be conducted in three of these administrative zones, baseline survey (Zone 10, Kodambakkam and Zone 11, Valasaravakkam) and in-depth interviews in Zone 8, Anna Nagar.

## Research Methodology

Post the secondary data collection of materials on SWM, 2016, which included government notification, guides, field notes, Micro Composting Centres (MCC) & MRF reports, audit reports and mapping data from CAG outreach staff, a baseline survey was conducted among GCC Solid Waste Management staff. Zonal officers from Zone 10 and 11 of the GCC were interviewed, who were also responsible for solid waste management for their respective municipal corporation zones. For the BWG section, the research team interacted with 12 Bulk Waste Generators, which consisted of residential complexes, institutions, marriage halls, and restaurants, to learn about the current situation. Following the data analysis and field reports of the baseline survey, an interview guide was drafted for interviewing BWGs. The interview guide<sup>7</sup> comprised of the following sections:

- 1) **Basic details:** Years in operation, floor area in sq. metre, no. of households in case of residential complexes, no. of shops in case of commercial complexes, seating capacity and walk-ins in case of restaurants, quantity and composition of the waste generated in a day, staff and in-house infrastructure to handle the waste
- 2) **Segregation:** Segregation practised, types of segregations practised, reasons for non-segregation of waste, how are different types of waste processed, challenges or issues due to the practise of segregation
- 3) **Waste collection:** How waste leaves the BWG's premises, who takes it, how is it taken, how the costs are arrived at, wastes that are refused
- 4) **Service provider:** Experience working with GCC and PSP, setting up of composting or bio methanation plants, relationship with GCC, the transition to adopting SWM, 2016, PSP operations, charges, relationship in comparison with GCC, suggestions and complaints for improving the whole waste collection and handling process.

As the baseline survey was conducted in zones 10 and 11, these zones were deliberately avoided for bias. Zone 8 was randomly selected for the primary data collection. Two CAG researchers, one of whom had earlier mapped the zone, were deployed to interview BWGs. The zonal officer of Zone 8, Anna Nagar wasn't informed about the data collection so that data could be captured without any last minute

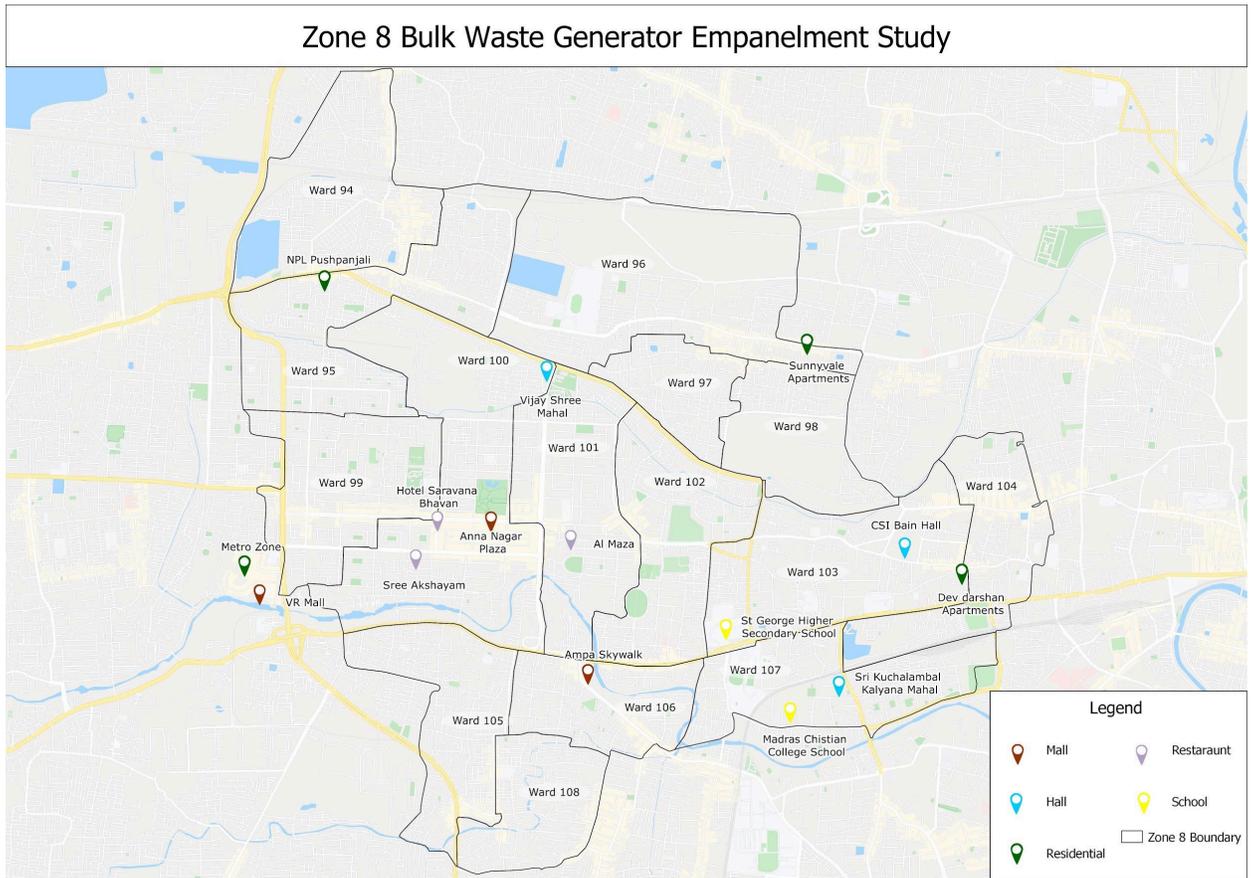
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<sup>7</sup> [https://drive.google.com/open?id=1O-iQVZ6LJfXyBR2z4d4w5J5tvN\\_pN2NqGDi05Mjs\\_tk](https://drive.google.com/open?id=1O-iQVZ6LJfXyBR2z4d4w5J5tvN_pN2NqGDi05Mjs_tk)

Interview Guide for Bulk Waste Generators, Citizen consumer and civic Action Group, February, 2020

interventions from the GCC's side. An index of BWGs was earlier compiled during the mapping process. This database was also used and key gated communities and businesses in zone 8 were personally visited. The researchers grouped the BWGs into five categories namely: residential complexes, commercial complexes, educational institutions, restaurants and marriage halls. A list of probable BWGs were compiled in each of these categories (2-3 BWGs for each category) and the researchers visited their premises. A total of 15 interviews were conducted at the premises of the BWGs. All the BWGs objected to audio recording their conversation as they felt it could be used against them in the future.

The qualitative data collected at the end of the exercise was analysed on a data matrix. The BWGs interviewed were plotted on the zone 8 map, which was earlier gathered by CAG researchers. Based on the data collected from BWG, an interview guide was prepared for GCC, which was used to interview Conservancy Inspectors/ Supervisors/ Workers. The plan was to interview the respective CI of the ward, where the BWG was located.



After review of the data collected from interviewing BWG, an interview guide<sup>8</sup> was created for Conservancy Inspector/Supervisors/ workers (CI/CS/CW). The guide comprised of the following sections:

- 1) **General details:** Age, number of years in service, service in the ward/zone
- 2) **Employment details:** whether GCC permanent employee or contractual worker, responsibilities in the line of work, typical day of work and schedule
- 3) **Bulk Waste Generators:** waste collection from BWG vs. non-BWGs, segregation practises of BWGs, reasons for not segregating, advice given for segregation, background of the issues on the field that led to SWM, 2016, labelling BWGs, serving notices and enforcing SWM, 2016, orders received from zonal offices regarding the enforcing of SWM, 2016, relationship with BWG after the enforcement of SWM, 2016, workload pre and post SWM, 2016, empanelled and private service providers who collect waste and their relationship with GCC

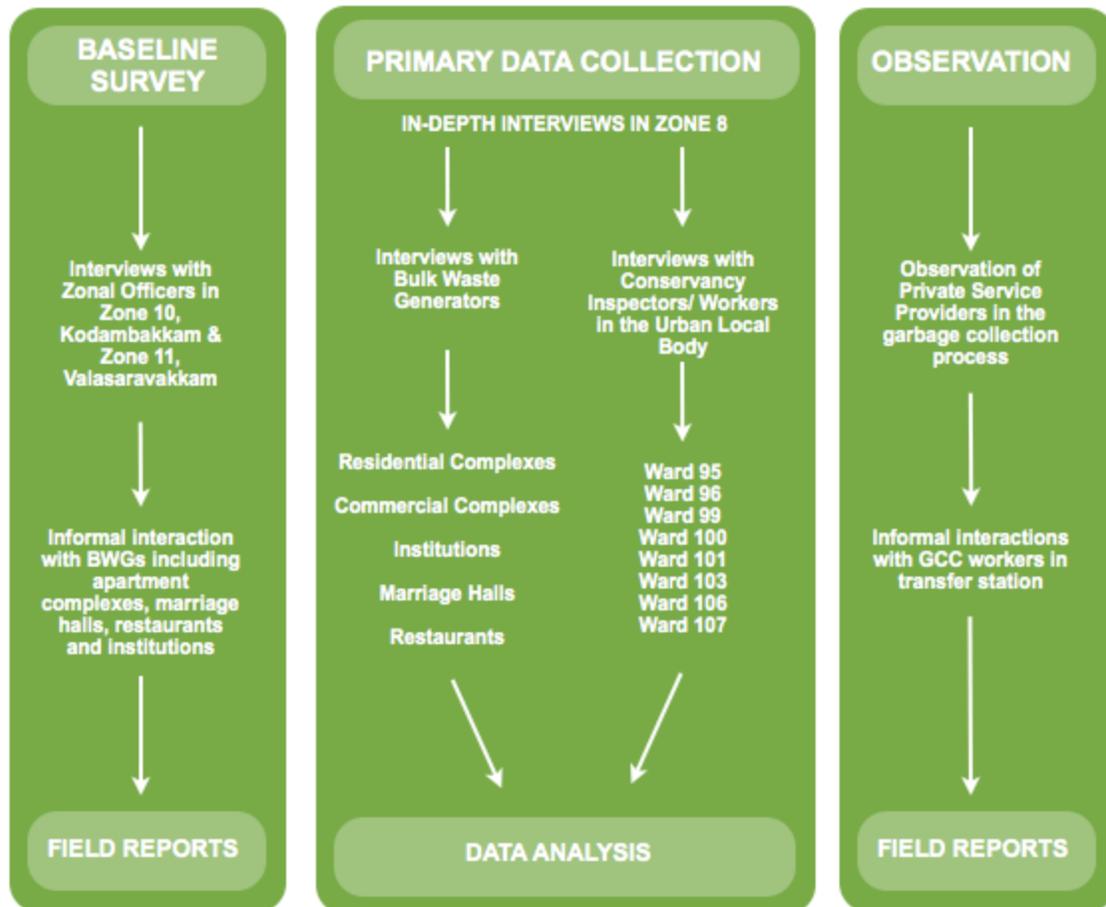
Based on the map, CAG researchers identified that the BWGs were spread across 8 wards in zone 8, hence interviews were conducted among the 8 CI/CS/CWs in the respective wards. The researchers interacted with a number of conservancy workers (CW) to learn about how SWM, 2016 impacted them. The data collected from BWG interviews and CI/CS/CW were processed in conjunction with each other to learn about the bigger picture of the impact on SWM, 2016 on both groups of respondents.

Post the data collection among CI/CS/CW, a research team was deployed to observe the waste collection practised by PSP in the BWG's premises. This was to verify the claims by BWGs and GCC employees for example, that waste was being disposed of scientifically.

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<sup>8</sup> <https://drive.google.com/open?id=1BzAbLVEf8wO1QuF6pfdY3cnd3i1ZpXJUS2pQhOI8u7A>

Interview Guide for Conservancy Inspectors/ Workers, March, 2020, Citizen consumer and civic Action Group



## Findings

### *Zonal Officers' interview*

Interviews with zonal officers revealed that BWG labelling exercises began in 2017 and lasted until 2019. The GCC had labelled the BWGs based on inputs from conservancy workers, who usually collected their waste. Following this, they were informed of the BWG status by the GCC. For non-biodegradable and domestic hazardous waste, the BWG needs to engage a PSP, and all of this needs to be arranged within 30 days from the receipt of their BWG status. It was revealed that non-compliance received no consequences even 4 months after the expiration of the 30-day window period. To help in this process, the GCC had also put out a list of 30 empanelled service providers (ESP), which the BWG can engage, but they were free to choose their own PSP too. It was learned that each zone had their own modified version of the definition of BWG, contrary to what was mentioned in the SWM, 2016, i.e. in zone 11, restaurants who generated only 50 kgs of waste too were labelled as BWGs. Apartment complexes with 20 plus households too were labelled as BWGs. The GCC had a calculation that each household generates 1.5 to 2 kgs of waste a day i.e 500 gms of waste from an individual assuming that a family consists of four members. Going by that calculation the apartment complexes didn't meet the BWG definition as

mentioned by the SWM, 2016 or GCC SWM, 2016 by-laws. It was observed that each zone had their own criteria to identify BWGs, while one zone labelled apartment complexes over 20 households as BWGs, another labelled for over 25 households. The BWG labelling criteria was observed to be non-uniform. The GCC were serving printed notices to the identified/labelled BWGs. The compliance rate of BWGs for the new change in law was 1-2%, but it was expected to go up to 15-20% in two years and 100% in six years time according to the Zonal Officers.

There has been a reluctance on the part of the BWGs to adapt to this new change in law, since they considered waste disposal to be an immaterial part of their daily process and were happy to just see the waste leave their premise unsegregated. The GCC had relaxed its stance temporarily by collecting from restaurants, who were particularly unhappy with setting up composting or bio methanation plants in house due to the smells it may emanate. A lack of space on rented premises was also cited as an inability by the restaurants to set up composting plants. The zonal officers advised the coming together of 10 or more BWGs to set up common composting plants to process their biodegradable waste. The BWGs have been cold in their response to the notices and the GCC has been considering invoking the fine provisions in SWM, 2016 to make them comply. Since the BWGs were unresponsive to the notices, the GCC zonal officers shared BWGs list with PSPs and directed them to approach the BWG themselves and market their products and services. GCC officers were fairly convinced that SWM, 2016 was here to stay and the hurdles to implement were only temporary, they also believed that the SWM, 2016 was a solid measure to reduce the burden of GCC to collect waste from BWGs as the entire Solid Waste Management department was overburdened.<sup>9</sup>

## **BWG**

### **General details**

The **residential complexes** interviewed had households ranging from 146 to 396 in number on an average to the highest of 1,134 and were spread across an area of 6,000 to 80,000 sq.metres<sup>10</sup>. They generated an overall waste of 50 kgs up to 1.5 tonnes depending on the number of households, i.e an average household of four members generated 1-1.5 kgs of waste a day and included equal quantities of biodegradable and non-biodegradable waste. Domestic hazardous wastes were rare, and would only go to a couple of hundred grams/per month per household. Three out of the four apartment complexes interviewed had installed composting plants within their premises after constant pressure from the GCC, but one was still at loggerheads as they vehemently refused to adhere to the SWM, 2016 as they believed the GCC was just shunning its primary responsibility of collecting waste. The apartment complexes employed housekeeping staff to the ratio of 1:14 and 1:18 to the number of households. The staff collected segregated waste door-to-door from individual households and processed the same in the common area along with their

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<sup>9</sup> For a detailed transcript of the interviews with GCC zonal officer, access here: <https://drive.google.com/open?id=1efxF3fQjdBMvzGYJTNsefncSdln9SDKC2uu6RWfs7xl>

<sup>10</sup>Data matrix, Interviews with Bulk Waste Generators, Citizen consumer and civic Action Group, March, 2020 [https://drive.google.com/open?id=1Lc5DD3m04wG99Hg9LqHjt8ZGb-6lr\\_-gl13dcmBmnH4](https://drive.google.com/open?id=1Lc5DD3m04wG99Hg9LqHjt8ZGb-6lr_-gl13dcmBmnH4)

sweeping and general cleaning responsibilities. The housekeeping staff of the lone apartment complex, who were reluctant to follow the SWM, 2016 were still collecting unsegregated waste and disposing it in the neighbourhood GCC dumpster placed on the street.

All the **Commercial complexes** interviewed accommodated 60-120 individual enterprises within it, though some of them could accommodate up to 200 shops. All of them were built on an average of 10,000 sq. metre of land area. The existence of food courts and restaurants had a direct impact on the quantity of waste generated, i.e a commercial complex with no food joints generated just 75 kgs of mixed waste (25 kg bins X 3) while the complex with food courts generated .50-.75 tonnes of waste on weekdays and more than one tonne of waste on weekends. The number of housekeeping staff too was directly related to the amount of waste generated. The complex generating .50 to .75 tonnes of waste employed 40 housekeeping staff, while the complex generating 1 to 1.5 tonnes of waste was employing 120 housekeeping staff. The staff collected segregated waste from each enterprise and processed the same in the basement while also cleaning and sweeping the entire complex.. Commercial complexes generating up to a tonne of waste have been managing their waste processing from start to finish entirely, while the GCC only held monitoring responsibilities. The local CIs usually visited once in two weeks on an average to check whether the complexes were indeed disposing their waste as prescribed in SWM, 2016.

The **Institutions** interviewed had a campus area of 50,000 to 1,00,000 sq. metres making them BWGs. The institutions were attended by 1,500-5,000 students daily and generated around 300 kgs of mixed waste a day. Owing to the large campus, 40% of the total waste were dried leaves and plant material, which fell down and needed to be swept everyday. The institution with 1,500 students employed 13 cleaning staff, while the institution with 5,000 plus students employed 80 staff. None of the institutions interviewed had composting or bio-methanation plants installed and they have been handling all their waste in-house, which includes burning and burying them in the ground. It has been observed that burning had been abandoned due to environmental reasons and burying is actively practised. The cleaning staff are known to take away paper, cardboard and plastic wastes away for reselling and there is also a lot of problem material like mattresses, old clothes, broken wooden benches and desks, which pile up in the campus, which are ultimately buried in the ground.

The **Marriage Halls** interviewed were all spread across 8,000 to 10,000 sq. metres and could accommodate 1,000-1,500 guests for an event. There was no daily generation of waste as marriages or events take place at an average of 70 times a year. But this too has been noted to be declining as some respondents confirmed there has been a steady decline in the number of events, sometimes up to 35-40 in the past two years from the usual 70. On event days, an average of two to three dumpsters full of waste is generated i.e 1 to 1.5 tonnes of mixed waste. There is no permanent team of cleaning staff employed by the marriage halls, but are only employed on a part-time basis, when there are events. None of the marriage halls interviewed had composting or bio methanation plants and were reluctant to install them in spite of GCC's insistence as they felt it was a waste of resources given that they have only 35-40 events in a year.

**Restaurants** interviewed consisted of two types: one which generated over a tonne of waste daily and another which generated 50 kgs of waste a day. Both were labelled as BWGs, but were treated differently

by the local CIs. The smaller restaurant had an average of 150 walk-ins a day, while the larger restaurants had 1,500-2,000 walk-ins a day. The larger restaurants generated 500 kgs to one tonne of waste depending on whether it was weekdays or weekends. The smaller restaurant segregated its waste and deposited the same in the nearest MCC using its own vehicle, while the larger ones employed a private service provider (PSP) to clear the waste from their premises and did not practise segregation. The larger restaurants had 5-15 dishwashing staff, who were also responsible for handling the waste. None of the restaurants interviewed had set up composting or biomethanation plants and wasn't happy with the idea of keeping waste lying for over 24 hours and processing it within their premises.

## **Segregation**

Out of the four **residential complexes** interviewed, two practised two types of segregation (biodegradable and non-biodegradable) while the domestic hazardous wastes were usually placed into a separate waste bag and disposed of with the non-biodegradable waste. One apartment complex, which had not practised segregation till now had recently purchased a composting machine and had plans in place to practise segregation. Though the RWA advised segregation, they had strictly communicated that sanitary wastes (menstrual pads, child and adult diapers) and meat wastes will not be collected and it's up to the residents to dispose of it themselves. It was noted that residents were disposing of these wastes in the neighbourhood dumpsters. One apartment, which had constantly refused to follow the SWM, 2016 was still not segregating their waste and disposing it in the neighbourhood dumpster. They felt it was the GCC and the conservancy workers' responsibility to segregate and not theirs, as they have been paying property taxes and other municipal taxes. There is no separate method to handle domestic hazardous or sanitary wastes as they are usually placed into a separate waste bag and disposed of with non-biodegradable waste, which are either collected by the GCC or PSP.

The **commercial complexes** interviewed have been practising segregation, but the lone commercial complex, which had no food courts, has been disposing of their mixed wastes in the neighbourhood dumpster. The other commercial complexes had an elaborate system of waste segregation. It was instructed that individual enterprises/shops segregate their waste into two separate dustbins and domestic hazardous wastes are usually placed into a separate waste bag, which would be collected by the housekeeping staff each day. The waste is then taken to the basement, where the biodegradable waste is fed into the heat composting machine, which gives out manure in 24-48 hours. The non-biodegradable waste and domestic hazardous wastes are collected by the respective PSPs employed by the commercial complexes. The PSPs who served the complexes, also served as scrap merchants, whereby they were buying back non-biodegradable waste, which could fetch a price and deducting the same from the service fees collected from the complexes.

All the **institutions** interviewed, segregated paper and plastic from their food wastes. The paper and plastics were usually sold by the cleaning staff in the neighbourhood scrap shops. As there was no collection from GCC, nor any information from GCC labelling them as BWGs, the institutions had been handling their waste within their premises. One school had a strict no food wastage policy i.e the parents were advised not to pack excessive lunch for their children and staff were assigned to check whether children were indeed finishing their meals and not wasting them. This system of checking for food

wastage has helped the school attain zero generation of food wastes. As the schools also housed hostels, there were problem materials like mattresses, broken benches too, which were usually buried in the empty spaces of the campus. All institutions interviewed were mixed-gender schools, so there were menstrual pad incinerators installed in the women's bathrooms. One school had a sprawling garden and it was used to segregate its waste out of which the food waste was used as a manure in the garden, but as the school expanded, this garden was given way for auditoriums and buildings, so the school abandoned the practice of segregation henceforth. The dry leaves, plant material and C&D wastes are usually piled up together and handed over to a PSP, who collects it once a month.

All the **marriage halls** interviewed were keeping aside single use plastic bottles and selling them in the scrap shops. This wasn't a policy or practised by the administration, but was adopted by temporary cleaning staff, who earn some side income. Though a notice announcing a ban on the usage of single-use plastics is prominently displayed by the GCC, event organisers or customers prefer to use single-use packaged water bottles. Rest of the waste is usually mixed and is disposed into the dumpster that is placed inside their premises. Calling the local GCC staff to clear the waste is a usual practice, for which they are usually paid Rs.100/head. But after the SWM, 2016 GCC has been reluctant to collect this waste but still does it and has been pressuring marriage halls to set up their own composting or biomethanation plants. One marriage hall had already employed a PSP, to whom they were handing over their unsegregated waste. One marriage hall was still getting GCC to clear their unsegregated waste as they were connected to a bureaucrat in GCC.

Two of the three **restaurants** interviewed segregated their waste into food wastes and other plastic packaging materials, while one restaurant was not practising any segregation. There was very little domestic hazardous or sanitary wastes generated and which when generated, was placed into a separate waste bag and added to the non-biodegradable waste. One restaurant which was generating around 50 kgs of waste was segregating their wastes even before SWM, 2016 as the proprietor felt it was the right thing to do. When GCC served the BWG notice to this restaurant saying that they need to segregate, the proprietor objected that they have always been segregating, which reveals that the segregation till then was a fruitless exercise, as all wastes were mixed together in the compactor. The restaurant, which did not segregate and was generating up to one tonne of waste, mentioned that they did not practise segregation as they had always been following the unsegregated route and the GCC didn't object when they were in charge of collection. The restaurant had also employed a PSP to clear waste from their premises and the PSP too didn't insist on segregated waste, hence the waste was always taken from their premises unsegregated. It must be noted that a single PSP has been collecting waste from both these restaurants which was generating up to one tonnes of waste each a day.

## **Waste Collection**

All the **residential complexes** interviewed were served by GCC until the SWM, 2016 GCC. GCC insisted to all the respondents to set up composting or biomethanation plants as they will no longer collect biodegradable waste from their premises. GCC did promise that they will not cease the collection of non-biodegradable and domestic hazardous waste. The residential complex with over 1,100 households have been handling their waste themselves and GCC is only engaged in monitoring the waste handling.

They had employed a PSP, Earth Recyclers, who take away non-biodegradable and domestic hazardous waste on a daily basis. All three respondents had installed composting machines in their premises except the one apartment complex, which still refuses to adhere to segregation or handling of biodegradable waste in-house. This apartment complex's housekeeping staff collects unsegregated waste door-to-door and then transfers the same into a tricycle and takes it to the street and empties these in the dumpsters placed in the street, in spite of the local CI's repeated warnings. GCC is still collecting non-biodegradable waste from the complexes once a week, but still insists on tips to be paid. All the respondents handed over their waste in waste bins, while only one respondent insisted that they didn't want to spend money for waste bags as well, especially after purchasing the composting machine that they directly disposed of their dumpsters into the GCC compactors.

Two of the three **commercial complexes** interviewed had installed slow heating composting machines and had employed PSPs for collecting their non-biodegradable and domestic hazardous wastes. The PSP were Lakshman waste Company and Ilahi Traders. The PSPs usually arrived past midnight, sorted out the waste, sent the biodegradable wastes to the composting machines and packed the non-biodegradable ones to be taken out in a lorry. As per the interviewed BWGs, these waste were taken to GCC's transfer stations for processing as the PSPs had an agreement with the GCC. The BWGs mentioned that they wouldn't employ these PSPs if they were to dump these waste somewhere else. As they were using GCC's premises, they were convinced that they were not breaking any municipal waste management rules. The PSPs never denied any type of waste and would even take it if it was not segregated. While one respondent shortlisted and employed its PSP after placing an advertisement in the newspaper inviting quotations for waste collection services, another respondent had directly selected the PSP as their housekeeping manager had worked in another commercial complex earlier, where the same PSP were employed. They felt it placed them at a better position to negotiate the rates. For the former respondent, three PSPs placed their bid for the waste collection services, one quoted Rs.35,000/month another Rs.25,000/month and the third quoted. Rs.15,000/-. The third PSP was chosen for transporting the waste, usually around a tonne to the GCC transfer station for Rs.500/day or Rs.15,000/ month. Apart from this the BWG also paid Rs.6,000/- for the waste to be deposited at the GCC's transfer station. The payments for the transfer station weren't remitted to the GCC directly but were paid to the PSP.

All the **Institutions** interviewed were not served by GCC. Owing to the large campuses occupied by the institutions, they usually handled their waste within their premises. One institution sought the help of GCC as well as a PSP named Golden Earth Movers. The institution also rented out its premises for weddings and other events. In those situations, the institution called the local CI, who would send a compactor to collect the food wastes, which the institution wanted immediately cleared. The local CI charged Rs.500 for this load and this wasn't legal. For non-biodegradable waste, dried leaves, broken furniture and C&D wastes, the institution sought the service of Golden Earth Movers, who charged Rs.2,500/ lorry load of waste. The PSP had no restrictions as to what type of waste could be given to them and the institution was clueless of what the PSP was doing with this waste. They weren't concerned about whether the PSP was dumping and were only keen on seeing the waste leave their campus. According to them, GCC only collected biodegradable waste to help them get the food out of their campus, while they had to employ the PSP for all other types of waste. The PSP had been serving the institution for a long

time and the campus manager during his interview, expressed that he couldn't identify when or how the PSP started serving them.

All the **Marriage Halls** interviewed, mentioned that GCC used to collect the waste without any qualms till mid 2019. Since then, they have been pressured by the GCC to adhere to the SWM, 2016. Only one respondent out of the three had employed a PSP, Arul waste Company, who takes mixed waste away from their premises. Arul waste company charges Rs.3,000-4,000 for each lorry load of waste. Rest of the two marriage halls were still paying GCC discreetly, Rs.1,500-2,000 for clearing a lorry load of waste from their premises. GCC had invited all the interviewed marriage halls to a BWG awareness meeting in mid 2019, which was chaired by the Chairman of the National Green Tribunal to inform and clarify about the new change in law. All the respondents strongly objected to this change of law and the GCC relieving itself of its waste collection responsibilities. All the marriage halls have been disposing their waste in waste bags except one which GCC has been disposing waste straight into the GCC compactor. The GCC has been pressuring them to setup composting plants, abandon the use of single use plastics and employ PSP to collect the waste, but the marriage halls are averse to setup composting plants as they felt it was a waste of money and space as they generate waste only up to a maximum of 70 times a year.

All the **restaurants** interviewed were serviced by GCC till September 2019, when they were informed that the GCC will no longer collect any type of waste from them as they are commercial entities. It was observed that the GCC had a two-tier system in labelling restaurants as BWGs. Restaurants which generated under 100 kgs of waste and around 50 kgs were advised to use their own transport vehicle and bring their segregated waste to the local MCC, but the BWG restaurants, who generated above 100 kgs and running up to a tonne was mandated to set up their own composting/bio methanation plants or employ PSP to take over the entire waste collection responsibility. Two out of the three respondents employed a PSP, Arul waste Company, which came daily post-midnight and collected unsegregated waste from the restaurants. The waste was collected in a mix of waste bags and large drums were used for leftover liquid curries. Arul waste Company collected Rs.7,000-15,000 a month depending on the load. They usually came in a tractor trailer and loaded all the waste in the trailer. According to the BWGs interviewed, Arul waste company was taking the waste to a pig farm located in Manali, which had close to 300 pigs and they were processing this waste in their premises. This had to be verified, which was the need for the discreet waste collection and observation exercise at the later part of the study.

## **Service Providers**

All the **apartment complexes** interviewed informed that they were sent information between September to December, 2019, which informed that they have to compulsorily segregate and set up composting plants to handle the biodegradable waste within their premises. The notice gave 30 days for the apartment complexes to implement this, but GCC didn't act on them for 3-4 months. When there was no response from the BWG, the GCC decided to take coercive steps. For one particular respondent, the GCC dumped waste right in front of their gate, and for another GCC tossed waste over the walls into the apartment

complex. When the BWG was not taking segregation instructions seriously, the CI ordered CWs to dump waste and segregate it in front of their front gate. As a last resort, GCC abruptly ended the collection of waste and the BWGs came running to the local CIs as to why they weren't collecting the waste. CIs then had to reiterate the seriousness of the SWM, 2016. All the apartment complexes except one were extremely unhappy about this change of law and alleged that the GCC was trying to pass over their responsibility of waste collection. They felt they were being cheated as they were paying property taxes, while GCC was trying to shun its responsibility. When they knew they could no longer postpone this, the BWG's RWA came together and gathered funds to set up a composting machine. GCC had handed over a list of empanelled service providers to two BWGs, while the rest were not aware of such a list. They used their personal contacts to learn about composting machines, which were installed in hospitals or large offices. One respondent purchased an organic waste composting machine for Rs.8 lakhs from Cryogenic Process Controllers, while another respondent bought a organic waste converter from the same company for Rs.2.5 lakhs, the difference lays in the quantity of food wastes that could be processed at a time, the 8 lakh machine could process up to 300 kgs of food waste at a time and give out manure in 24-48 hours, while the 2.5 lakh machine could process up to 50 kgs at a time. The apartment complex also considered hiring a PSP for waste collection, but they charged Rs.200/ household per month. As the complex had 400 houses, it would be Rs,80,000/month for waste collection, that too the PSP wouldn't be collecting door-to-door but just using a lorry to take the mixed waste out. The apartment complex's RWA was only ready to pay Rs.30-40/household a month and the deal wasn't struck. Another apartment complex with over 1,134 households had employed a PSP, Earth Recyclers for Rs.2.5 lakhs a month, to clear biodegradable and non-biodegradable waste from their premises. The complex has a composting machine, but of lower capacity, so biodegradable waste too was collected by Earth Recyclers. As of now, after the installation of the composting machine, GCC has promised to collect just non-biodegradable waste and has been doing the same. All the apartment complex respondents interviewed had deep resentment for the GCC and CIs as they felt they were bullied into complying with the SWM, 2016.

All the **commercial complexes** interviewed confirmed that even before the SWM, 2016 the respondents have been handling their own waste through composting machines and PSPs. As the respondents generated over a tonne of waste on a daily basis, relying on GCC to clear that waste daily was not an option for them, hence the respondents had employed PSPs. One was Ilahi Traders and another Lakshman waste Company for collecting non-biodegradable and domestic hazardous waste from their premises. One commercial complex advertised seeking a private waste company, while another appointed a waste company based on recommendation from a manager, who had earlier served as a housekeeping manager for another commercial complex. The respondents paid Rs.15,000/month for collecting waste from their premises. While one respondent mentioned that the PSP was using GCC's premises for disposing the collected waste, another was unaware about where it was taken. The BWGs were convinced that if the PSP were dumping waste somewhere, they would have known by now, as GCC sanitary inspectors, visited them regularly, at least once a month to check whether the complex maintained cleanliness and that the waste was collected by a PSP. The sanitary inspectors also requested pictures of waste collection by PSP to be sent to them on a regular basis. The BWGs didn't have any issue with the GCC as they haven't been working with them directly. The GCC just had a monitoring role and the BWGs had no issues with them as they were disposing of all the waste through a PSP. The lone commercial complex, which didn't generate any biodegradable waste was just disposing its mixed waste in a neighbourhood

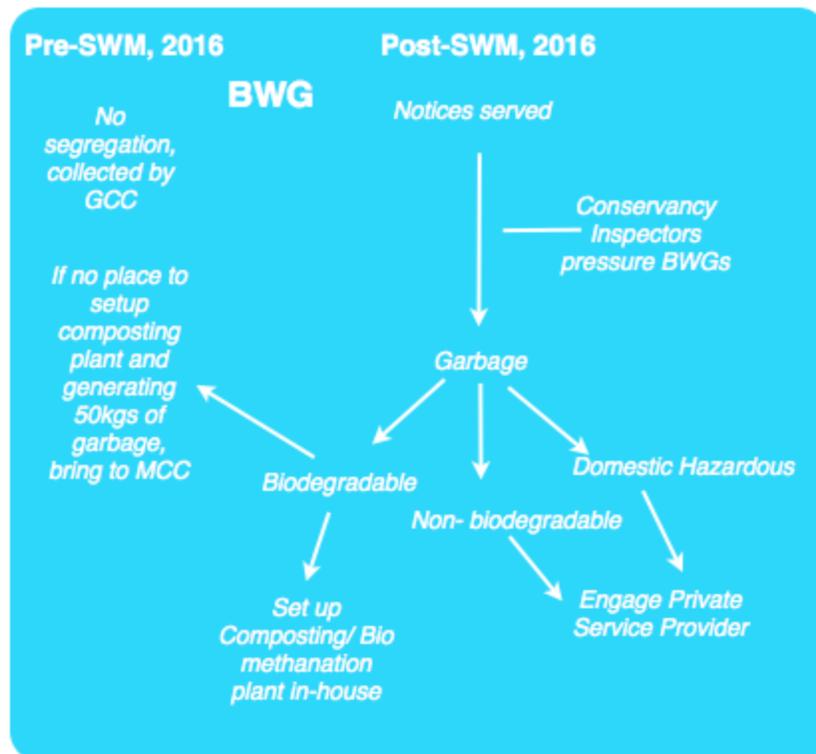
dumpster, and the GCC was not happy with this as they had been labelled as BWG owing to their land area.

All the **Institutions** interviewed mentioned that GCC had been ignoring them completely. They do not come for waste collection, nor for fumigation against mosquitoes. The schools have been doing these privately and felt that the GCC offered no help, even though these were schools with thousands of children in attendance. One of the respondents mentioned that GCC health inspectors had arrived once for spot inspection and fined them for selling locally packed snacks. The institution felt that it wasn't about the snacks, but they were just looking for an opportunity to impose fines on the institution. Another institution has been hiring a PSP, Golden Earth Movers Company to collect all types of waste from their campus. The PSP charges Rs.2,500 for a lorry load of waste. The institution isn't aware of what the PSP does with the waste, but are only concerned that it be taken away from their campus. The institution also hires GCC on an adhoc basis, when they have to clear biodegradable food wastes, which are generated when the institution rents out its grounds for events. In those times, GCC collects Rs.500 for a pickup and this is done off the record. All the Institution BWGs aren't aware of SWM, 2016 and confirmed that they received no communication from GCC regarding this. The institutions feel that they are losing a lot of money by taking the waste out themselves and want the GCC to act on this. There have been repeated representations from an institution, but there was no action from the GCC's side.

All the interviewed **Marriage Halls** confirmed that GCC used to collect their waste until August 2019. After that, they were invited for a BWG awareness event and were soon served notices to adhere to SWM, 2016 and told to make arrangements for setting up composting/ biomethanation plants and employ PSPs. One respondent took it up with the GCC and they linked them up with Arul waste Company, which collects Rs.4,000 for a lorry load of unsegregated waste. Other respondents mentioned that they still haven't managed to find a PSP. There were PSPs who were approaching the respondents to set up composting and biomethanation plants, but none were willing to remove all the waste from their premises on a need basis, which was what the BWGs wanted. Weddings happen a maximum of 70 times a year, and spending lakhs of rupees for setting up and maintaining an organic waste plant was considered a poor financial decision by the respondents. For one respondent, GCC was still collecting waste from them as they have been putting pressure on the GCC to collect through a bureaucrat known to them. GCC collected Rs.1,500-2,000 for each of this lorry load. One BWG was well aware that they cannot keep relying on GCC for a long time and have decided to take efforts to find a PSP. Since the BWG has a large committee managing it, the decision may be delayed. Another BWG were very unhappy about the SWM, 2016 as the rule was burdening them as they were already struggling with low marriage bookings for the past two years.

All the interviewed **Restaurants** mentioned that things were smooth when GCC was serving their restaurants. But in December 2019, they abruptly stopped the collection of waste and when they confronted them, GCC expressed that they were stopping their services to commercial establishments. One respondent which generates up to 50 kgs of waste mentioned that the GCC were ready to collect their waste, if they used their own vehicle and brought it to the local MCC. They felt that this method had completely disrupted their waste process and wanted a quick and permanent solution. The local CI had earlier offered to collect their waste privately with CW and had been paid Rs.600-800 a month, but this

too stopped after 3 months as they expressed they cannot collect discreetly anymore. CWs used to collect tips and sometimes forced a respondent to offer them up to 8 meals a day as gifts. The respondent calculated and realised that this alone was costing them up to Rs. 20,000 a month. The respondent had soon hired Arul waste company to whom they were paying only Rs.8,000, which they felt was very smooth compared to dealing with the GCC. Two large restaurants, which generated over a tonne of waste a day mentioned that it was a hassle to deal with GCC as they were always looking for tips and free meals, but with the PSP it's just the agreed upon amount and nothing more. All the respondents felt that there was poor communication from the GCC and they had never hand held them through the transition to SWM, 2016 and they were still clueless as to whether it was genuinely from the government or whether the local CIs were just avoiding responsibilities. It was observed that the respondents who generated over a tonne of waste a day, didn't consider segregation and scientific waste disposal as an essential part of their work. They hadn't given much thought to it, that's why they had ignored the SWM, 2016 till now and had to hire a PSP, only when GCC stopped services abruptly. The restaurants vehemently opposed the plans to set up composting plants in their premises as they weren't pleased with the idea of food rotting in their premises post the end of the day. This they felt was bad for their business if the GCC were to enforce it forcefully. Though the BWGs were quite unhappy with the local GCC CIs, they didn't wanted to antagonise them as it was bad for business since they could pressure them through many ways, which could disrupt their business.



## Findings from Interviews with CIs<sup>11</sup>

**General Details:** Out of 8 CIs interviewed, 6 were months short of 58 years of age, which was GCC's retirement age for CIs. All the interviewed CIs had close to 25-30 years of experience working with the GCC and were permanent employees. Their experience working in zone 8 extended from 3 months to 20 years at the maximum. Some CIs were originally Conservancy Supervisors and had received a promotion. All respondents interviewed were primarily involved in the waste management processes of the GCC and had deep insights into the waste collection and processing work.

**Employment Details:** The responsibilities of CIs include working with CS to get conservancy workers to fulfill their responsibilities of sweeping and collecting of waste. Managing the MCCs and MRFs in their wards, coordinating with CIs in other wards to forward non-biodegradable waste to their MRFs or wards that have bailing machine. Post the SWM, 2016 there are additional responsibilities of enforcing segregation of waste, checking for dumping especially C&D wastes, trees and imposing fines based on the SWM, 2016 and monitoring the overall quantity of waste in the ward and taking steps to reduce waste sent to the transfer station and landfill. The original work timings of the CIs were from 6 am to 1.30 pm, but they were always overworked and had to stay back till 3 pm to finish their duties or prepare reports to be sent to the zonal office.

**Bulk Waste Generators:** All the interviewed CIs and CWs confirmed that waste collection from BWGs was much easier compared to Non-BWGs like an individual household. The BWGs had dedicated housekeeping staff, who would keep the waste ready and help the CWs load, they would also pay heed to the CIs advise. Large quantities of waste is also made available at a single point for BWGs, while for individual households, 500 gms to a kilo of waste had to be collected from each household, so the time and effort was much larger for non-BWG waste collection. All the interviewed CIs confirmed that not serving BWGs had dried up a significant amount of incentives for the CWs. When CWs used to serve BWGs, they usually get tips, free meals and snacks everyday, this has completely stopped since the BWGs no longer entertain CWs on their premises. All the interviewed CIs informed that they have had less troubles with restaurants and commercial complex BWGs, but residential complexes have been a big hassle to implement the SWM, 2016. Residential complexes were managed by a large team of Resident Welfare Associations (RWA) and it's hard to get them to make a unified decision regarding anything let alone waste processing. For the RWAs to change their waste processing methods according to SWM, 2016 also warranted significant budget allocation for setting up composting plants or hiring PSPs. All the interviewed CIs mentioned that they have had problems with residential complexes, who refused to adhere to the SWM, 2016 and the CIs had to resort to villainous methods like dumping garbage at their front gates or seizing their housekeeping service vehicles or the halt the collection of garbage to make them adhere to the new change in law. Prior to the implementation of SWM, 2016, CIs mentioned that printed notices were hand delivered to the BWGs with a 30-day window period to adhere to it, but the GCC never acted, even after 30 days as it wanted to give more time to the BWGs. The BWGs were observed to be

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<sup>11</sup> Data Sheet, Responses from interviews with Conservancy Inspectors/ Supervisors/ Workers, Citizen consumer and civic Action Group, March, 2020, [https://drive.google.com/open?id=1SbB8aDEcrLOroEcPy5rW\\_dArL8PnHX2Q8IFy8FfOG3M](https://drive.google.com/open?id=1SbB8aDEcrLOroEcPy5rW_dArL8PnHX2Q8IFy8FfOG3M)

cold and never took any initiative to adhere to the change of law and the CIs on advise from the zonal offices were forced to take action. All the interviewed CIs confirmed that there hasn't been any issues with BWGs prior to SWM, 2016 that led to the change of law. The push had been entirely from above, through the zonal offices and their higher ups who felt that there needed to be efforts made to reduce the amount of waste sent to the landfill. The bureaucrats believed that mandating BWGs to segregate and passing over the responsibility of waste collection from them would be an effective measure. All the CIs confirm that an average 7-8 tonnes of waste a day has been reduced from their wards after the implementation of SWM, 2016 for BWGs. The whole zone 8 also recorded up to 80 tonnes of reduction of waste per day from being sent to the landfills in Perungudi and Kodungaiyur.

The criteria for determining a waste generator as BWG had not been uniform across the wards. Some wards labelled residential complexes with over 20 households as BWG, while other wards labelled for over 25 and others for over 50. It was observed that there were strict waste reduction targets given to the wards based on their contribution of waste to the landfill. The CIs were expected to act upon the respective BWGs to reduce the waste, which meant each ward took maximum efforts to label a number of BWGs liberally, so that they could forgo the collection of waste from them, which would ultimately lead to the reduction of waste. Though the amount of waste has significantly reduced, the work load of CIs, CSs and CWs has only gone up, as they now need to follow a meticulous system of segregation and processing according to the composition of the waste material. A printed notice was issued from the zonal offices to the ward offices, which had blank spaces so that the CIs could fill the names of the BWGs and hand deliver to them. The alternatives that the BWGs can take have been poorly explained or not explained at all in some wards. Two CIs were even unaware of the list of empaneled service providers put out by the GCC. Rest of the six CIs had given a printed list of the empaneled service providers or recommended a PSP, Arul Garabge Company to the BWG. Out of 8 interviewed CIs, only one confirmed that they invited BWGs to the ward offices and held a detailed meeting. The CI had also documented the entire process meticulously, while all other wards had served the notices and never bothered to educate the BWGs about the change in law.

Once the notice was served, the restaurant BWGs, were quick to employ PSPs. Even though the GCC assured to collect non biodegradable waste from them, they felt it was a hassle working with two service providers for two types of waste and fully opted for the PSP. One CI informed that a BWG restaurant had to be threatened by sending a sanitary inspector and warning them that they will have their trade licences cancelled, if they were not to adhere to the SWM, 2016. Residential complexes were the most troublesome as they felt they were being cheated by the GCC. They felt they paid property taxes which also included fees for garbage services, while the CIs had to repeatedly remind them that property taxes had nothing to do with garbage collection and that the GCC had been engaged in the service of garbage collection for free. This might be changed in the near future as waste collection fees are likely to be worked out at the bureaucratic level. There has been lot of tussles between RWAs and respective CIs as the RWAs were known to not cooperate with the CIs, while the CIs blamed the same on the RWAs. These tussles led to the CIs to take drastic measures like dumping waste and halting waste collection to make the RWAs comply. All the CIs believed that there is very little initiative from the RWAs to comply with their notices and requests, they feel that they don't take the GCC and CIs and CWs serious enough, which forced them to take these extreme measures. The CIs have also been dumping waste in front of

restaurants, who refused to segregate. Due to the lack of strong presence of PSP, the GCC has been collecting segregated waste from small BWGs (50 kgs of waste a day) if they were to bring the waste to the MCC. PSPs were still believed to be in their infancy and not in a position or lack the staff and infrastructure to take over the GCC's role of collecting waste from BWG. Most PSPs were keen to install a one time composting/ biometanation plant and not collect all the waste on a continuous basis, which the BWGs always preferred. One CI informed that he never suggests any ESP or PSP to the BWG as he doesn't trust them with whether they are disposing of the collected waste according to the rules. He believed that the PSPs were widely engaged in dumping in the outskirts of the city and the CIs don't care as long as the waste leaves their ward limits.

The CIs felt some BWG government quarters too were not complying with their notices and that they have no power to enforce these rules on another government agency, so they were left to still collect waste from them. Though all the CI respondents confirmed 4-8 tonnes of waste reduction a day from their wards, they also confirmed that their workload has tripled after the change of law. Earlier all the waste just needed to be sent to the landfill, now some 6-7 types of segregation is needed. Individual households were a big hassle as they refused to segregate and sometimes, the CWs had to sort these waste on their own. The CIs had strongly mooted for increasing the number of CWs to compensate for this increased work load. Seven out of 8 CI respondents confirmed that they have no working relationship with any PSP and that they do not share any infrastructure or premises. Only one CI confirmed that there were plans to allocate a space in the MCC to Sreenivasa waste Company so that they can process their waste locally rather than taking it outside of the city, which is where their facilities are located. Seven out of 8 CIs also confirmed that retired CIs or CWs were highly unlikely to return back to private garbage collection business as they are just unsatisfied with this work of garbage collection and just wanted an out post-retirement. One CI also confirmed that the CWs' health condition is poor owing to their continuous working in unhygienic conditions that they are unable to physically work post-retirement. Some Superintendent Engineers of late were noted to have started private waste collection companies, which is likely to grow in the near future. All the interviewed CIs responded that the SWM, 2016 was in the right direction and is bound to succeed in the coming years. Seven out of 8 respondents opined that there is no going back from SWM, 2016. BWG provisions are bound to proceed this way, but a lone respondent felt that though the expectations of PSP to enter the field of waste collection has been large, the reality was far short of that. The CI felt that PSPs have not managed to even bear a significant portion of the work done by GCC and that GCC was still solely performing the waste collection and processing responsibilities and the role of PSPs is negligible.

நமது குப்பை!  
நமது பொறுப்பு



Our Garbage!  
Our Responsibility!

**Notice to Bulk Waste Generators**

Z.O. 8. C.No./2822/2019

Date: 15.05.2019

From,

Zonal Officer,  
Zone-VIII,  
36-B, Pulla Avenue,  
Shenoy Nagar,  
Chennai – 600 030.

To,

SUNNY WALE  
K.H. ROAD AYANAVARAM CH. 23.  
RWA/Market Association/Hotels/Hostels  
Restaurants/Establishments/Hospitals  
Institution/Buildings/Place.

Sub.: Categorization as Bulk Waste Generators for implementing provisions of Solid Waste Management Rules 2016 and the Greater Chennai Corporation SWM By Laws 2018 – reg.

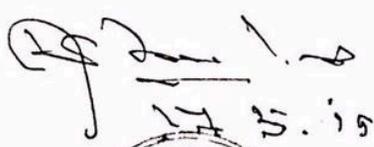
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Sir/Madam/Messer's,

Considering the activities / business carried out at your premises, the competent authority exercises the duty as per Rule 15 of Solid Waste Management Rules 2016, has designated you as Bulk Waste Generator generating more than 100 kg waste/day or having a built up area of more than 5000 square meter and are directed to comply with provisions of the solid Waste Management Rules 2016 and implement segregation of waste at source, processing & treatment of biodegradable waste within premises or processing tied up with service providers, segregated storage of dry waste / non-biodegradable waste without any mixing up of wet waste and facilitate the doorstep collection of residual waste by Greater Chennai Corporation or the

The above mentioned provisions related to Bulk Waste Generators have to be complied and intimated to the undersigned with in 30 (Thirty) days of receipt of this notice, failing which will attract penal provisions of Solid Waste Management Rules 2016 and the Greater Chennai Corporation SWM by laws 2018.

You are hereby requested to kindly coordinate with Greater Chennai Corporation for better sanitation of Chennai City and make Chennai as the cleanest city.

  
Zonal Officer  
Zone-VIII  
ZONAL OFFICER-VIII  
GREATER CHENNAI CORPORATION



<sup>12</sup> (For a detailed list of all study documents and pictures, access footnote)

### **Private Service Providers Observation Exercise**

Two CAG researchers were deployed past midnight to discreetly observe the BWGs and how the PSPs have been collecting and disposing of the waste from them. The data gathered from BWG interviews were used as inputs to plan out the timings. The BWGs had mentioned that the PSPs had a partnership with the GCC to use their transfer stations, MCC and MRFs to process their waste, while the CIs and GCC denied

<sup>12</sup> Pictures and Documents, Bulk Waste Generators Study, CAG, March 2020  
<https://drive.google.com/open?id=1g7GCTmLh0qO2oK10IQ1zxOb7Eba0OUU0>

that the GCC had any working relationship with any PSP to share its infrastructure and facilities. One of the aims of the exercise was to verify this and how the PSP disposes the collected waste. The observations are as follows and a detailed report<sup>13</sup> of the exercise can be accessed:

Restaurant and commercial complex BWGs who had employed PSPs were being observed. Arul waste Company, Ilahi Traders and Lakshman waste Company were some of the PSPs serving these BWGs. Arul waste Company were observed to be arriving at two prominent BWGs interviewed on a tractor trailer and collecting unsegregated waste, in a mix of waste bags and waste bins. The collection was post 2 am daily and the PSP stopped to pick up waste from all their clients till the trailer filled up. The PSP's clients included popular fast food chains and cafes like McDonalds, Starbucks, Hotel Saravana Bhavan and Akshayam. The researchers observed that all the collected waste was brought to GCC's Mylapore transportation station (Zone 9) and unloaded. Ilahi Traders, which served Ampa Skywalk, another interviewed BWG, was collecting the waste at 11pm and bringing the same to the Mylapore transfer station. Laksman waste Company who served VR Mall, another BWG interviewed in the study, was collecting and disposing of the waste in the same Mylapore transfer station. BWGs outside zone 8, who were not interviewed by the researchers too were availing the services of these PSPs, who collected their waste and transported it to the transfer station. The PSPs were also observed to be collecting waste from a popular hospital and bringing it to the transfer station. It is notable from GCC's waste process that waste from the transfer stations were usually sent to the landfill. In Spite of the SWM, 2016, GCC compactors were still observed to be collecting unsegregated waste from some BWGs past midnight. It's believed that all of this is conducted in violation of the SWM, 2016.

To confirm the same, CAG researchers posed as event organisers and approached another GCC transfer station in zone 8 to enquire whether they would accept waste from private enterprises. The GCC staff in-charge of the transfer station was willing to take in waste discreetly, but for a fee of Rs. 4,000 for a tonne of waste. This was in violation of SWM, 2016 and the payment was only in cash, which had to be personally handed over to the staff. The transfer station was ready to take in unsegregated waste and didn't explicitly reject any types of waste. The transfer station was also ready to offer logistics support for bringing the waste to the transfer station from the client's premises for Rs.1,500. The staff admitted that this was all in violation of GCC laws and should be kept a secret. When enquired whether we could take the waste to the nearest GCC transfer station, the staff objected that only they had such an arrangement. The staff mentioned that there were provisions for PSPs to approach the GCC for disposing their waste with them, but that could cost up to three times the rate they quote and it involved a lot of paperwork with the GCC, which the staff discouraged from pursuing. The staff at the transfer station also advised to say that we had employed a PSP, if the local CIs were to confront us as to where we were taking the waste. The staff also assured that CIs would care less as long as the waste has left their respective wards. Anything beyond that is not their responsibility.<sup>14</sup>

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<sup>13</sup> BWG Followup field notes, CAG, Chennai, March, 2020  
<https://drive.google.com/open?id=1QoL62qrdFS8plh2HHPfdLjkbzXEPfrywQFLaVzBN2dg>

<sup>14</sup> Transcript of interview with In-charge GCC Cholai transfer station, CAG, March, 2020  
[https://drive.google.com/open?id=1bIPQfugDT3kUJZiY8jZ6weDDnu0BcFFuazpn\\_BpJ6dg](https://drive.google.com/open?id=1bIPQfugDT3kUJZiY8jZ6weDDnu0BcFFuazpn_BpJ6dg)

## Conclusion

With the data collected from BWGs and GCC Conservancy Inspectors, it is understood that there is a lack of understanding of the provisions of SWM, 2016. There is also observed to be poor communication and efforts on the part of GCC to explain the change of law to the BWGs. It is also observed from the BWGs' reactions that they aren't proactive to adhere to the SWM, 2016 and a sense of responsibility for them to act keeping environmental concerns in mind hasn't been imbibed in them by the GCC. Extended Producers Responsibility of the SWM, 2016 is a concept still alien to the commercial enterprises. The assertion that payment of property taxes makes the GCC liable to collect waste is a point widely held by BWGs, but the GCC's contention that property taxes do not comprise waste collection services need to be effectively communicated to the BWGs to quicken the pace of the SWM, 2016's implementation. There needs to be a communication channel between BWGs and the respective zonal offices to clarify waste issues and resolve tussles that occur between local CIs. The provisions of the SWM, 2016 should be uniformly applied to all BWGs irrespective of their political affiliations. Government complexes who are BWGs need to set an example by complying to SWM, 2016 and not use their authority to overrule it. Residential complexes were the BWGs, who expressed strong displeasure for the SWM, 2016 as this involved allocating land for installing composting machines. Land has been rationed on the development of these properties and the RWAs were unhappy to let go of this space, over their contribution to Open Space Reservation (OSR) land to the GCC. Space for waste processing and composting machines need to be compulsorily factored into the original building plan, which is not the case now.

The majority of the Empanelled Service Providers in the GCC's list are keen to set up a one-time composting/ biomethanation plant over collecting waste regularly, while there is clearly demand for the latter. The private waste collection services are still in their infancy due to the limited number of players, lack of space to store and process waste. GCC needs to take measures to lease or allocate land and resources to PSPs, without which it would be impossible to fill the role played by GCC for BWGs. GCC must step in to regulate rates offered by PSPs, which they currently do not. GCC must also work with self employment programmes to make individuals or enterprises take up private waste collection services. Mudra loans too should be allocated for the same. The SWM, 2016 has multiplied the workload of Conservancy Workers and efforts need to be made to increase the staff to manage the segregation process. GCC needs to impose fines as prescribed by the SWM, 2016 and need to be given more power to counter organisations and individuals, who enjoy political connections and try to overrun SWM, 2016. As all wards in the GCC now practise composting, there is an excess of manure in some cases. The studied zone 8 itself had 25 tonnes of manure as stock, unaware of what to do with it. More networking needs to be done on a national level to move the excess of these materials from one place to another, where there might be a shortage. A national level system could be devised in cooperation with the Ministry of Urban Affairs to exchange these recyclables. The SWM, 2016 makes efforts to reduce the waste that goes to the landfill. Though it appears to be doing this, CAG investigations also proved that the waste from BWGs are secretly sent to the landfill again, making the entire purpose of the SWM, 2016 meaningless except diverting funds to corrupt GCC staff. The SWM, 2016 appears to be on the right path to fulfil Zero Waste City objectives, but unless GCC starts reigning in on their staff to enforce SWM, 2016 with integrity and non-partiality, the objectives of SWM, 2016 could be easily set back by many years.

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