Report on Status of Civic Issues in Mumbai

June 2021

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I. Foreword

2020 was an exceptional year for the world. The COVID-19 pandemic created various challenges for cities and Mumbai was no exception. Praja appreciates the handling of the appropriate pandemic by the Municipal Corporation of Greater Mumbai (MCGM). The civic body's introduction of various noteworthy initiatives also is commendable.

MCGM, during this period, successfully used decentralised control rooms with command posts in each of the city's 24 wards (COVID-19 War Rooms). Another thing that has worked in their favor has been the use of technology. MCGM reintroduced the 1916 call centre– a unified complaints system, as a COVID call centre. The 1916 call center was in fact incubated by Praja, back in 2003.

Mumbai being the economic capital of the country, needs to run efficiently and the citizens of the city deserve apposite basic day to day civic services. Praja understands that a lot of citizens' issues could not be attended to, due to major focus being diverted towards COVID-19 this year, and this has been reflected in our Civic Report as well.

In 2020, **3943 complaints were received for garbage not collected** even though the corporation has claimed that they have achieved 100% door-to-door garbage collection, in an MCGM Report. Data also shows that MCGM took an average of **29 days to resolve a water complaint** and **43 days to solve all SWM complaints**, in 2020. Additionally, a 2015 MCGM survey had also revealed that **58% toilets had no electricity** which also is a major safety concern. However, post 2015, no follow up survey has been conducted to understand the current scenario. MCGM should conduct surveys such as the one in 2015, at regular intervals to collate data on the progress of civic issues, complaints and their redressal.

Further, when it comes to water supply Mumbai overall receives an average of 188 lpcd (Litres per Capita per Day), which is higher than the Bureau of Indian Standards (BIS) norms of 135 lpcd. Of this, the **non-slum areas receive 150 lpcd (at Rs. 19.44 per month)** while **the slum areas receive 45 lpcd (at Rs. 4.85 per month), through metered connections**. People in the slums to access the remaining need of water hence, have to **rely on water tankers and other sources, which approximately costs them Rs. 500-550 per month**. If MCGM is able to provide **135 lpcd (as per the BIS norms) of water supply to slum population through metered connection then, the cost will be as low as Rs. 14.54 per month**. Implementing 100% metered water connection in slums would allow them to access required quantity of water at just Rs. 14.54 per month as compared to Rs. 500-550 they are currently paying.

A budget portrays priority areas for development by the local government and highlights funds allocated for many civic functions. However, **since 2015, a difference between budget estimates and revised estimates has been seen** where capital budgets have been consistently lower than the budget estimates. An outcome-based budget should be incorporated to ensure a targeted development within the city. MCGM also live-streamed the budget announcement this year, as they have been doing for the past few years, thus exposing citizens to the process of budgeting. However, it would mean dear little, if the **citizens are not able to comprehend the various nuances of the budget**. Thus, the budget structure needs to be simplified for a common citizen to understand.

It is also critical that ward committees be energised and put to good use. For this, the use of technology can be a game changer. Data suggests that in **2017-2019, an average of 22 meetings were conducted every month**. However, in **October- December, 2020, when the ward committees started meeting online, the average number of meetings increased to 28 each month**. This indicates that adapting to new technology and conducting virtual meetings could be beneficial in increasing the number of meetings, thus better representing a community's interests and issues in the local government.

During MCGM's COVID-19 management, three key areas of successes came to light, that can be carried forward in post-pandemic rebuilding and further improve the services at ward level. First, **decentralisation** of various functions at local level for inclusive decision making and better quality of services. This can, secondly, be achieved through an even more extensive **use of technology**, which the MCGM has previously showcased an inclination for (Livestreaming budgets, online ward committee meetings and so on). Thirdly, MCGM should **collaborate** with various stakeholders in both public and private sector to find innovative solutions to city's growth. This will not only help MCGM in providing basic day to day services efficiently but also managing and becoming future-ready city.

NITAI MEHTA
Founder Trustee, Praja Foundation

II. Acknowledgement

Praja has obtained the data used in compiling this white paper through Right to Information Act, 2005. Hence it is very important to acknowledge the RTI Act and everyone involved, especially the officials who have provided us this information diligently.

We would like to appreciate our stakeholders; particularly, our Elected Representatives & government officials, the Civil Society Organisations (CSOs) and the journalists who utilise and publicise our data and, by doing so, ensure that awareness regarding various issues that we discuss is distributed to a wide-ranging population. We would like to take this opportunity to specifically extend our gratitude to all government officials for their continuous cooperation and support.

Praja Foundation appreciates the support given by our supporters and donors, namely Friedrich Naumann Foundation, A.T.E Chandra Foundation, Lal Family Foundation, Madhu Mehta Foundation and numerous other individual supporters. Their support has made it possible for us to conduct our study & publish this white paper. We would also like to thank our group of Advisors & Trustees and lastly but not the least, we would like to acknowledge the contributions of all members of Praja's team as well as Interns, who worked to make this white paper a reality.

Note: Due to the COVID-19 pandemic and the subsequent difficulty in receiving complete data from the related MCGM departments the paper suffers from the limitation of not including certain data points. Attempt is however made to portray the holistic situation of Mumbai using published data from online sources and to suggest changes in strengthening civic services in the city.

III. Source of Data

The sources of information for this study have been collected by filing RTIs (Right to Information) to the relevant departments and through Government Websites:

Data Points	Year	Source
Water Supply		
Amount of Water	2016-17 to 2019-20	Environment Status Report
Water Supply Timing	2018 to 2020	MCGM Portal
Metered Un-Metered Connections	2020	Hydraulic Engineer Department
Drinking Water Quality	2016-17 to 2019-20	Environment Status Report
Sanitation and Sewerage System		
Public Toilet	2018 to 2020	Solid Waste Management Operation
Community Toilet	Till 2019	Slum Sanitation Program
Toilet Facility	2015	AE Maintenance Dept. & MCGM Portal
Swachh Survekshan ODF++	2019	SBM Department
Sewer Treatment Plant	2015-16 to 2019-20	Sewerage Operation Department
Solid Waste Management		
Quality of Water bodies	2019	CPCB Portal
Waste Generation & Composition, Key Indicator	2016-17 to 2019-20	Environment Status Report
Advanced Locality Management	2019	MCGM Portal
Swachh Mumbai Prabodhan Abhiyan	2020	MCGM Portal
Swacch Survekshan - Garbage free City	2019	SBM Department
Bio Medical Waste	2019	SWM Zone-1 Dept. & MPCB Portal
Air Quality, CCRS, MCGM Budget, MCGM Human Resources & ER Deliberation		
Air Quality	2020	CPCB Portal
Central Complaint Registration System	2018 to 2020	Disaster Management
MCGM Budget	2015-16 to 2020-21	MCGM Portal
MCGM Human Resources	2019 to 2020	General Administration
Elected Representative Deliberation	Mar'17 to Dec'20	Municipal Secretory Dept.

Section I: Water Supply & Sewerage

Part 1. Water Supply

A. Key Highlights

Amount of Water Supply:

- As on 2019-20, amount of water at source (source yield) for Mumbai was 4,173 Million Litres per Day (MLD) while the ***overall water supplied to the city was 3,850 MLD with a 7.74% conveyance loss.***
- The Bureau of Indian Standards (BIS) prescribes an average of 135 litres per capita per day (lpcd) of water required for residential purposes[1] whereas ***the average amount of water supplied in Mumbai was calculated to be 188lpcd***[2].
- Although the average amount calculated as 188lpcd is higher than the prescribed 135lpcd, not all households receive this amount. A disparity in per capita water supply is evident from an MCGM report titled 'Towards Equitable and 24x7 Water Supply for Greater Mumbai' cited in various reports[3] which mentions that ***non-slum areas in Mumbai receive much more water (150lpcd) while slum areas receive only 45lpcd***.
- 33% of 11,855 water related complaints were of ***shortage of water*** in 2020.

Water Supply Timings:[4]

- The MCGM launched a 24x7 water supply project in 2014, but the ***average timing of water supply in the city in 2018 was only 5.4 hours.***
- However, out of the 290 zones, 204 zones ***(70%) receive only upto 4 hours of water supply.***
- ***Top 3 wards (K/W, P/N and R/C) in complaints*** related to 'shortage of water supply' in 2020 were also wards, which ***had average water timings of less than 5 hours*** per day. Of this K/E and P/N have 49%, and 58% of their population living in slums, which bear a larger brunt of poor accessibility due to shared connections and lack of proper storage facilities.

Water Quality:

- MCGM's water quality tests based on BIS norms showed ***0.8% unfit samples in 2019-20***.
- However, ***12% of 11,855 water complaints in 2020 were related to contamination***.
- To further argue the water quality, information acquired from the HMIS (Health Management Information System) database states that in 2019-20, the number of ***reported Diarrhoea Cases were 34,144 & Typhoid 5,449***. Information for Cholera cases was absent in HMIS.

Water Metering:

- MCGM's water metering policy of 2019, Atal Mission for Rejuvenation and Urban Transformation (AMRUT)[5] and the National Water Mission[6] have ***100% metering*** as a goal.
- However, in Mumbai the ***island city has unmetered connections*** and pays a lump sum 'cost for service' as a component of the property tax while metered connections in rest of the city pay 'cost for amount of water' according to the Water Charges Rules, 2015.

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[1] https://law.resource.org/pub/in/bis/S03/is.1172.1993.html

[2] According to data on number of metered connections, 83% are residential, if this figure were assumed for the entire city the per capita consumption is calculated by subtracting non-revenue water from the source yield (taken as 30% according to a report on 'Economics of Mumbai Water Supply' by Mr. S.N. Patankar, Former MCGM City Engineer and current Member of Mumbai Vikas Samiti), and dividing 83% of the remainder by the population.

[3] As per an RTI Response

[4] https://portal.mcgm.gov.in/irj/portal/anonymous/qlhedocs

[5] http://amrut.gov.in/content/innerpage/the-mission.php

[6] http://nwm.gov.in/?q=goal-4

- In the water costing for metered connections, ***slum households pay Rs 3.59/1000lt. only marginally less (Rs. 0.73/1000lt) than non-slum households which pay Rs.4.32/1000lt***. This highlights that non-slum areas benefit more from the water subsidy than slum residents.
- **13,937 commercial and industrial units** still have a **non-metered water connection** in the city of Mumbai.

Budget:

- MCGM's water operations department budget shows a **decrease in budget utilisation from 109% in 2017-2018 to 75% in 2019-2020**.
- It apprehends the inefficiency in service delivery as **33% of total water related complaints were of "Shortage of Water"** and it took **29 days for water and 52 days for sewerage related complaints to be resolved**.

B. Accessibility, Adequacy and Affordability of Water Supply in Mumbai

Mumbai city is largely dependent upon freshwater supply from seven water reservoirs- two within the city limits (Vihar and Tulsi) and five outside the city limits (Tansa, Modak Sagar Upper Vaitarna, Bhatasa and Middle Vaitarna) at an average distance of 138kms. Raw water available from these sources is conveyed through 2235 mm to 5500 mm diameter pipelines and tunnels to water treatment facilities at Bhandup Complex (2810 MLD) and Panjrapor (1365 MLD). The treated water is stored in the Master Balancing Reservoirs (MBR) located at Bhandup Complex (within Mumbai) and Yewai (Outside Mumbai) and is further distributed to 27 service reservoirs located throughout Mumbai City with a water supply network of about 450kms.[7]

Table 1: Water Supply and Conveyance Losses in Mumbai from 2016-17 to 2019-20[8]

Years	2016-17	2017-18	2018-19	2019-20
Overall				
Overall Water Yield from source (MLD)	4,200	4,173	4,173	4,173
Overall Water Supply (MLD)	3,750	3,850	3,850	3,850
Conveyance Losses (MLD)	450	323	323	323
Conveyance Losses in %	10.71%	7.74%	7.74%	7.74%

Inference:

- Overall source yield of water has decreased by 0.64% from 2016-17 to 2019-20 whereas the overall water supply to the city has increased by 2.6% in the same period.
- This is because conveyance loss has decreased from 2016-17 to 2019-2020 even though there has been a loss in overall water yield.
- Conveyance losses[9] as of 2019-20 were 7.74% of the total water yield at 323 MLD. This amount, considering the average per capita requirement of 135lpd (as per BIS norms) could have served the water requirements of an additional 23,92,593 persons'.

[7] MCGM Environment Status Report 2019-20.

[8] MCGM Environment Status Reports 2016-17 to 2019-20. Conveyance losses are the amount of water lost in transmitting water from the source to the city distribution network. It is calculated as the difference between the Overall Water Yield from source and the Overall water supply to the city.

[9] The loss of water from a pipe or canal that is caused by leakage, seepage, evaporation, or evapotranspiration.

Table 2: Sources of Drinking Water in Mumbai (Census 2011)

Source	Within premises		Near premises		Away		Total number of households	
	Number	%	Number	%	Number	%	Number	%
Tap water from treated source	20,71,006	98.3%	3,96,043	83.1%	48,338	58.5%	25,15,387	94.4%
Tap water from un-treated source	27,575	1.3%	29,260	6.1%	8,118	9.8%	64,953	2.4%
Covered well	1,408	0.1%	1,145	0.2%	1,500	1.8%	4,053	0.2%
Un-Covered well	879	0%	1,360	0.3%	1,606	1.9%	3,845	0.1%
Hand pump	3,964	0.2%	8,810	1.8%	3,260	3.9%	16,034	0.6%
Tube well/Borehole	1,527	0.1%	2,953	0.6%	1,301	1.6%	5,781	0.2%
Spring	0	0%	1,772	0.4%	34	0%	1,806	0.1%
River/Canal	0	0%	4,083	0.9%	95	0.1%	4,178	0.2%
Tank/Pond/ Lake	0	0%	8,631	1.8%	5,386	6.5%	14,017	0.5%
Others (community toilets, tankers)	0	0%	22,388	4.7%	13,039	15.8%	35,427	1.3%
Total	**21,06,359**	**100%**	**4,76,445**	**100%**	**82,677**	**100%**	**26,65,481**	**100%**

Inference:

- Although the central government's **Jal Jeevan Mission** has set a target of piped water connections for all households by 2024 this applies only to rural areas in line with the targets adopted by the central government under **Sustainable Development Goals** (SDGs). 96.8% of drinking water was sourced from tap water from the piped system and 79% were within the premises.
- However, the SDGs refer to achieving universal and equitable access to safe and affordable drinking water for all measured by the proportion of the population using safely managed drinking water services. Further, under WHO norms [10] for an improved water source, vendor provided water including water tankers/carts, unprotected wells, and surface water sources are considered unimproved sources of water. Mumbai's census data shows an overall 2.2% of such unsafe water sources apart from another 2.4% of households, which use untreated tap water.
- 79% of the total water sources were within the premises of the household whereas 18% are near the premises (within 100mt) and 3% are away from the household (more than 100mt). 5,59,122 households source their water from outside of their dwelling.

[10] https://www.who.int/water_sanitation_health/monitoring/jmp2012/key_terms/en/

Table 3: Ward wise Number of zones with water supply duration (2020)

Ward	Number of Supply Zones	Average Number of hours of Water Supply	<=2 hrs	>2 to <=4 hrs	>4 to <=8 hrs	>8 to <=12 hrs	>12 to <=18 hrs	>18 to <24 hrs	24hrs	NA
A	13	2.46	10	2	0	1	0	0	0	0
B	6	1.88	5	0	1	0	0	0	0	0
C	5	1.53	5	0	0	0	0	0	0	0
D*	21	3.45	7	7	5	1	0	0	0	1
E*	16	4.87	10	3	0	0	0	1	1	1
F/N	9	3.30	3	4	2	0	0	0	0	0
F/S	10	5.03	1	8	0	0	0	0	1	0
G/N	4	4.25	0	2	2	0	0	0	0	0
G/S	9	5.53	1	5	2	0	0	0	1	0
H/E	9	3.11	0	9	0	0	0	0	0	0
H/W	14	3.25	0	14	0	0	0	0	0	0
K/E	18	6.48	1	14	0	0	0	1	2	0
K/W	17	3.50	8	7	1	0	0	1	0	0
L	8	8.97	1	2	2	0	2	0	1	0
M/E	21	7.56	2	8	7	0	0	0	4	0
M/W	5	11	0	1	2	0	0	1	1	0
N	7	15.61	0	1	1	0	2	0	3	0
P/N	19	3.89	4	10	4	1	0	0	0	0
P/S*	15	2.73	2	11	0	0	0	0	0	2
R/C	9	2.20	4	5	0	0	0	0	0	0
R/N	7	2.43	2	5	0	0	0	0	0	0
R/S	28	4.86	3	13	10	1	0	0	1	0
S	16	11.25	0	4	5	2	1	0	4	0
T	4	24	0	0	0	0	0	0	4	0
Total	**290**	**5.39**	**69**	**135**	**44**	**6**	**5**	**4**	**23**	**4**

Note: NA stands for 'Water Supply Timing' not available

Note (*): D, E ward has 1 zone and P/S ward has 2 zones for which water supply timing was not available.

Inference:

- Water supply timings are an important indicator of accessibility to water services. This is especially the case for household connections that do not have storage facilities.
- The average water supply timings for B, C and R/C wards are the lowest while T, S and N wards have the highest supply time. T ward receives 24 hours of water supply.
- Out of the 290 zones, 204 zones (70%) receive upto 4 hours of water supply, while 23 zones (8%) receive water supply for 24 hours.
- Data on water timings across the city shows that of 290 zones, in 22 zones water is supplied from before 6 am and up to after 12 am for <=2 hours and in 29 zones for >2 to <=4 hours.

Table 4 : Water Metered and Unmetered Connections in MCGM as on Dec 2020

Ward	Total Metered Connections				Non Metered Connections				% of Non-Metered
	CM*	DM*	IND*	Total	CM*	DM*	IND*	Total	
A	3,054	2,106	117	5,277	268	44	9	321	6%
B	1,333	335	19	1,687	44	1	0	45	3%
C	2,443	443	82	2,968	49	5	0	54	2%
D	3,172	4,907	185	8,264	560	30	13	603	7%
E	2,117	1,647	557	4,321	244	9	1	254	6%
F/N	1,804	13,244	33	15,081	362	8	1	371	2%
F/S	1,546	3,292	233	5,071	296	5	10	311	6%
G/N	2,710	8,875	184	11,769	448	26	0	474	4%
G/S	1,523	3,780	323	5,626	377	10	33	420	7%
H/E	1,684	33,521	77	35,282	494	19	0	513	1%
H/W	2,994	16,948	17	19,959	1,297	85	0	1,382	7%
K/E	3,541	30,780	778	35,099	1,492	135	1	1,628	4%
K/W	4,088	25,034	222	29,344	1,325	100	0	1,425	5%
L	2,325	30,197	567	33,089	577	16	6	599	2%
M/E	1,009	37,148	148	38,305	108	5	0	113	0.3%
M/W	1,743	21,202	83	23,028	532	1,544	1	2,077	8%
N	2,197	16,816	178	19,191	424	1,063	1	1,488	7%
P/N	3,040	36,669	260	39,969	684	58	1	743	2%
P/S	2,115	14,338	809	17,262	857	41	9	907	5%
R/C	3,052	14,947	34	18,033	1,058	96	1	1,155	6%
R/N	1,772	12,692	115	14,579	499	81	2	582	4%
R/S	2,275	24,293	433	27,001	519	64	1	584	2%
S	1529	25922	315	27,766	775	34	5	814	3%
T	2181	10182	121	12,484	553	135	0	688	5%
Grand Total	**55,247**	**389,318**	**5,890**	**450,455**	**13,842**	**3,615**	**95**	**17,552**	**4%**

***CM- Commercial, DM-Domestic, IND- Industrial**

Inference:

- MCGM's water metering policy of 2019 highlights the goal of 100% metering in consonance with Atal Mission for Rejuvenation and Urban Transformation (AMRUT) launched in 2015 that sets universal metering as one of its goals. However, as outlined in the MCGM policy, old connections in the island city will continue to be unmetered until its redevelopment.
- Data of metered connections shows that 86% of the connections are residential while 12% were commercial and 1% were industrial.
- Of the overall units across the city, 4% have non-metered connections
- M/W (8%), N & G/S (7%) wards have the highest percentage of non-metered connections while M/E (0.3%), and H/E (1%) have the least percentage of non-metered connections.
- Wards H/W, K/E, K/W and R/C have a large proportion of commercial units with non-metered connections.

Table 5: Affordability of Water Supply (Residential)

Type of Connection	Metered Tap (Non-slum)	Metered Tap (Slum)	Tanker (Slum)
Cost criteria	Rs. 4.32/1000lt[11]	Rs. 3.59/1000lt	Rs. 210/1000lt
Average expense per month based on per day norm (135lpcd)	Rs. 17.5	Rs.14.54	Rs. 850.5*
Average expense per month based on Mumbai's per capita average(188lpcd)	Rs. 24.36	Rs. 20.25	Rs. 1,184.4*
Average expense per month - Mumbai's slum (45lpcd) and non-slum (150lpcd) per capita average	Rs. 19.44	Rs. 4.85**	Rs 567**

Note: (**) Cost of water for slum households is calculated based on the following consideration- if 45 lpcd is received from the metered connections it costs Rs. 4.85 per month; while the rest 90lpcd (considering daily norm requirement of 135lpcd) is met through tanker water, which would cost Rs. 567. The total monthly cost for a slum household to use 135lpcd would therefore be Rs. 571.85.
(*) The cost of water is calculated considering the entire amount received from a tanker.

Inference:

- Currently, in Mumbai, there are two methods followed for water costing- cost for service and cost for the amount of water.
- The former applies to old connections in the island city that are unmetered and pay water charges as a component of the property tax according to Section 141 of the MCGM Act.
- Whereas the metered connections and water supply through tankers are based on the amount of water consumed, charges depend upon the Water Charges Rules[12], last revised in 2015.
- However, water subsidy benefits the non-slum households, as is evident from the fact that slum households pay a difference of only a mere Rs. 0.73/1000lt. less than non-slum households.
- Further, considering the inequity in the amount of water received per capita in slum and non-slum areas, slum dwellers often end up spending much more for their water through other means such as water tankers, which is much more expensive than a metered connection. For example, if a slum household receives an average of 45lpcd as mentioned in the MCGM report 'Towards Equitable and 24x7 Water Supply for Greater Mumbai[13]', the metered connection per month would cost Rs. 4.85 per capita. But for meeting the ideal water need, the family would need to access other sources which would cost an exorbitant Rs. 567 per capita for the remainder 90lpcd (considering the per capita requirement of 135lpcd).
- Considering an average family size of 4.5[14] per family, the average expense per month (based on Mumbai's slum (45lpcd-metered, 90lpcd-tanker) and non-slum (150lpcd) per capita average) would be Rs. 2,573.33 for a slum household and Rs. 18.48 for a non-slum household. If the entire 135lpcd is provided through a metered tap for slums, then the per slum household cost would be Rs. 65.43.
- To sum up slum population will receive the water at Rs. 14.54lpcd per month if 100% metering is done.

[11] This rate is applicable for usage of 150litres per capita per day (lcpd). Thereafter it is progressive as follows: 150-200lpcd is Rs. 8.64/1000lt, 200-250lpcd is Rs. 12.96/1000lt and above 250lpcd is Rs. 17.28/1000lt.
[12] https://portal.mcgm.gov.in/irj/go/km/docs/documents/MCGM%20Department%20List/Hydrallic%20Engineer/DOCS/Water%20Charges%20Rules%20effective%20from%2001.04.2015_English.pdf
[13] As per an RTI Response
[14] https://censusindia.gov.in/2011census/hh-series/hh01.html

C. Quality of Water Supply in Mumbai

An important component of water supply is the quality of water- safe water supply is one of the criteria of SDGs under its water and sanitation Goal 6. The Bureau of Indian Standards (BIS) sets specific quality requirements of potable water and water for domestic use, which is regularly monitored by the MCGM.[15] According to the Environment Status Report of the MCGM, 200 drinking water samples are collected daily for testing at the G/North water-testing laboratory. Apart from user point and distribution network, quality testing is also done at the source point, prior to and after treatment.

Table 6: Ward Wise Drinking Water Quality Testing Results from 2016-17 to 2019-20

Ward	% of unfit samples			
	2016-17	2017-18	2018-19	2019-20
A	9%	5%	1.3%	0.9%
B	5%	4%	2.1%	1.0%
C	3%	1%	1.2%	1.3%
D	3%	2%	1.5%	1.4%
E	3%	1%	0.8%	0.1%
F/N	3%	1%	1.2%	0.1%
F/S	6%	2%	0.8%	1.2%
G/N	2%	3%	0.9%	1.5%
G/S	3%	1%	0.6%	0.6%
H/E	3%	1%	0.0%	0.2%
H/W	6%	2%	1.3%	1.1%
K/E	1%	1%	0.6%	0.4%
K/W	2%	<1%	0.1%	0.4%
L	4%	2%	1.2%	0.9%
M/E	3%	2%	1.9%	0.9%
M/W	5%	2%	2.4%	0.9%
N	2%	1%	0.7%	0.3%
P/N	1%	<1%	0.2%	0.2%
P/S	3%	1%	0.8%	1.3%
R/C	3%	5%	1.8%	0.8%
R/N	4%	2%	2.0%	1.3%
R/S	0%	1%	0.4%	0.4%
S	2%	1%	0.1%	0.6%
T	7%	1%	0.4%	0.2%
Average	**3.5%**	**1.9%**	**1%**	**0.8%**

Inference:

- The percentage of unfit testing samples has reduced considerably from 3.5% in 2016-17 to 0.8% in 2019-20.
- G/N (1.5%), D (1.4%), C (1.3%), P/S (1.3%) and R/N (1.3%) wards had the highest percentage of unfit samples in 2019-20.
- 16 out of 24 wards had less than 1% unfit samples in 2019-20.
- Even though there is an overall decrease in unfit samples, in wards F/S, G/N and P/S the percent of unfit samples has increased to more than 1 % from 2018-2019 to 2019-2020.

[15] https://cpcb.nic.in/wqstandards/

D. Sustainability

Sustainability is an important factor in the water supply in urban areas. It has been an emerging theme of all major water policies, and rightly so. A Niti Aayog report on the Composite Water Management Index[16] highlighted a serious water-stress situation in India's cities and predicted that 21 major cities will run out of water by 2020. The extent of water crisis has been more than evident after Chennai faced severe water scarcity in 2019. It is therefore of utmost importance to focus on the sustainability of water, given that even in Mumbai the water demand is estimated to double in the next 20 years.

The recently launched national **Jal Shakti Mission**[17] lays a specific focus on rejuvenation of water sources and adoption of sustainable practices for water conservation through tracking of rainwater harvesting, reuse of treated wastewater, rejuvenation of water bodies, plantation and awareness programmes. Mumbai already has an existing **MCGM rainwater harvesting policy**[18] to make RWH mandatory to new properties coming for development from 1st Oct. 2002 having plot area 1000 sq.mt and more. From 8.05.2019 as per DP 2034, the condition is binding to all developments having a plot area 500 Sq. Mts. & more.

Information acquired through an RTI, as on October 2020, there is total number of **3209 RWH units** in Mumbai city. However, this needs to be tracked with the number of properties developed since 1st Oct. 2002 compared to the RWH units and ward wise for effective monitoring of policy implementation.

[16] https://niti.gov.in/sites/default/files/2019-08/CWMI-2.0-latest.pdf
[17] http://nwm.gov.in/
[18] https://portal.mcgm.gov.in/irj/go/km/docs/documents/MCGM%20Department%20List/Solid%20Waste%20Management/Rain%20Water%20Harvesting/Water%20Conservation%20and%20Rainwater%20Harvesting%20EN.pdf; MCGM Environment Status Report 2018-19

Part 2. Sewage and Water Treatment

I. Key Highlights

Sewerage and sanitation systems are as important as the water supply systems in urban areas since they act as complements for enabling sustainable and healthy cities. All major national policies that focus on water, also deal with sewerage systems. This is because in the near future, a lot of water demand can be met by effective treatment of wastewater.

Coverage:

- The AMRUT policy[19] of the central government declares providing a ***sewerage connection to every household*** as one of its mission statements.

Sewage Treatment:

- Mumbai currently generates ***1,956MLD of sewage*** of which 1,474MLD is treated in MCGM's ***8 Sewage Treatment Plants (STPs)*** at Malad, Versova, Bhandup, Colaba, Bandra, Worli, Charkop and Ghatkopar.
- However, as of 2019-20, only ***3 out of 8 STPs primary, secondary and tertiary treatment***.
- ***Highest outlet Biochemical Oxygen Demand (BOD) in 2020 was at Malad STPs at 125.6mg/lt***., much higher than the prescribed limit of 20mg/lt. by the Central Pollution Control Board (CPCB) and 10mg/lt. by the Maharashtra Pollution Control Board (MPCB).
- As a result, ***major sea outlets and beaches in Mumbai are polluted***[20] from untreated sewerage and/or surface pollution including solid waste. The average maximum BOD recorded in all the major beach outlets was 19mg/lt. in 2019, much higher than the prescribed norm for beaches by the CPCB of <3mg/lt.
- Similarly, the maximum BOD of ***Mithi river*** was 50mg/lt. (compared to the norm of <3mg/lt.) showing that it is highly polluted from untreated sewerage and waste disposal.

There are various national level policies related to sewerage. The Atal Mission for Rejuvenation and Urban Transformation **(AMRUT)** policy[21] of the central government declares providing a sewerage connection to every household as one of its mission statements. Similarly, the **National Water Mission**[22] aims at incentivising the recycling of water including wastewater and the development of an eco-friendly sanitation system. The **Jal Shakti Abhiyan**[23] of the ministry has increased the reuse of sewage water as one of its targets.

If we look at Mumbai's performance in this context, currently there are 8 Sewage Treatment Plants (STPs) in Mumbai, which treat 1,474 MLD out of the total 1,956 MLD of sewage generated in 2019-20. However, it is important to note that most STPs in Mumbai are only undertaking primary treatment.[24] This is evident from the table below where only a few STPs on average let out permissible treated wastewater.

Untreated sewerage poses the risk of contaminating water sources and is a major cause of river and marine pollution. Sewerage from units not connected to the piped sewer system, leakages in sewage pipes, and poor treatment of sewerage all pose a serious risk, not just for the environment alone, but also for human health.

[19] http://amrut.gov.in/content/innerpage/the-mission.php
[20] https://cpcb.nic.in/nwmp-data/
[21] http://amrut.gov.in/content/innerpage/the-mission.php
[22] http://nwm.gov.in/
[23] http://geourbanmissions.gov.in/
[24] RTI reply shows that as of 2019, 4 of 8 STPs have preliminary treatment, 3 have primary and secondary treatment while one has primary, secondary and tertiary treatment.

Water and vector-borne diseases are more likely to have a serious impact on human lives due to water contamination, mismanaged and untreated sewage.

According to norms of the Pollution Control Boards, the three major indicators used for measuring the quality of wastewater are as follows:

1. **Biochemical Oxygen Demand (BOD)**: Refers to the amount of dissolved oxygen in the water required to decompose the organic matter. The higher the organic matter (sewage and pollutants) in the water, the more is the BOD; the more the BOD, the lesser is the available oxygen for aquatic life. CPCB norms for BOD from STP outlet are 20mg/lt. MPCB has adopted a stricter norm of 10mg/lt. The CPCB norm followed for BOD of waterbodies is 3mg/lt.

2. **Total Suspended Solids (TSS)**: Refers to the dry weight of undissolved solid particles in water. The prescribed limit for STP outlet is 50mg/lt. by CPCB and 20mg/lt. by MPCB.

3. **Faecal Coliform (FC)**: Faecal Coliform is bacteria found in the faeces of warm-blooded animals and humans, commonly found in human excreta and a major cause of water-borne diseases. The CPCB's prescribed limit for faecal coliform in all waterbodies is 2500MPN[25]/100ml and for drinking water, detectable faecal coliform has to be nil.

[25] Most Probable Number (MPN) is a method to estimate concentration of microorganisms in liquid.

Table 7: Status of Mumbai's Sewage Treatment Plant's Waste Water Quality from 2015-16 to Dec-2020[26]

Criteria			2015-16	2016-17	2017-18	2018-19	2020[27]
BOD (Prescribed limit is 20mg/lt. by CPCB and 10 mg/lt. by MPCB)	Colaba	Inlet	42	NA	59.14	124	135
		Outlet	59	123.4	42	89.6	<5
	Worli	Inlet	114	NA	114	118	89
		Outlet	87	139.16	87.14	71.5	2.14
	Bandra	Inlet	NA	110	NA	110	78
		Outlet	35	70	42	18	1.65
	Versova	Inlet	52	70	60	110	117
		Outlet	36	7	32	45	29.92
	Bhandup	Inlet	NA	NA	NA	NA	80
		Outlet	36	8	15	15	31.17
	Ghatkopar	Inlet	NA	90	NA	NA	76
		Outlet	50	44.25	40	40	34.5
	Malad	Inlet	88	120	250	250	125
		Outlet	73	60	90	90	125.64
	Charkop	Inlet	135	78	80	80	149
		Outlet	85	80	78	78	<5
TSS (Prescribed limit is 50mg/lt. by CPCB and 20mg/lt. by MPCB)	Colaba	Inlet	46	NA	46	82	174
		Outlet	38	41	37.71	64	<5
	Worli	Inlet	144	NA	142	65	119
		Outlet	136	56.8	98	41.6	-*
	Bandra	Inlet	NA	240	NA	60	95
		Outlet	24	18	28	18	-*
	Versova	Inlet	53	38	55	90	153
		Outlet	26	22	31	28	17.7
	Bhandup	Inlet	NA	NA	NA	NA	90
		Outlet	30	10	22	22	23.88
	Ghatkopar	Inlet	NA	62	NA	NA	115
		Outlet	45	66.5	30	30	33.5
	Malad	Inlet	120	40	35	35	164
		Outlet	75	15	18	18	155.71
	Charkop	Inlet	135	110	115	115	155
		Outlet	78	76	16	16	<5

*Discharge is through Marine Outfall, BO: Biochemical Oxygen Demand, TSS: Total Suspended Solids

STP's Index

Colour	Remark
	MPCB criteria met
	CPCB criteria met
	Average outlet quality is worse than the inlet

Inference:

- In 2020 Colaba, Bandra, Worli and Charkop STPs met the MPCB limit as these STPs were able to achieve the average BOD of lower than 10mg/lt.
- In Malad STP, the outlet quality was 125.64mg/lt, which is higher than the inlet quality, indicating a failure in the primary treatment of waste water. If water is to be reused in the long run for the sustainability of the water-sewerage system, it is important to improve the treatment facilities.

[26] http://www.mpcb.gov.in/about-us/annual-report

[27] As per an RTI Response (Jan 2020 to December 2020)

- As for total suspended solids, the STPs have fared better, highlighting that primary treatment can tackle suspended solids in the sewerage except for Malad STP where the TSS is 155.71mg/lt, which is far beyond the prescribed limits of MPCB and CPCB.

Table 8: Quality of Water Bodies in Mumbai in accordance with CPCB norms (2019)[28]

Station name	Type of Water Body	B.O.D. (mg/l)		Faecal Coli form (MPN/100ml)	
		<3 mg/l		<2500MPN/100ml	
		Min	Max	Min	Max
Source					
Bhatsa U/S Of Liberty Oil Mills, Satnel, Shahapur, Thane	Minor River	3	4	2	220
Bhatsa D/S Of Liberty Oil Mills, Satnel, Shahapur, Thane	Minor River	3	4	11	220
Bhatsa D/S Of Pise Dam Near Pise Village (Ulhas)	Minor River	3	10	2	210
Tansa Near Road Bridge, Village Dakewali, Wada, Thane	Minor River	3	4	4	350
Vaitarna Near Road Bridge, Gandhare Village, Wada, Thane	Minor River	3	4	23	240
Outlet					
Sea Water At Nariman Point, Colaba, Mumbai	Marine	8	20	110	17,000
Sea Water At Malabar Hill, Walkeshwar, Mumbai	Marine	6	15	70	1,600
Sea Water At Haji Ali, Worli, Mumbai	Marine	9	16	49	1,600
Sea Water At Shivaji Park, Dadar, Mumbai	Marine	4	45	49	1,600
Sea Water At Juhu Beach, Juhugaon, Santacruz, Mumbai	Marine	3	14	33	1,600
Sea Water at Gateway of india,Colaba,Mumbai	Sea	9	16	33	1,600
Sea Water at Charni Road Choupathy, Girgaon,Mumbai	Sea	8	17	46	1,600
Sea Water at Worli Sea Face, Worli, Mumbai	Sea	9	16	49	920
Sea Water at Varsova Beach,Andheri, Mumbai	Sea	3	14	11	1,600
Mithi	Minor River	3	50	13	3,500
Mahim Creek At Mahim Bay	Creek	6	50	23	920

Inference:

- The above table indicates that Mumbai's water sources even before treatment are highly polluted.
- Major sea outlets and beaches in Mumbai are however polluted from untreated sewerage or surface pollution including solid waste. The minimum BOD recorded in all the major beach outlets is much higher than the prescribed norm for beaches of less than 3mg/lt. The Faecal Coli Form is high too, in most beaches it is within the maximum but at Nariman Point, Colaba it exceeds the maximum by a huge margin of 17000MPN/100ml.
- Mithi river pollution from untreated sewerage and waste disposal is evident from the high BOD (maximum 3mg/lt.) as well as the high Faecal Coli Form. (maximum 3500MPN/100ml)

[28] https://cpcb.nic.in/nwmp-data/

E. Water Supply and Sewerage related Budget, Citizens Complaints and Human Resources

Table 9: Budget Estimates and Actual Expenditure of 'G' Budget (Water & Sewerage) in Crores

Water & Sewerage		2017-18	2018-19	2019-20	2020-21	2021-22
Budget Estimates	RE	3,215	3,513	3,532	3,490	4,123
	CE	1,611	1,787	2,150	2,601	3,634
	Total	4,826	5,300	5,682	6,091	7,757
Revised Estimate	RE	4,061	3,956	3,997	4,452	-
	CE	1,000	1,231	1,539	1,580	-
	Total	5,061	5,187	5,536	6,032	-
Difference (in %)	RE	26%	13%	13%	28%	-
	CE	-38%	-31%	-28%	-39%	-
	Total	5%	-2%	-3%	-1%	-
Actuals	RE	4,559	4,212	2,858	-	-
	CE	974	1,040	1,307	-	-
	Total	5,533	5,251	4,165	-	-
Percentage Utilised	RE	112%	106%	72%	-	-
	CE	97%	84%	85%	-	-
	Total	109%	101%	75%	-	-

Inference:

- The revised estimate for Water and Sewerage department has increased from 5,061 in 2017-18 to 6,032 in 2020-21 whereas, the budget estimated for 2021-22 is 7,757.
- The difference in budget and revised estimates of revenue expenditure shows an increasing trend however, capital expenditure has always decreased in the last four years.
- The budget utilisation percentage has declined from 109% in 2017-18 to 75% in 2019-20.

Table 10: Comparison of Citizens Complaints, Time take to resolve Complaints, Budget Utilisation and Human Resources

Department	Citizen Complaints			Average days to resolve a complaint			Budget Utilization (%)			Human Resources Vacant Post (%)		
	2018	2019	2020	2018	2019	2020	2017-18	2018-19	2019-20	2018	2019	2020
Water	12,647	15,507	11,855	42	24	29	109%	101%	75%	42%	40%	39%
Sewerage	573	657	447	56	36	52						

Inference:

- In 2020, the average number of days to resolve a complaint was 29 days for Water & 52 days for Sewerage. Whereas, according to the citizens' charter, the prescribed average number of days to resolve any complaint is only 3 days.
- At the same time the budget utilisation has declined from 109% in 2017-18 to 75% in 2019-20.
- There is still a vacancy of 39% in Water and Sewerage department as of 2020.
- Although the number of citizen complaints related to water supply has decreased, 33% of 11,855 complaints were regarding a shortage of water in 2020.

F. Recommendations

- **<u>Part 1. Water Supply</u>:**
- **Water Supply and Timing:** The required BIS standard of 135lpcd should be supplied to every connection with at least 6-hour water supply in all areas, including the slum areas.
- **Quality:** MCGM tests for drinking water quality checks need to cover all areas in the wards for an accurate measure of water contamination. If there are more water complaints from a particular area then corrective measures should be taken accordingly. In addition, the rise in water-borne diseases can be attributed to the quality of water and ensuring better measures to increase quality should be implemented.
- **100% Metering:** Implementing 100% metered water connection in slums would allow them to access required quantity of water at just Rs. 14.54 per month as compared to Rs. 500-550 they are currently paying. Water metering should be adopted for residential connections per household to accurately track the amount of water used. At the same time, priority should be given to 100% metering of commercial units to track and proportionally supply water between residential and commercial units ensuring improved revenue generating system.
- **Sustainability**: For ensuring equity and sustainability in the water supply systems, more localised methods of water resource and supply management through localised and collectively owned sustainable practices can be promoted. MCGM can look to incentivising and strict monitoring of the implementation of RWH projects especially, in developments having plot area 500 Sq. Mts. & more. RWH will also enable meeting the future water demand and reduce the transmission wastage of water.
- **Monitoring and Response:** Proper record maintenance of water connections and amount of water supplied, and a social audit of the supply adequacy and quality should be regularly done to ensure that amount and timing of water is equitable across the city. Furthermore, MCGM must put in place effective measures to promptly address complaints registered according to time given in the Mumbai Citizens' Charter to ensure all their grievances are resolved at the earliest.
- **<u>Part 2. Sewage and Water Treatment</u>:**

- **Treatment:** Treatment of sewerage generated needs to be 100% and tertiary treatment needs to be done in all the STPs to reduce marine pollution and prevent water and vector borne diseases.
- **Reuse of Waste Water:** MCGM can use the treated wastewater for various purposes such as cleaning roads, watering gardens, traffic islands, road dividers etc. in the city. The corporation can also earn revenue by sale of treated waste water- Nagpur for example treats 90% of its sewerage and sells part of it to National Thermal Power Corporation and Maharashtra State Power Generation Company. Recycling of sewage should also be incentivised where possible (for example: housing societies, large commercial establishments, industrial establishments) so that treatment of sewage can be done locally and can reduce the water demand of that unit.

- **Budget**: Better utilisation of the budget can reduce the inequality persistent in the amount of water supplied, cost of water in non-slum and slum households and efficient sewerage & water treatment. By ensuring 100% metered connection, provisioning for appropriate quality checks to curb the problem of water borne diseases.

  Provisioning and executing the appropriate sewerage & water treatment plants with all levels (primary, secondary and tertiary) of treatment and resolving complaints related to these in a quickest manner will lower the risk of water contamination and hence, enabling the better environment and health.

Section II: Solid Waste Management and Sanitation

Part 1. Solid Waste Management

A. Key Highlights

Segregation:

- The Municipal Solid Waste (Management and Handling) Rules, (MSW rules) 2016[29] provide for 100% segregation of waste at source. MCGM claims ***82% segregation of its waste***- this is however not only segregation at source, as mandated by the rules.
- Moreover, in Swachh Survekshan 2019 report "***Segregation at Source***" is one of the mandatory parameters and ***Mumbai has scored only 30 marks at Level 1***.

Door-to-Door Collection:

- Swachh Bharat Mission (SBM)[30] prescribes for 100% door-to-door collection as a primary indicator. ***MCGM claims 100% door-to-door collection*** of waste as on 2019-20.[31]
- However, of the total 11,595 SWM complaints in 2020, ***34% were related to garbage not being collected.***
- What also an important factor is ***frequency of collection***, in order to ensure pubic hygiene and cleanliness. While the MCGM citizen charter prescribes ***1 day*** to solve issues of collection of garbage, it took ***44 days on an average to solve complaints of 'garbage lifting', 45 days for 'collection point not attended' and 57 days for 'garbage vehicle not arrived'.***

Scientific Disposal of Waste:

- MSW rules provide for ***100% waste to be scientifically disposed***.
- Approximately 1,200MTD to 1,700 MTD of waste was dumped in Deonar in 2019-20, which has been functional for the past 89 years, way beyond the prescribed active landfill lifespan of 10 to 25 years.[32]
- 4500 to 5,500MTD of waste was processed in the newly established (5 years) Kanjur Municipal Solid Waste (MSW) Processing Facility with bioreactor and windrow composting technologies***. Given the new Kanjur facility, waste scientifically disposed increased from 63% in 2018-19 to 75% in 2019-20.*** It is still however significantly lower than the prescribed norm of 100%.

Waste Recovery:

- The MSW rules and SBM indicators, both stress on waste recovery, through various practices such as ***waste to energy and waste to compost.***
- According to the MSW rules, at least ***80% of the waste generated by local bodies needs to be recovered.***
- Mumbai as of 2019-20 ***recovered only 35% of its waste*** and is constant from the last four years with no improvement.
- Mumbai generated an average of 6,650 Metric Tonnes per Day (MTD) of waste as of 2019-20, of which ***73% was food biodegradable waste***, which can be easily recovered through composting.

[29] http://bbmp.gov.in/documents/10180/1920333/SWM-Rules-2016.pdf/27c6b5e4-5265-4aee-bff6-451f28202cc8
[30] http://swachhbharaturban.gov.in/
[31] MCGM Environment Status Report 2019-20
[32] http://cpheeo.gov.in/upload/uploadfiles/files/chap17(1).pdf

- Various initiatives were started by MCGM to increase waste recovery. ***Advanced Locality Management (ALM)[33] and policy of bulk generators***[34] both aimed to promote segregation and localised composting. However, currently there are 614 ALMs in Mumbai, but only 454 are segregating waste and ***only 39 are - composting waste***.[35] By the end of 2018-19, 49% bulk generators were composting their waste.[36]
- Further, in spite of Swachh Mumbai Prabodhan Abhiyan for providing effective SWM services in Mumbai's slums, these areas still suffer from a poor management of solid waste. For example, ***39% of the total SWM complaints in 2020 were from 9 wards*** (F/N, P/N, P/S, R/N, R/S, M/W, N, L, and S) ***which have a slum population of more than 50%.***

Budget:

- ***53% of capital expenditure went unutilised in 2019-20***.
- The total utilisation percentage has ***dropped from 99% in 2017-18 to 84 % in 2019-20***.

B. Coverage

Management of municipal solid waste is one of the primary duties of urban local governments and a large proportion of their budgetary expenditures. It is also a major challenge in terms of complete collection coverage, segregation at source and scientific disposal and/or reuse.

Rules related to Solid Waste Management are detailed in the **Municipal Solid Waste (Management and Handling) Rules (MSW rules), 2016.**[37] These rules and the MSW rules, 2000 that preceded them focus on segregation and scientific management of different kinds of waste. The latest rules include provision for 100% source segregation, user fees for bulk generators, composting and waste to energy plants.

The MCGM has in consonance with these rules, prescribed its own **SWM bylaws**[38] detailing the SWM management process, fines for violation etc. In 2018, the MCGM also passed an order stating that all bulk generators i.e. units generating more than 100kg per day will compulsorily set up biodegradable waste composting units; and such waste will not be collected from bulk generators.[39]

At the central government level, **SBM**[40] also has solid waste management as its major component focussing on the following coverage and reuse indicators- 100% door to door collection, increase in waste to energy and waste to compost practices by ULBs.

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[33] Formed in formal housing societies/groups to incentivise segregation and composting:https://portal.mcgm.gov.in/irj/go/km/docs/documents/Circulars/ALM%20manual.pdf

[34] Units generating more than 100kg per day will be called bulk generators and will compulsorily set up biodegradable waste composting units, and biodegradable waste will not be collected from bulk generators.

[35]https://portal.mcgm.gov.in/irj/go/km/docs/documents/Circulars/Dry%20Waste%20Collection%20route%20for%20ALM.pdf

[36] MCGM Environment Status Report, 2018-19

[37] http://bbmp.gov.in/documents/10180/1920333/SWM-Rules-2016.pdf/27c6b5e4-5265-4aee-bff6-451f28202cc8

[38]https://portal.mcgm.gov.in/irj/go/km/docs/documents/MCGM%20Department%20List/Solid%20Waste%20Management/Docs/Bye%20laws/02%20Greater%20Mumbai%20Cleanliness%20Byelaws%20-%202006.pdf

[39] MCGM Environment Status Report, 2018-19

[40] http://swachhbharaturban.gov.in/

As a part of Swachh Sarvekshan, **Star Rating for Garbage Free cities**[41] started in 2017, aimed at certifying cities based upon 12 major parameters of waste management. Urban Local Bodies have to self-declare their star rating based upon the parameters, of which 3, 5 and 7 star ratings are independently evaluated by the central government.

Mumbai had a two star garbage free rating in 2019, and had applied for five star rating for 2020. However, in the third party survey of the central government for star rating, it failed to qualify for any stars. Reports suggest it failed in one of the mandatory parameters of 100% sweeping of public areas, due to which it lost all its stars and was given a rating of zero.[42]

Table 11: Waste generation and waste composition in Mumbai from 2016-17 to 2019-20[43]

Year	2016-17	2017-18	2018-19	2019-20
Waste Generation				
Waste Generated(MTD)	9,400	7,350	7,450	6,650
% change year on year	9.30%	-21.81%	1.36%	-10.74%
Domestic Waste Composition				
Food Waste	73%	73%	73%	73%
Wood, Cloth	3%	4%	4%	4%
Sand, Stone and Fine Earth	17%	17%	17%	17%
Plastic	3%	3%	3%	3%
Paper and other Recyclable Metals	4%	3%	3%	3%

Note: In 2017-18, 2018-19 and 2019-20, the figures indicate the average waste generated in MTD

Inference:

- Waste generated has reduced from 9400 Million Tonnes per Day (MTD) in 2016-17 to 6650 MTD in 2019-20.
- Despite a decrease in waste generated, the composition of waste in Mumbai has been constant from 2016-17 to 2019-20. This ordains more focus on tackling food waste through composting at the source to reduce the pressure on landfills and adopt a decentralised waste economy by incentivising by-products from waste processing.

[41] https://www.pcmcindia.gov.in/marathi/swm2019/Final-GARBAGE%20FREE%20CITIES%20Flyer.pdf
[42] https://www.hindustantimes.com/mumbai-news/bmc-cries-foul-over-zero-stars-in-swachh-survekshan-league-2020-s-garbage-free-city-rating/story-wYIh7PN8sNnRdwQTlTKc8J.html
[43] MCGM Environment Status Report 2019-20

Table 12: Status of Key Solid Waste Management (SWM) Indicators from 2016-17 to 2019-20[44]

Key SWM indicators	2016-17	2017-18	2018-19	2019-20
Collection door-to-door (%)	95%	99%	100%	100%
Segregation (%)	53%	65%	83%	82%
Number of bulk generators[45]	NA	3,364	3,380	3,367
Number of bulk generators composting at source	NA	1,064	1,671	1,696
Extent of Municipal Solid Waste Recovered (80% target)[46]	35%	35%	35%	35%
Extent of Scientific Disposal of Waste at Landfill site[47] (100% target)	32%	32%	63%	75%
Number of transportation vehicles	3,985	5,369	4,379	5,946

Inference:

- Although the MCGM claims 100%, door-to-door collection in 2019-20, this is highly unlikely given that waste is not regularly collected from slum areas in the city and waste collection points are not properly managed. This is evident from the MCGM complaints- of the total 11,595 SWM complaints in 2020, 34% were related to garbage not being collected.
- 82% of the waste is being segregated as of 2019-20. This however is not waste segregated at source, as prescribed in the MSW rules. The increase in segregation from 53% in 2016-17 to 82% in 2019-20 can be partly attributed to the establishment of 46 dry waste segregation centres in Mumbai where waste is separated into plastic, paper, glass and metal; and sent accordingly for recycling- waste/rag pickers association has been appointed to perform this task and 188.5MTD of waste was handled in 2019.[48]
- 50% of the bulk generators identified by MCGM are composting waste at the source.
- Despite policies like Advanced Locality Management (ALM) and guidelines for bulk generators, the total extent of waste recovered are still low at 35%. The MCGM has proposed various initiatives to improve recovery, including a 600MT waste to energy plant at Deonar that will generate 4 Mega Watt (MW) of electricity.
- MCGM Budget 2020-21 also proposed to incentivise segregation of waste followed by composting of wet waste and management of dry waste through tie ups with recyclers and a rebate up to 10% on Property Tax for housing societies upon compliance. Decentralised Community level composting and biomethanation facility of 10 to 20 MTD capacity is also planned at the ward level.
- 75% of the waste was scientifically managed as of 2019-20.

[44] MCGM Environment Status Report 2016-17 to 2019-20

[45] In 2018, the MCGM passed an order stating that all bulk generators i.e. units generating more than 100kg per day of waste will compulsorily set up biodegradable waste composting units and such waste will not be collected from bulk generators.

[46] Waste recovered refers to amount of waste that is recovered to be used again for a productive purpose. Compost and waste to energy are examples of waste recovery.

[47] Scientific disposal at landfill refers to elimination of the risk of waste seeping underground by effective collection of leachate. Scientific landfilling also means reducing and channelizing the production of methane without causing air pollution.

[48] https://portal.mcgm.gov.in/irj/go/km/docs/documents/MCGM%20Department%20List/Solid%20Waste%20Management/Docs/DWSC%20-%20List%20of%20Centres%20PDF.pdf

- There has been a decrease in waste generated by 29% from 2016-17 to 2019-20, yet the number of transportation vehicles has increased by 36% (approx.), an indication of capital expenditure. This raises the question that the increase in vehicles is not compensating for a better collection of waste nor impact on complaints received for door-to-door collection, segregation and/or waste recovered.

Table 13: Disposal of Municipal Solid Waste in Mumbai[49]

Name of Dumping ground	Years of operation	Area (Ha)	Type of Waste Processing	Amount of waste disposed (MTD)[50]				Current Status
				2016-17	2017-18	2018-19	2019-20	
Deonar	88	120	Dumping	3,200	2,200-2,500	2,500-3,100	1,200-1,700	Operational
Kanjurmarg	4	65.96	Bioreactor technology (3000-3500MTD) and windrow composting technology (1000MTD) at Kanjur MSW Processing Site	3,000	3,600	4,500	4,500-5,500	Operational
Mulund	47	24	Dumping	2,800-3,200	1,700-1,800	Closed	Closed	Closed

Inference:

- The predominant method of waste disposal followed until lately was the dumping and leveling of waste. With the starting of Kanjurmarg bioreactor and composting technology in 2015, the amount of waste processed has improved. In 2019-20, 75% of the waste was scientifically treated.
- Since Mulund (2018) and Gorai (2009) dumping grounds have been closed and Deonar is long due closure, it is relevant to focus on decentralised waste management practices that will reduce the waste going to dumping grounds. It will be more sustainable since dumping grounds produce leachate that causes soil and marine pollution and emits methane into the atmosphere. Burning waste in dumping grounds to reduce the volume of waste is also a major cause of air pollution in the surrounding areas.

[49] MCGM Environment Status Reports 2016-17 to 2019-20
[50] Approximate values given in the MCGM Environment Status Report

Table 14 : Ward wise Biomedical Waste (BMW) Collected, Treated & Disposed for Period January 2018 to Dec 2019 (Kg.)[51]

WARD	2018 (in Kg.)	2019 (in Kg.)	Increase from 2018 To 2019 (in %)
A	267,112	298,792	12%
B	58,021	65,592	13%
C	7,084	11,522	63%
D	876,544	811,628	-7%
E	687,122	732,662	7%
F/N	313,378	360,841	15%
F/S	1,006,649	817,722	-19%
G/N	409,434	393,638	-4%
G/S	87,915	82,568	-6%
H/E	88,355	149,181	69%
H/W	452,313	436,418	-4%
K/E	278,899	288,424	3%
K/W	920,830	864,624	-6%
L	187,799	223,224	19%
M/E	93,493	151,101	62%
M/W	135,768	158,425	17%
N	164,110	170,025	4%
P/N	118,879	167,354	41%
P/S	124,751	150,707	21%
R/C	132,601	163,690	23%
R/N	115,087	125,874	9%
R/S	164,508	201,066	22%
S	193,277	237,398	23%
T	585,078	619,521	6%
Total	**7,469,007**	**7,681,997**	**3%**

Inference:

- Bio waste generation has increased by 3% from 2018 to 2019.
- The highest increase is in H/E ward (69%) followed by C ward (63%) and M/E (62%) from 2018 to 2019.
- K/W ward is the highest in collecting, treating and disposing BMW followed by F/S and D wards.

[51] As per an RTI Response

C. Community Based Initiatives

The MCGM had started the Dattak Vasti Yojana for slums in 2001 so that community based organisations are involved to ensure the collection of waste from slum households to collection points. The scheme was changed to Swachh Mumbai Prabodhan Abhiyan (SMPA). Under the scheme, a unit is made of 150 families of 750 people. For the implementation of this scheme, a monthly allowance is provided on a per unit basis. Accordingly, for one unit an allowance of Rs. 5400/- per month and for the organisation an additional allowance of Rs. 600/- per unit has provided for carrying out activities like awareness, public participation and a conducive environment for the scheme. In this scheme, an eligible organisation is awarded an area of minimum of 5 units and maximum of 18 units. The contract for this work is awarded and renewed annually.[52]

Table 15 : Details of Ward Wise SMPA (Swachh Mumbai Prabodhan Abhiyan) in Mumbai 2020[53]

Ward	Total SMPA CBO*	No. of SMPA Unit allotted	Segregated Dry waste collected (kg/day)	On site Processing of wet waste (kg/day)	No. of Waste Composting Unit in SMPA area
A	11	110	515	0	0
B	0	0	0	0	0
C	0	0	0	0	0
D	3	34	430	110	2
E	9	131	388	0	0
F/S	19	274	1,920	0	0
F/N	35	480	1,750	0	0
G/S	8	100	650	0	0
G/N	66	744	2,800	1,950	5
H/E	42	597	1,105	0	0
H/W	17	245	2,200	180	3
K/E	56	745	1,329	0	0
K/W	50	575	4,600	120	1
P/S	36	365	1,293	80	2
P/N	73	953	3,438	65	2
R/S	48	536	5,250	50	1
R/C	22	191	750	150	2
R/N	34	364	1,820	15	3
L	74	1,085	410	0	0
M/E	69	832	1,558	1,760	2
M/W	40	440	700	0	0
N	40	552	2,800	950	7
S	56	774	1,500	200	15
T	13	163	2,016	500	0
Total	**821**	**10,290**	**39,222**	**6,130**	**45**

*CBO: Community Based Organisations

Inference:

- Wards B and C shows there are no SMPA units in these wards.
- As per the scheme if 10,290 SMPA units are allotted across all wards which means, total of 15,43,500 families and of 77,17500 people are covered in Mumbai as of 2020.
- Highest number of SMPA are being allotted to L ward (1,085) followed by P/N (953) and M/E (832).

[52] https://portal.mcgm.gov.in/irj/go/km/docs/documents/HomePage%20Data/Related%20Links/SwachaMumbaiPrabodhanAbhiyan/Scheme_Circular.pdf

[53] https://portal.mcgm.gov.in/irj/go/km/docs/documents/MCGM%20Department%20List/Solid%20Waste%20Management/Docs/SWM%20PPT%20Oct-2020.pdf

- However, the highest number of segregated dry waste are collected from R/S ward (5,250 kg/day), followed by K/W (4,600 kg/day) and P/N (3,438 kg/day).
- There are 11 wards that are not processing wet waste on site and 12 wards with no waste composting unit.

D. Third Party Inspection (TPI) report for Certification on Garbage Free City for Mumbai[54]

The SBM launched a protocol for Star Rating of Garbage Free cities. This rating consists of conditions designed to enable cities to evolve into a model (7-star) city, with progressive improvements in their overall cleanliness. It involves 25 key parameters across the SWM spectrum to help cities self-assess the status and encourage them to progress towards improving their cities' overall cleanliness and aesthetics. These parameters have been differentiated into the following criteria: -

- Mandatory parameters
- Essential parameters, and
- Desirable parameters

The self-assessment is verified by an independent third-party agency, appointed by MoHUA. *"Garbage Free"* status is awarded when at any point of time in the day, no garbage or litter is found in any public, commercial or residential locations (including storm drains and water bodies) in the city (except in litter bins or transfer stations), 100 percent of waste generated is scientifically managed, all legacy waste has been remediated and scientifically managing its municipal solid waste, plastic waste and construction & demolition waste.[55]

[54] As per an RTI response

[55] http://gfcstarrating.org/#:~:text=With%20a%20vision%20is%20to,in%20litter%20bins%20or%20transfer

Table 16 : Indicator wise status of Garbage free City Report under Swachh Survekshan 2019

Components/Conditions			Level 1	Level 2	Level 3	Level 4	Status
Mandatory Parameters			**0**				
Ward Level	M1	Door to Door Collection				100	Pass
Ward Level	M2	Segregation at Source	30				Pass
Ward Level	M3	Sweeping of Public commercial and residential areas					Fail
Ward Level	M4	Litter Bins			75		Pass
Ward Level	M5	Storage Bins				100	Pass
City Level	M6	Waste Processing - Wet Waste		50			Pass
City Level	M7	Waste Processing Capacity - Wet Waste				100	Pass
City Level	M8	Waste Processing - Dry Waste		50			Pass
City Level	M9	Waste Processing Capacity - Dry Waste				100	Pass
City Level	M10	Grievances Redressal				100	Pass
Essential Parameters			**65.5**				
Ward Level	E1	Bulk Waste Generators Compliance			75		Pass
Ward Level	E2	Penalty/Spot Fines		50			Pass
City Level	E3	Segregation at City Level	30				Pass
City Level	E4	User Charges				100	Pass
City Level	E5	Plastic Ban		50			Pass
City Level	E6	C&D Waste Collection		75			Pass
City Level	E7	Scientific landfill - Availability and Use		50			Pass
City Level	E8	Scientific landfill - Waste Disposed			75		Pass
City Level	E9(A)	Water bodies and storm water drains		50			Pass
City Level	E9 (B)	Screening of Nallahs				100	Pass
Desirable Parameters			**50**				
Ward Level	D2	On-site wet waste processing	25				Pass
Ward Level	D3	C&D Waste - Storage, Segregation, Processing, Recycling				100	Pass
City Level	D5	Dumpsite Remediation		50			Pass
City Level	D1	Sustainability					Pass

Inference:

- Within the Mandatory Parameters, the lowest score was awarded to Segregation at source (30). The highest was a score of 100% received by Door-to-Door Collection, Waste Processing Capacity-Dry Waste, Grievance Redressal, Waste Processing Capacity-Wet Waste and Storage bins. In the Sweeping of Public commercial and residential areas, the status of FAIL was given.
- In the Essential Parameters, the lowest score was given to Segregation at City Level (30) and the highest was achieved by User Charges and Screening of Nallahs (100).
- In the Desirable Parameters, on-site wet waste processing was given the lowest score of 25 while only C&D Waste - Storage, Segregation, Processing and Recycling received a perfect 100.

Table 17 : Solid Waste related complaints registered in CCRS for the year 2019 & 2020

Complaints of Solid Waste Management Related	2019	2020
Collection point not attended properly	620	685
Garbage lorry not reported for service/ Lorry not covered	751	326
Garbage not lifted from House/Gully/ Municipal Market/Road/ Authorized collection point	6,086	3,943
Lifting of Tree Cutting	1,753	1,590
Non-attendance of nuisance Detector	1,947	1,168
Providing/ removing/ replacing dustbins	666	440
Removal of dead animals	1,105	1,164
Removal of Debris	2,371	1,395
Silt to be lifted from road	845	320
Sweeping of roads	972	564
Grand Total	**17,116**	**11,595**

Inference:

- There were 685 complaints of collection points not attended properly in 2020. Similarly, 326 were of garbage lorries were not covered or reported for service and there were 3,943 complaints of Garbage was not lifted from House/Gully/ Municipal Market/Road/ Authorized collection point.
- Even though MCGM has received complaints about the lack of efficient waste collection from their households, it contradicts Swachh Sarvekshan 2019 report, which claimed 100% rating for door to door collection in Mumbai.

Table 18 : Summary of Garbage Free Report

Indicator	Mandatory	Essential	Desirable
Score	0	65.5	50

Final Remark of Inspection Report:

*This is to certify that city of Greater Mumbai in Mumbai district of Maharashtra has been **awarded '0' Star***

Inference:

- Due to a 'FAIL' status given for Sweeping of Public commercial and residential areas, Mumbai scored a 0 under mandatory parameters resulting in a "0" rating for Garbage Free City Report under Swachh Survekshan 2019.
- The highest score awarded in the Garbage Free Report is 65.5 within the essential parameter category.

Part 2: Sanitation and Toilet Sewerage System

A. Key Highlights

Toilets and its sewerage systems are as important as the water supply systems in urban areas since they act as complements for enabling sustainable and healthy cities. All major national policies that focus on SWM, also deal with sanitation. It directly impacts the health related issues and exposure to human waste causes water borne and sanitation related diseases. Appropriate sanitation facilities are essential for clean & healthy communities and contribute to the social and economic development of country.

Coverage:

- Mumbai census data however shows that ***42% of the total households did not have access to toilet within the premises***, majority of which (94.8%) use public/community toilets, highlighting the importance of coverage and equity factors of public/community toilets.

Public Toilets:

- Although the Swachh Bharat Mission (SBM) has focussed on construction of toilets, ***only 1 in 4 public toilets were for women*** in 2020.
- Based on the census population figures, there is currently *1 public toilet seat per 752 males and 1,820 females,* while the SBM prescribes 1 toilet for 100-400 males and 100-200 females respectively.

Community Toilets:

- In c*ommunity toilets*, that are generally built for slum pockets the ***male to female ratio is almost equal***.
- However, the numbers of toilet seats are still lesser than the prescribed norms. Based on the census slum population figures, there is currently ***1 toilet seat per 42 males and 34 females,*** while the SBM prescribes 1 toilet for 35 males and 25 females respectively.

Toilet Facilities:

- Results of an MCGM toilet survey conducted in 2015, highlight the grave inequity in facilities provided in public and community toilets.
- ***28% of toilets were connected to the piped sewerage system***, worst being in M/E (3%), S (4%) and H/W (7%) wards, which also have high proportion of slum population- 30%, 72% and 39% respectively.
- In ***78% of toilets, there was no proper information of water connection*** available.
- ***58% of the toilet blocks surveyed had no electricity***- a safety concern rendering the public toilet unusable at night. Again, the inequity was highest among wards with a high proportion of slum population- F/N, H/W and P/N where 99%, 88% and 80% toilets had no electricity.

B. Coverage

Table 19: Type of toilet and its sewerage facilities in Mumbai (Census 2011)

Type of Facilities			Mumbai District	Mumbai Suburban District	Total	%
Number of households with latrines facility in the premises	Flush/Pour Flush Latrine	Piped sewer system	3,61,541	8,66,917	12,28,458	80%
		Septic tank	38,060	1,64,599	2,02,659	13.2%
		Other systems	6,813	18,899	25,712	1.7%
	Pit Latrine	With slab/ ventilated improved pit	8,904	20,298	29,202	1.9%
		Without slab/ open pit	168	1,651	1,819	0.1%
	Night soil disposed into open drain		9,819	27,064	36,883	2.4%
	Service Latrine	Night soil removed by human	309	828	1,137	0.1%
		Night soil serviced by animal	1,594	8,367	9,961	0.6%
	Total		**4,27,208**	**11,08,623**	**15,35,831**	**100%**
Number of households with no latrines facility in premises	Public Latrines		2,01,190	8,70,222	10,71,412	94.8%
	Open		9,340	48,898	58,238	5.2%
	Total		**2,10,530**	**9,19,120**	**11,29,650**	**100%**

Inference:

- 42% of the total households did not have access to a toilet within the premises, the majority of which (94.8%) use public/community toilets, highlighting the importance of coverage and equity factors of public/community toilets.
- 58,238 households in Mumbai reported practicing open defecation while 36,833 households reported disposal of night soil into an open drain.
- Of the 58% of households with toilets 80% are connected to a piped sewer system while 13.2% are connected to a septic tank.
- 95% of household toilets have flush services, 2% have pit latrines, 2% night soil disposed of in open drains and 1% service latrines.
- The census data also highlights that the type of toilets built and policies supporting a particular type of toilets have a direct impact on human rights issues. For example, the Swachh Bharat Mission Urban Guidelines, 2017[56] prescribe 4 types of toilet constructions (two-pit latrines, septic tanks, biodigester anaerobic and aerobic tanks) of which the first two have to be cleaned manually if there is no proper equipment to pump out the sewage. The Guidelines have not mentioned any information on such types of equipment. As data shows that apart from the 1,137 households that reported manual scavenging of night soil, the septic tanks and pit latrines of 2,33,680 households are likely to be manually cleaned as well if proper equipment is not available/used.

[56] http://swachhbharaturban.gov.in/writereaddata/SBM_GUIDELINE.pdf

Swachh Sarvekshan under the SBM surveys urban centres across India on sanitation and waste management. It uses various parameters for ranking cities – service level progress of sanitation and solid waste management (SWM) as submitted by the local governments, direct observation, citizen feedback and various certifications such as ODF for sanitation and star ratings for SWM.

Mumbai's 2019 rank was 49 among 100 cities (with more than 1 lakh population) fallen from 19 in 2018. The fall can be attributed to the change in methodology, which added weightage for certifications such as Star Rating (for SWM) and ODF (for sanitation).

In the ranking for sanitation (open defecation free), [57] that has three parameters ODF, ODF+ and ODF++. Which include various requirements for toilets, toilet facilities and sewerage systems; Mumbai had an ODF+ status as of Swachh Sarvekshan 2019.

An ODF city/ward is defined as[58] 'A city/ward can be notified/declared as ODF city/ ODF ward if, at any point of the day, not a single person is found defecating in the open.' Under this definition, necessary conditions that are mandated to be achieved before declaring a city as ODF are:

- All households that have space to construct a toilet, have constructed one.
- All occupants of those households that do not have space to construct a toilet have access to a community toilet within a distance of 500 meters.
- All commercial areas have public toilets within a distance of 1 kilometre.
- The city has a mechanism in place through which fines are imposed on people found defecating in the open.

Under the 'Swachh Certificate for Open Defecation Free Status'[59] banner, Greater Mumbai had been declared 100% Open Defecation Free (ODF) as of 18-08-2018.

C. Third Party Inspection (TPI) report for Certification of ODF++ Greater Mumbai Municipal Corporation.[60]

Table 20 : Toilet Inspection report under ODF category in Swachh Survekshan 2019

Total No. of Toilets Inspected	Unusable	Usable but dirty	Clean	Very Clean	Excellent	Aspirational
33	0	0	4	3	16	10

Inference:

- The total number of toilets inspected were only **33 out of which 16 were Excellent and none were unusable.**
- Only **0.3% of toilets** were inspected from the total (9826) public and community toilets block. This is an extremely minuscule number and the coverage of the toilets needs to be widened to reflect the grassroots reality.

[57] https://www.pcmcindia.gov.in/marathi/swm2019/ODFPlus.pdf
[58] https://smartnet.niua.org/sites/default/files/resources/ODF%20Declaration%20booklet.pdf
[59] http://sbmodf.in/?metric=ALL&state=maharashtra&city=greater%20mumbai
[60] As per an RTI Response

Table 21 : Toilet related complaints registered in CCRS for the year 2019 & 2020

Complaints Type	2019	2020
Cleaning/ Repair of the P.S.C/ W.C Block/ Channels	121	107
Non attendantance at the Public Toilet/ urinals	163	225
Providing/ repairing doors, windows of P.S. blocks	86	59
Unhygienic conditions of Toilets/ Public urinals	255	227
Grand Total	**627**	**618**

Inference:

- 255 and 227 complaints were registered due to unhygienic conditions of toilets and public urinals, in 2019 and 2020 respectively. It is in contradiction to the average rating of toilets done under Swachh Survekshan 2019 that states none of the inspected toilets were unusable and dirty.
- The Non attendant at the Public Toilet/ urinals saw an increase in complaints from **163 in 2019 to 225 in 2020.**

Table 22 : Sewage treatment plant Inspection report of Swachh Survekshan 2019

Sr. No	Location Visited in the ULB	Documentation	Capacity of Plant	Status
1	Versova WWTF	Complete	180 MLD	ODF++
2	Love Groove WWTF	Complete	757 MLD	ODF++
3	Malad WWTF	Complete	289 MLD	Non ODF++
4	Colaba WWTF	Complete	41 MLD	ODF++
5	Bhandup WWTF	Complete	280 MLD	ODF++
6	Bandra WWTF	Complete	797 MLD	ODF++
7	Ghatkopar WWTF	Complete	386 MLD	ODF++

Additional Observation by report: It has been observed that during the inspection, the BOD of the STP at Malad was 276 mg/l which exceeded the MPCB standards (50 mg/l) and CPCB standards, hence not able to fulfill the SBM ODF++ protocols

Final Remark of Inspection Report:

As of December 22nd 2019, Greater Mumbai Municipal Corporation cannot be declared as Open Defecation Free++ but can be declared as ***Open Defecation Free+***

Inference:

- The documentation of all plants was complete in 2019 and all the departments except Malad WWTF received ODF++ rating in the Swachh Survekshan.

Further, under the Swachh Bharat Mission Urban Guidelines (2017) for community and public toilets the prescribed norms for the number of toilet seats is as follows:

Type of Toilet Facility	Male Toilet Seat Norm	Female Toilet Seat Norm	Other facilities
Public Toilets	1 seat for 100-400 males	1 seat for 100-200 females	Water tap with drainage arrangements Separate seat for Trans genders Special arrangements for physically challenged
Community Toilets	1 seat for 35 males	1 seat for 25 females	Adequate bathing facilities

However, there are some serious assumptions made regarding the male-female parity under the SBM. The Guidelines state that 'it may be assumed that two-thirds of the number are males and one-third females' and provide for toilet seat guidelines accordingly. However, if we look at the Mumbai census data male to female ratio is almost half- 54% males and 46% females.

The MCGM maintains two types of toilets; Public (Pay & Use) toilets and Community toilets. Community toilets are built by the MCGM/State Agency in slum areas and generally handed over to a community/slum under a CBO (Community Based Organisation).

Table 23: Number of Public Toilet Blocks and Seats in Mumbai (2018 & 2020)

Ward / Zone	Population 2011	No of Toilet Blocks in 2018	No of Toilet Blocks in 2020	Ladies Seats		Gents Seats		Differently Abled (Handicapped) Seats		Disparity (between Ladies & Gents seats)	
				2018	2020	2018	2020	2018	2020	2018	2020
A	185,014	39	39	102	141	449	434	17	34	77%	68%
B	127,290	42	43	92	92	377	377	18	18	76%	76%
C	166,161	34	32	55	54	356	348	9	14	85%	84%
D	346,866	35	35	79	79	327	327	17	17	76%	76%
E	393,286	45	42	105	100	435	413	45	45	76%	76%
F/S	360,972	52	48	155	213	517	439	1	48	70%	51%
F/N	529,034	36	39	130	133	388	381	12	14	66%	65%
G/S	377,749	33	34	106	109	406	376	4	19	74%	71%
G/N	599,039	117	115	675	648	1,507	1,441	21	20	55%	55%
H/E	557,239	25	27	95	116	277	285	0	27	66%	59%
H/W	307,581	21	20	70	56	243	221	7	5	71%	75%
K/E	823,885	28	26	98	95	258	240	1	0	62%	60%
K/W	748,688	33	32	162	112	467	321	3	14	65%	65%
P/S	463,507	16	19	54	58	184	280	9	15	71%	79%
P/N	941,366	34	28	101	104	328	306	32	28	69%	66%
R/S	691,229	29	26	95	82	315	275	0	1	70%	70%
R/C	562,162	25	23	96	92	255	236	6	5	62%	61%
R/N	431,368	27	20	170	85	340	236	8	20	50%	64%
L	902,225	34	32	104	64	292	287	10	8	64%	78%
M/E	807,720	46	46	267	267	631	631	5	5	58%	58%
M/W	411,893	31	37	135	207	327	353	12	24	59%	41%
N	622,853	34	29	98	87	331	292	0	58	70%	70%
S	743,783	33	24	103	73	325	145	1	0	68%	50%
T	341,463	32	30	90	79	311	283	4	5	71%	72%
City Total	3,085,411	433	427	1,499	1,569	4,762	4,536	144	229	69%	65%
Western Sub. Total	5,527,025	238	221	941	800	2,667	2,400	66	115	65%	67%
Eastern Sub. Total	3,829,937	210	198	797	777	2,217	1,991	32	100	64%	61%
Grand Total	**12,442,373**	**881**	**846**	**3,237**	**3,146**	**9,646**	**8,927**	**242**	**444**	**66%**	**65%**

Note: Year 2020 data is same as mention in the Year 2019 as per the response to RTI inquiry.

Inference:

- The total number of Toilets in the city has decreased by 4% from **881 in 2018 to 846 in 2020**.
- The total number of toilet seats for ladies has decreased by 3% i.e. **3,237 in 2018 to 3,146 in 2020**. Similarly, for gents too the number has decreased by 7% from **9,646 to 8,927 in 2020**. Whereas, the toilets for disabled persons have increased by **83% in 2020**.
- Despite provisions made within the MCGM budget, there exists a disparity of 65% in 2020 between female and male toilet seats.

Table 24: Number of Community Toilets[61] Seats in Mumbai by Gender up till 2019

Type of Toilets	Toilet Seats				Toilet Blocks
	Male	Female	Specially Abled	Total	
Community Toilets	64,399	64,202	1,311	133,137*	8,980

*In a response to RTI received for 2020, it only showed the total number of community toilets but no gender wise bifurcation.

Inference:
Compared to public toilets, the gender parity of community toilets is much better with the number of toilet seats almost equal. However, only 1% of the total toilet seats were dedicated to the specially abled persons.

[61] Community Toilets include toilets built by MHADA and MCGM.

Table 25: Survey[62] Results of Facilities in Toilets in Mumbai (in %)

Ward	Toilet Blocks No.s	Type of Sewerage					Water connection					Electricity connection	
		Sewage line	Septic Tank	Open drainage/Nallah	Aqua privy/pit latrine	Not Given	MCGM connection	Stand post connection	Water tank	Well/bore well	NA	No	Yes
A	93	73	2	20	0	4	54	0	10	4	32	29	71
B	40	90	10	0	0	0	90	0	8	3	0	0	100
C	35	80	3	17	0	0	80	0	0	14	6	9	91
D	91	80	3	15	0	1	38	0	0	4	57	46	54
E	78	24	72	4	0	0	76	0	8	0	17	29	71
F/N	201	55	44	0	0	0	1	0	31	0	68	99	1
F/S	135	100	0	0	0	0	0	0	65	1	34	62	38
G/N	239	51	47	2	0	0	46	0	2	3	49	48	52
G/S	110	80	20	0	0	0	34	0	0	0	66	55	45
H/E	357	55	45	0	0	0	16	0	0	1	82	77	23
H/W	173	7	93	0	0	0	19	1	1	0	79	88	12
K/E	791	16	79	3	1	1	6	0	0	2	91	61	39
K/W	215	14	70	0	9	7	24	0	0	1	75	64	36
L	777	41	57	0	0	2	19	1	1	0	79	64	36
M/E	429	3	96	0	1	0	13	0	6	19	62	47	53
M/W	217	17	83	0	0	0	17	0	0	3	79	42	58
N	524	55	45	0	0	0	23	0	2	4	71	54	46
P/N	1,268	18	81	1	0	0	7	0	1	1	91	80	20
P/S	335	34	66	0	0	0	7	0	0	4	89	61	39
R/C	254	13	87	0	0	1	13	0	2	4	81	85	15
R/N	399	9	91	0	0	0	17	0	0	3	80	57	43
R/S	395	30	70	0	0	0	15	1	2	1	81	44	56
S	1043	4	96	0	0	0	7	0	1	4	88	25	75
T	216	42	57	0	1	0	29	0	4	15	52	57	43
Total	**8,415**	**28**	**70**	**1**	**0**	**1**	**16**	**0**	**3**	**3**	**78**	**58**	**42**

Inference:

- Only 28% of toilets were connected to the piped sewerage system, the worst being in M/E (3%), S (4%) and H/W (7%) wards. Septic tank toilet was the preferred type of toilet (70%) which is likely to be cleaned manually if there is no proper equipment to pump out the sewage.
- In 78% of toilets, there was no proper information of water connection available, and in 16%, water was provided by the MCGM, 3% through tanker and 3% through wells. Lack of water in toilets reflects poor hygiene, cleanliness and inability to provide a basic sanitation service to the public. Water is especially important in cases when the toilet facilities are also used as a source of non-portable water.
- 58% of the toilet blocks surveyed had no electricity- this is a safety concern rendering the public toilet unusable at night.

[62] Survey of Municipal Corporation of Greater Mumbai Toilet blocks surveyed by M/s Cybertech system & Software LTD, 2015. Includes public and community toilets. https://portal.mcgm.gov.in/irj/portal/anonymous/qlmsdp. Summary of this data was also received in a 2019 RTI reply.

D. SWM and Sanitation related Budget, Citizens Complaints & Human Resources

Table 26: Budget Estimates and Actual Expenditure of Solid Waste management (SWM & Sanitation) in Crores

SWM, SSP and T		2017-18	2018-19*	2019-20*	2020-21*	2021-22*
Budget Estimate	RE	2,247	2,456	2,709	2,746	2,896
	CE	359	510	562	925	1,154
	Total	2,606	2,966	3,270	3,671	4,050
Revised Estimate	RE	2014	2126	2608	2541	-
	CE	259	253	438	450	-
	Total	2,273	2,379	3,046	2,991	-
Difference (in %)	RE	-10%	-13%	-4%	-7%	-
	CE	-28%	-50%	-22%	-51%	-
	Total	-13%	-20%	-7%	-19%	-
Actuals	RE	2,110	2,265	2,363	-	-
	CE	142	117	207	-	-
	Total	2,253	2,382	2,570	-	-
Percentage Utilised	RE	105%	107%	91%	-	-
	CE	55%	46%	47%	-	-
	Total	99%	100%	84%	-	-

*Includes Slum Sanitation Program (SSP)

Inferences:

- The total budget estimates for SWM and Sanitation has increased from 2,606 in 2017-18 to 4,050 in 2021-22. This indicates the realisation of cleanliness and sanitation owing to pandemic.
- There has been a constant decrease in both revenue and capital expenditure from budget to revised estimates in the last four years.
- The total utilisation percentage has dropped from 99% in 2017-18 to 84 % in 2019-20. Whereas, in 2019-20 53% of the capital expenditure went unutilised.

Table 27: Comparison of Citizens Complaints, Time take to resolve Complaints, Budget Utilisation and Human Resources

Department	Civic Complaints*			Average days to resolve a complaint			Budget Utilisation			Human Resources (Vacant Post)		
	2018	2019	2020	2018	2019	2020	2017-18	2018-19	2019-20	2018	2019	2020
SWM	14,494	17,116	11,595	36	19	43	99%	100%	84%	19%	18%	15%
Toilet	494	627	618	44	28	50						

Inferences:

- Complaints received under SWM have reduced to 11,595 in 2020 from 17,116 in 2019. 618 complaints were for issues related to toilets in 2020.
- In 2020, MCGM took an average of 43 days to resolve a complaint under SWM & 50 days for Toilets, when the average time promised in the Citizens Charter is only 3 days. Also the average days taken to resolve the complaints has increased from 19 days in 2019 to 43 days in 2020 for SWM and 28 days in 2019 to 50 days for Toilets in 2020.
- At the same time utilisation of budgeted funds has declined from 100% in 2018-19 to 84% in 2019-20.
- SWM and Toilets department still have a vacancy of 15% human resources in 2020.

E. Recommendations

- **<u>Part 1. Solid Waste Management</u>:**

  The process of centralised waste management currently followed, therefore needs to be altered to enable decentralised management of waste to ensure maximum recovery and sustainable management.

- **Decentralisation**: If decentralisation of SWM happens at ward level, with below recommended facilities then, there will be no need to dumping grounds.

- **Collection and Segregation**: MCGM needs to incentivise residents to participate in the waste management process to enable collective management of waste. The first step is ensuring door-to-door collection and 100% segregation of waste at the source. Indore for example used a mix of awareness campaigns and fines to ensure segregation of waste- this was however possible due to household collection and household wise monitoring of whether waste was being properly segregated.

- **Composting**: While the MCGM has planned new initiatives for decentralisation of waste, biodegradable waste processing units should be developed in each constituency. Different treatment methods used for waste segregation like Vermi-composting, Organic Composting for Biogas should also be carried out to ensure optimum recycling. For decentralised composting, Indore adopted mobile compost machines, for composting waste from markets. Vellore in[63] Karnataka and Alappuzha in Kerala have adopted successful micro composting centres for composting biodegradable waste in every constituency. F/South Mumbai model has also aimed to make the constituency dustbin free through door-to-door collection and segregation and composting of biodegradable waste within the ward, through community involvement. The MCGM policy of bulk generators is a positive step in this regard, however, subsidies for compost units and developing a market network for the sale of compost will be essential for its success. Introduce Bio Gas plants: Taking the example of Pune Municipal Corporation and the PPP, setting a bio-gas plant for the creation of electricity can help reduce conventional usage. Since a large portion of waste generated in MCGM is food waste (73%), a similar practice can be carried out in Mumbai[64]

- **Recycling**: As for non-biodegradable waste, a local government-managed network of buyers for such materials as paper, glass, plastic, etc. needs to be developed. In Mangalore for instance dry waste collection centres have been set up where such waste is sold to manufacturers and recyclers. This provides an incentive for people to segregate and sell such waste. Further, there is a need for devising better recycling methods– Kochi for example widely uses plastic for road tarring.

- **Monitoring**: The process of monitoring SWM activities must be made to tackle SWM issues. Better implementation of initiatives like ALMs and the SMPA can ensure effective measures to ensure proper waste management at the source. In addition, targeted solutions must be carried out to timely solve complaints received areas. A robust monitoring system can ensure a better ranking for Mumbai as well amongst cities.

- **<u>Part 2. Sanitation and Toilet Sewerage System:</u>**

- **Policy Changes:** Policies related to sanitation need to have a holistic approach and take into consideration the entire sanitation cycle including management of sewage systems and treatment of sewage. Bias (male to female public toilet norm) and lack of clarity (no proper norms mentioned for

[63] https://qcin.org/nbqp/knowledge_bank/uploads/2020/05/1589625640_case%201.pdf
[64] https://qcin.org/nbqp/knowledge_bank/uploads/2020/05/1589625640_case%201.pdf

toilet facilities) in the SBM Guidelines, need to be rectified. Sanitation policies need to incentivise the use of sustainable toilet blocks and those that connect to the piped sewerage system. ***Consequently, there is a need to increase the proportion of toilets surveyed under SBM, to ensure adequate information is delivered about ground realities as portrayed by complaints received against hygiene conditions of toilets. To better this quality, active and user-friendly citizen feedback mechanisms must be placed within toilets.***

- **Coverage and Mechanisation:** To eliminate human faeces contact and prevent diseases caused due to poor sanitation, all toilet blocks must be connected to the sewerage system and the use of septic tanks/pit latrines should be reduced. Use of human labour in the cleaning of sewerage must be eliminated by complete mechanisation of the process of cleaning sewerage pipes/tanks, etc.

- **Equity:** Male-female disparity in toilet seats needs to be corrected for public toilets, and toilet facilities for transgenders and the specially abled need to be provided. Unisex toilets (such as eco-toilets) can also be promoted, which can be used by all genders.

- **Facilities:** Water and electricity in public and community toilets is essential for ensuring cleanliness, hygiene, safety, and prevention of diseases- it must be ensured that these facilities are available and functioning in all toilets.

- **Complaints and Monitoring:** The MCGM must add corrective measures in the grievance redressal system to ensure the response is swiftly carried out, according to the Citizens' Charter.

➢ **Budget**: Better utilisation of the budget can reduce the gender inequality persistent in the number of toilet seats, essential facilities for toilets and effective management of waste. By focusing more on segregation at source, scientific disposal, reuse and composting of waste to energy the waste can be efficiently utilised and managed. This will also control the pollution and unhygienic conditions faced by the citizens.

Constructing more toilet seats for women and connecting all toilet block with essential facilities such as electricity, water connection and piped sewerage system will not only provide access to clean toilets but also ensure safety from health and women harassment issues.

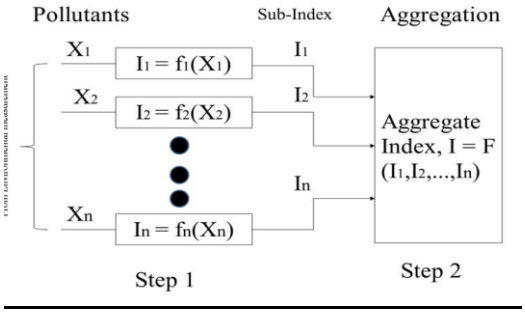
Section III: Air Quality

A. Key Highlights

- On an average ***23% days in 2020 had Good Air Quality (84Days), 28%, days in 2020 had satisfactory air quality (103 days) and 25% days had moderate air quality (93 days), while there were no days with severe air quality.***
- The best average monthly AQI in Mumbai was 37 in August 2020 – the least AQI in 5 years.
- The highest ***average monthly AQI in 2020 was 164 in December***.
- Mumbai sees the ***best air quality in the months of June to September,2020*** which can be explained by the presence of the monsoon season, which drastically helps abate poor air quality. Similarly, the worst AQI is in winter months

B. Measuring AQI

An Air Quality Index (AQI) is defined as an overall scheme that transforms weighted values of individual air pollution related parameters (SO2, CO, visibility, etc.) into a single number or set of numbers. The result is a set of rules (i.e. set of equations) that translate parameter values into a simple form employing numerical manipulation:



Note: This image has been taken from the 'National Air Quality Index' Report released by the Central Pollution Control Board (2014)

Air Quality Index standards, according to the Central Pollution Control Board (CPCB)

Colour	AQI	AQI Range	Remark
	Good	0-50	Minimal Impact
	Satisfactory	51-100	May cause minor breathing discomfort in sensitive people
	Moderate	101-200	May make breathing difficult for people with lung diseases and cause discomfort in children, older adults and heart patients
	Poor	201-300	May make breathing difficult after prolonged exposure, and cause discomfort to people with heart diseases
	Very Poor	301-400	May cause respiratory illnesses in people on prolonged exposure. The effect may be more pronounced in those with lung and heart diseases.
	Severe	>400	May cause respiratory problems even in healthy people, and seriously impact those with lung/heart diseases. Even increased breathing during light physical activity can impact health.

C. AQI Status in Mumbai

Table 28: Average Month-wise AQI from April 2016 to December 2020[65]

Month	Average AQI				
	2016	2017	2018	2019	2020
January	170	186	176	171	163
February	98	168	147	150	156
March	103	126	127	119	100
April	74	97	88	90	69
May	70	66	80	85	55
June	59	55	72	68	40
July	68	78	65	53	40
August	56	51	69	56	37
September	55	71	81	45	59
October	91	107	115	85	95
November	113	136	137	132	144
December	164	152	151	179	164

Inference:

- The best Average Monthly AQI was 37 in August 2020 – the least monthly average AQI in 5 years. The highest Average Monthly AQI in 2020 was 164 in December.
- Mumbai sees the best air quality from June to September, which can be explained by the presence of the monsoon season, which drastically helps abate poor air quality. Similarly, the worst AQI is in the winter months of December and January.

Table 29: Station wise Number of days with Air Quality level for the year 2020[66]

Air Quality Level	Bandra	Borivali East	Colaba	CST	Kurla	Powai	Sion	Vile Parle West	Worli	Average
Good	25	62	143	102	67	112	61	74	113	84
Satisfactory	191	97	75	76	102	98	129	62	99	103
Moderate	47	53	67	129	117	104	113	119	86	93
Poor	0	6	12	32	50	9	42	28	37	24
Very Poor	0	0	0	0	0	0	0	0	1	0
Severe	0	0	0	0	0	0	0	0	0	0
NA	103	148	69	27	30	43	21	83	30	62
Total	**366**	**366**	**366**	**366**	**366**	**366**	**366**	**366**	**366**	**366**

NA – Data not Available

Inference:

- On average 23% of days in 2020 had Good Air Quality (84 Days), 28% of days in 2020 had satisfactory air quality (103 days) and 25% of days had moderate air quality (93 days), while there were no days with severe air quality.
- Although on average, 17% of days in 2020 could not be accounted for due to the unavailability of data.

[65] All AQI data has been obtained from: http://cpcb.nic.in/ , after approval from the Central Pollution Control Board (CPCB) through an RTI application.

[66] All AQI data has been obtained from: http://cpcb.nic.in/ , after approval from the Central Pollution Control Board (CPCB) through an RTI application.

Table 30 : AQI of Year-wise Best and Worst Days from 2018 to 2020

Year	Best AQIs		Worst AQIs	
2018	07/06/2018	52	03/01/2018	243
	12/06/2018	51	04/01/2018	245
	21/06/2018	55	10/01/2018	272
	05/07/2018	55	08/02/2018	232
	19/07/2018	57	02/03/2018	235
	03/08/2018	57	03/03/2018	223
	04/08/2018	57	28/03/2018	230
	05/08/2018	56	08/11/2018	233
	06/08/2018	57	10/11/2018	233
	07/08/2018	57	24/12/2018	221
	09/08/2018	57		
	06/09/2018	57		
2019	24/07/2019	32	03/01/2019	265
	25/07/2019	34	04/01/2019	225
	04/09/2019	35	10/01/2019	217
	05/09/2019	36	20/01/2019	250
	06/09/2019	36	11/02/2019	230
	27/09/2019	34	17/02/2019	237
	28/09/2019	29	12/12/2019	222
	29/09/2019	36	24/12/2019	219
	30/09/2019	29	25/12/2019	275
	01/10/2019	37	26/12/2019	282
2020	01/07/2020	30	02/01/2020	243
	04/07/2020	28	04/01/2020	230
	27/07/2020	26	05/01/2020	228
	02/08/2020	30	21/01/2020	222
	03/08/2020	26	26/01/2020	235
	04/08/2020	25	17/02/2020	219
	18/08/2020	29	30/12/2020	212
	29/08/2020	30	26/11/2020	212
	30/08/2020	30	27/12/2020	213
	31/08/2020	29	31/12/2020	223

Inference:

- The lowest AQI (best air quality) was reported in August 2020 (7 out of 10 best days) and has improved compared to the lowest AQI of the previous two years. Worst AQI days were recorded in January, February, November and December 2020, the highest being 243.
- In comparison to the previous year (2019), it was August, which had the best Air Quality, unlike September in 2019.

Table 31: Comparison of Pollution Complaints

Pollution Sub-Issues	2018	2019	2020	% Change from 2018 to 2020
Average Air Quality Index	113	92	97	-14%
Air Pollution	193	169	151	-22%
Pollution due to Chemical Effluents	84	92	58	-31%
Nuisance due to Masala Mills/ Flour Mills	9	7	11	22%
Total complaints	**286**	**269**	**220**	**-23%**

Inference:

- 'Air Pollution' complaints decreased by 22% from 2018 to 2020, while the AQI has fallen from 2018 but increased compared to the year 2019, indicating that in specific areas air pollution might still be a problem, which average figures do not reveal.
- Complaints related to 'Nuisance due to Masala Mills/ Flour Mills' have increased by 22% from 2018 to 2020.

D. Recommendations

- **Uniform Monitoring:** For better AQI monitoring, the CPCB and System of Air Quality, Weather Forecasting and Research (SAFAR) both agencies that monitor the air quality of cities separately should instead, co-ordinate and a single AQI with uniform stations, be calculated by measuring major pollutants.

- **AQI Stations:** Further, air quality stations need to be established in every administrative ward to correctly measure air quality, pollution is otherwise not reflected in the AQI, as seen from the complaints data.

Section IV: Centralised Complaint Registration System (CCRS)

A. Key Highlights

For governments to function effectively collaboration and contact with citizens is essential, the most basic of which is a uniform complaint redressal mechanism where people can register complaints with the local body regarding civic issues in their locality and the local government is accountable to solve the same in a timely and structured manner.

Overall Complaints:

- Overall, MCGM's CCRS ***in 2020 received 93774 complaints***- highest complaints were related to drainage (15,508), followed by buildings (14,712) and Water Supply (11,855).
- Total number of complaints has decreased by 27% from 2019 to 2020 and the ***number of complaints closed has seen a down fall from 96% in 2019 to 82% in 2020***.
- In 2020, 82% complaints were solved at Level 0. Whereas of the 18% complaints that were escalated ***most of them (96%) were escalated up to the level of Municipal Commissioner***.
- In 2020, ***councillor code was not filled in 74% of the total complaints***.
- Action Taken Report is a clear contradiction of percentage of closed complaints. It states that the ***action was taken for 99.99% of total complaints however, the ratio of closed complaints is 82%*** in 2020. At the same time CCRS data shows that ***action is still pending for 17% of the total complaints***.

Ward-wise Complaints:

- Highest numbers of complaints are in ***K/W (7,456), K/E (6,847) and P/N (6,073)*** wards in 2020.
- There has been a significant ***decline in the percentage of complaints closed in all the wards***.
- ***Complaints escalation ratio*** to Level I and above has ***increased from 4% in 2019 to 18% in 2020.***
- ***54% of total complaints in G/N ward was escalated to Level I and above***.
- ***T, P/N and R/S wards took the most time for solving complaints- 77, 57 and 55 days*** respectively.

Issue-wise Complaints:

- The citizen's charter prescribes for almost all major complaints to be solved in one day. However, on an average, MCGM took ***an average of 36 days to solve complaints*** of drainage, water supply and solid waste management in 2020.
- Basic civic issues complaints such as, ***Toilets took an average of 50 days to resolve a complaint, followed by SWM – 43 days, Drainage – 36 days and Water supply – 29 days***.
- T ward took the maximum days to resolve almost all issues starting from an average of ***13 days to resolve a complaint related to contamination of water supply to 211 days for sweeping of roads***.

B. Issue Wise Details of Complaints Registered and Closed in the CCRS

The Complaint Management System of MCGM provides for a complaint number (1916), MyBMC 24X7 mobile app, an online portal on the MCGM website, or a written complaint to the complaint officer in the ward, where complaints can be registered. The complaint is referred to the respective department for taking necessary action and if not solved within the stipulated time is escalated to the next level of administration. This is based on the 'escalation matrix' which has been adopted by the MCGM to address the problem of complaints remaining stuck at the lower level of the civic administration, with no way to enforce accountability. Through this system, the higher administration is mandated to take note of and address complaints if they are not solved within a stipulated time. Once the complaint is solved, the complainant is notified of the same.

Table 32: Issue wise comparison of Total complaints and Complaints closed in 2019 and 2020

Complaint Type	Total complaints received		Closed Complaints				Average days to resolve a complaint	
	2019	2020	2019		2020			
			In no.	In (%)	In no.	In (%)	2019	2020
Roads	15,239	6,908	14,433	95%	4,659	67%	31	52
Buildings	20,317	14,712	18,105	89%	8,261	56%	55	54
Drainage	24,267	15,508	23,818	98%	12,919	83%	22	36
Water Supply	15,507	11,855	15,277	99%	11,299	95%	24	29
Solid Waste Management (SWM)	17,116	11,595	16,876	99%	10,485	90%	19	43
License	14,473	10,148	13,961	96%	8,868	87%	28	41
Pest control	7,501	10,971	7,451	99%	10,554	96%	17	26
Garden	3,367	4,522	3,346	99%	4,393	97%	23	22
Colony Officer	1,196	1,045	1,072	90%	539	52%	52	65
Storm Water Drainage	2,155	1,409	2,091	97%	993	70%	34	62
Shop and Establishment	778	986	746	96%	941	95%	26	40
Medical Officer Health (MOH)	1,472	889	1,418	96%	538	61%	39	63
MCGM Related	1,103	760	1,014	92%	433	57%	45	61
Estate	623	645	564	91%	434	67%	57	67
Toilet	627	618	612	98%	526	85%	28	50
Pollution	269	220	235	87%	119	54%	54	64
School	78	31	63	81%	15	48%	68	70
Nuisance due to vagrants on municipal roads, footpaths, gardens	2,057	952	1,843	90%	587	62%	52	70
Grand Total	**128,145**	**93,774**	**122,925**	**96%**	**76,563**	**82%**	**30**	**39**

Inference:

- The highest complaints were related to Drainage (15,508), followed by Buildings (14,712) and Water Supply (11,855) in 2020.
- The total number of complaints has decreased by 27% from 2019 to 2020 and the number of complaints closed has seen a downfall from 96% in 2019 to 82% in 2020.
- The average number of days to resolve a complaint has seen an increase from 30 days in 2019 to 39 days in 2020, showing deteriorated performance of the complaint management system.

Table 33: Issue wise Comparison of Total Complaints and Action taken on Complaints in 2019 and 2020

Complaint Type	Total complaints received		Action Taken Report*			
			2019		2020	
	2019	2020	In no.	In (%)	In no.	In (%)
Roads	15,239	6,908	15,228	99.93%	6,905	99.96%
Buildings	20,317	14,712	20,260	99.72%	14,712	100.00%
Drainage	24,267	15,508	24,263	99.98%	15,508	100.00%
Water Supply	15,507	11,855	15,435	99.54%	11,855	100.00%
Solid Waste Management (SWM)	17,116	11,595	17,116	100.00%	11,595	100.00%
License	14,473	10,148	14,454	99.87%	10,148	100.00%
Pest control	7,501	10,971	7,500	99.99%	10,969	99.98%
Garden	3,367	4,522	3,367	100.00%	4,521	99.98%
Colony Officer	1,196	1,045	1,195	99.92%	1,045	100.00%
Storm Water Drainage	2,155	1,409	2,153	99.91%	1,409	100.00%
Shop and Establishment	778	986	778	100.00%	986	100.00%
Medical Officer Health (MOH)	1,472	889	1,472	100.00%	889	100.00%
MCGM Related	1,103	760	1,103	100.00%	760	100.00%
Estate	623	645	616	98.88%	645	100.00%
Toilet	627	618	627	100.00%	618	100.00%
Pollution	269	220	269	100.00%	220	100.00%
School	78	31	78	100.00%	31	100.00%
Nuisance due to vagrants on municipal roads, footpaths, gardens	2,057	952	2,054	99.85%	950	99.79%
Grand Total	**128,145**	**93,774**	**127,968**	**99.86%**	**93,766**	**99.99%**

**differs from 'Complaints Closed'*

Inference:

- There is a significant improvement in the Action Taken Report (ATR) generation in 2020, which was 100% for most of the types of complaints.
- Roads, Pest Control, Garden and Nuisances due to vagrants on municipal roads, footpaths and gardens are the types of complaints in which the percentage of action taken on complaints is not 100%. However, it exceeds 99% in each of these and thus, is a commendable improvement from the past year.

Table 34: Issue-wise Status of Action Taken Report Generated on Complaints in 2020

Complaint Type	Total complaints received	Action Taken Report		Forwarded to Department		False Complaint		Action Taken/ Service Provided		Action Not Initiated	
		In no.	In (%)	In no.	In (%)	In no.	In (%)	In no.	In (%)	In no.	In (%)
Roads	6,908	6,905	100%	263	4%	260	4%	4,217	61%	2165	31%
Buildings	14,712	14,712	100%	1645	11%	1,031	7%	5,414	37%	6622	45%
Drainage	15,508	15,508	100%	105	1%	823	5%	11,714	76%	2866	18%
Water Supply	11,855	11,855	100%	2633	22%	688	6%	8,015	68%	519	4%
Solid Waste Management (SWM)	11,595	11,595	100%	16	0%	334	3%	10,147	88%	1098	9%
License	10,148	10,148	100%	15	0%	1,011	10%	7,867	78%	1255	12%
Pest control	10,971	10,969	100%	0	0%	831	8%	9,738	89%	400	4%
Garden	4,522	4,521	100%	101	2%	490	11%	3,772	83%	158	3%
Colony Officer	1,045	1,045	100%	18	2%	300	29%	243	23%	484	46%
Storm Water Drainage	1,409	1,409	100%	4	0%	21	1%	975	69%	409	29%
Shop and Establishment	986	986	100%	0	0%	861	87%	83	8%	42	4%
Medical Officer Health (MOH)	889	889	100%	16	2%	189	21%	302	34%	382	43%
MCGM Related	760	760	100%	21	3%	15	2%	408	54%	316	42%
Estate	645	645	100%	34	5%	227	35%	179	28%	205	32%
Toilet	618	618	100%	0	0%	16	3%	514	83%	88	14%
Pollution	220	220	100%	75	34%	31	14%	16	7%	98	45%
School	31	31	100%	1	3%	7	23%	8	26%	15	48%
Nuisance due to vagrants on municipal roads, footpaths, gardens	952	950	100%	1	0%	92	10%	499	53%	358	38%
Grand Total	**93,774**	**93,766**	**100%**	**4,948**	**5%**	**7,227**	**8%**	**64,111**	**68%**	**17,480**	**19%**

Inference:

- In 2020, out of the total complaints on which action was taken 68% of them received the service provided, 8% of them were reported to be false complaints and for 19% the action was pending
- Action taken through service provided was highest in Pest Control (89%) and Solid Waste Management (88%) whereas the least service provided was in Pollution 7%.
- The complaints where no action was taken were related to Schools (48%), Colony Officer (46%), Building (45%) Medical Officer Health (43%), as well as MCGM Related (42%) in 2020.

Table 35: Issue-wise Status of Complaints Escalated in 2020

Complaint Type	Total Complaints Received	Escalated Complaints			
		Level I (AMC/Chief Engineer)	Level II (DMC)	Level III (Add. MC)	Level IV (MC)
Roads	6,908	2,236	2,236	2,236	2,229
Buildings	14,712	6,493	6,302	6,105	5,933
Drainage	15,508	2,612	2,612	2,611	2,479
Water Supply	11,855	3	3	3	3
Solid Waste Management (SWM)	11,595	1,175	1,175	1,175	1,175
License	10,148	1,324	1,324	1,324	1,324
Pest control	10,971	447	447	447	445
Garden	4,522	149	149	149	148
Colony Officer	1,045	494	494	494	494
Storm Water Drainage	1,409	423	423	423	420
Shop and Establishment	986	39	39	38	38
Medical Officer Health (MOH)	889	354	354	354	354
MCGM Related	760	324	324	324	324
Estate	645	170	170	170	170
Toilet	618	93	93	93	92
Pollution	220	101	101	101	101
School	31	16	16	16	16
Nuisance due to vagrants on municipal roads, footpaths, gardens	952	360	360	360	360
Total	**93,774**	**16,813**	**16,622**	**16,423**	**16,105**
In (%)		**18%**	**18%**	**18%**	**17%**

The table above depicts the number of complaints escalated to different levels under the 'escalation matrix', which has been adopted by the MCGM. The escalation matrix was developed to address the problem of complaints remaining stuck at the lower level of the civic administration, with no way to enforce accountability. Through this system, the higher administration is mandated to take note of and address complaints if they are not solved within a stipulated time.

Inference:

- If a complaint is solved at the level in which it is filed, it is treated as being solved at Level 0. As can be seen through the data, once complaints are escalated, they reach the highest level i.e. that of the Municipal Commissioner.
- In 2020, 82% of complaints were solved at Level 0. Whereas, the 18% (16,423) of complaints that were escalated, almost all (16,105) of them were escalated to the Municipal Commissioner (Level IV).
- Out of the complaints escalated (16,813) at Level I 96% (16,105) reached till Level IV.

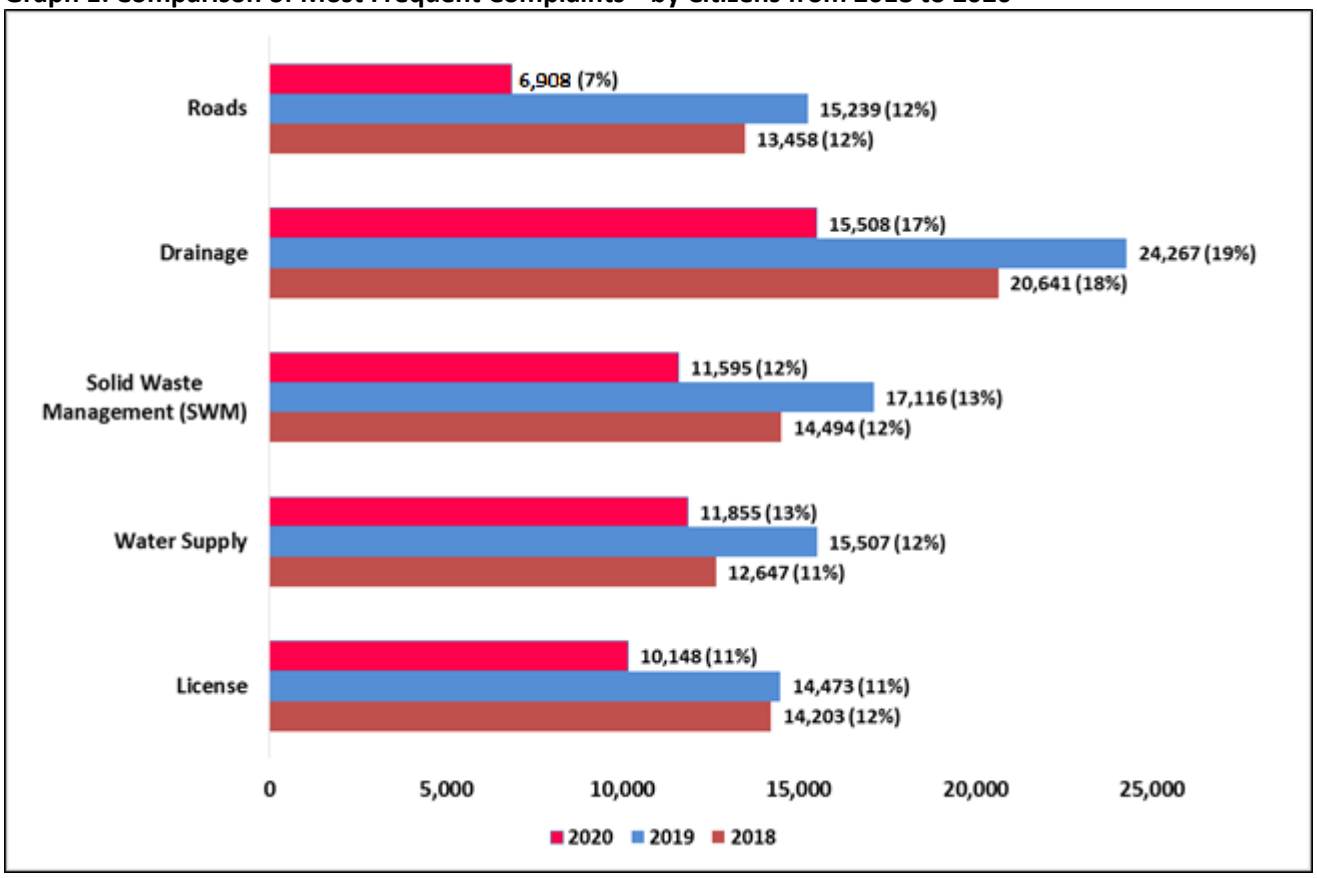
Table 36: Sub-issue Wise Top Four Civic Complaints by Citizens from 2018 to 2020

Issues/Sub-issues	2018	2019	2020	Increase from 2018 to 2019 (in %)	Increase from 2019 to 2020 (in %)
Roads					
Bad Patches / Potholes on the Roads	4,918	7,091	2,175	44%	-69%
Municipal Land - Road/ Footpath/SWD	3,374	3,224	1,854	-4%	-42%
Resurfacing of Road	1,281	1,332	802	4%	-40%
Street Lighting	1,360	1,416	746	4%	-47%
Total complaints	**13,458**	**15,239**	**6,908**	**13%**	**-55%**
Drainage					
Drainage Chokes and Blockages	12,403	14,077	9,649	13%	-31%
Overflowing drains of manholes	4,290	5,645	3,488	32%	-38%
Replacement of Missing / Damaged Manhole	2,469	2,856	966	16%	-66%
Repairs to pipe sewers/ main sewers	573	656	447	14%	-32%
Total complaints	**20,641**	**24,267**	**15,508**	**18%**	**-36%**
Solid Waste Management (SWM)					
Garbage not lifted from House/Gully/Municipal Market/Road/Authorised collection point	5,157	6,086	3,943	18%	-35%
Removal of Debris	2,122	2,371	1,395	12%	-41%
Lifting of Tree Cutting	1,241	1,753	1,590	41%	-9%
Non-attendance of nuisance Detector	1,571	1,947	1,167	24%	-40%
Total complaints	**14,494**	**17,116**	**11,595**	**18%**	**-32%**
Water Supply					
Shortage of Water Supply	3,476	4,504	3,914	30%	-13%
Leaks in Water Lines	4,491	5,294	3,434	18%	-35%
Unauthorised Tapping of Water Connection	1,308	1,158	859	-11%	-26%
Contaminated Water Supply	1,156	1,940	1,369	68%	-29%
Total complaints	**12,647**	**15,507**	**11,855**	**23%**	**-24%**

Inference:

- Citizens' complaints have seen a decline in 2020 as compared to 2019 for almost all issues and this can be attributed to nationwide lockdown.

Graph 1: Comparison of Most Frequent Complaints[67] by Citizens from 2018 to 2020



Note: The percentages mentioned in brackets indicate the share of complaints related to that issue to the total number of complaints. E.g. in 2018, 12% of total complaints received by citizens were related to 'Roads'.

Inferences:

- Complaints related to 'Drainage' (15,508 in 2020 and 24,267 in 2019 & 20,641 in 2018) have been constantly most frequently complained issue in the last three years.

[67] The complaints registered data is obtained through RTI from the Central Complaint Registration System (CCRS) of the MCGM

Table 37: Analysis of Complaints Attended (Closed) in Comparison with Days Mentioned in MCGM's Citizen Charter[68]

Issues/Sub-issues	To resolved as per Citizens' Charter	Actual time taken to resolve			
		2018	2019	2020	Increase from 2019 to 2020 (in %)
Drainage					
Drainage Chokes and Blockages	1	14	17	30	79%
Overflowing drains or manholes	1	28	25	48	90%
Odour (Foul Smell) from Drains	1	25	36	48	32%
Replacement of Missing / Damaged Manhole	1	32	34	51	48%
Raising of Manhole (except in Monsoon)	7	27	46	68	48%
Cleaning of septic tank	7	34	35	50	43%
Repairs to pipe sewers/main sewers	7	30	36	52	46%
Water Supply					
Contaminated Water Supply	1	25	23	28	25%
Leaks in Water Lines	7	26	24	29	20%
Shortage of Water Supply	2	25	24	30	25%
Burst Water Main	1	26	24	30	27%
Solid Waste Management (SWM)					
Garbage not lifted - Co-authorised Point	1	26	17	44	151%
Collection point not attended properly	1	25	20	45	128%
Garbage lorry not reported for service/ Lorry not covered	1	23	22	57	164%
Providing/removing/replacing dustbins	8	27	19	43	125%
Sweeping of road	1	24	19	48	159%
Removal of Dead Animals	1	23	19	54	184%
No attendance at public toilets	2	25	22	46	106%
Average	**3**	**22**	**22**	**36**	**64%**

Inference:

- The citizen's charter prescribes an average of three days (with one day for most of the essential services) for the basic citizens' complaints to be resolved. However, MCGM took an average of 36 days in 2020 to resolve the complaints related to Drainage, Water Supply and SWM.
- Number of days taken to resolve the complaints has increased by 64% i.e. 22 days from 2019 to 36 days in 2020.
- Sanitation related complaints took maximum days to be resolved. On an average 57 days for garbage vehicles not arrived, 45 days for collection points not attended and 44 days for garbage lifting, which reflects the poor state of solid waste management service in the city.
- Similarly, cleaning of septic tanks took an average of 50 days and 48 days for overflowing manhole complaints to be solved thus posing a major health and dangerous risk to people. Whereas, Odour or Foul Smell from drains complaints took 48 days to resolve in 2020.
- Complaints related to Removal of dead animals took an average of 54 days to resolve in 2020.

[68] *Citizen Charter http://goo.gl/M8EL9h*

C. Ward Wise Details of Complaints Registered and Closed in the CCRS

Table 38: Ward-wise Comparison of Total Complaints and Complaints Closed in 2019 and 2020

Ward	Total complaints received		Closed Complaints				Average days to resolve a complaint	
	2019	2020	2019		2020			
			In no.	In (%)	In no.	In (%)	2019	2020
A	2,896	1,763	2,859	99%	1,319	75%	19	44
B	3,959	2,461	3,688	93%	1,879	76%	31	37
C	3,596	2,888	3,521	98%	2,258	78%	36	31
D	5,159	3,730	5,058	98%	2,986	80%	25	50
E	4,642	3,660	4,618	99%	3,641	99%	23	12
F/N	5,304	3,597	5,290	100%	3,555	99%	15	18
F/S	2,857	2,444	2,850	100%	2,392	98%	18	35
G/N	5,954	4,657	5,421	91%	2,153	46%	55	40
G/S	4,192	2,658	4,183	100%	2,642	99%	33	42
H/E	4,397	3,519	4,362	99%	3,377	96%	24	23
H/W	4,774	3,481	4,756	100%	3,082	89%	13	30
K/E	9,724	6,847	9,432	97%	6,188	90%	18	39
K/W	10,399	7,456	9,871	95%	6,130	82%	28	36
L	7,560	5,862	6,142	81%	4,064	69%	46	42
M/E	4,334	3,525	3,849	89%	2,522	72%	28	42
M/W	4,387	3,438	4,345	99%	2,801	81%	37	38
N	6,843	4,981	6,811	100%	4,705	94%	17	42
P/N	8,019	6,073	7,512	94%	4,161	69%	41	57
P/S	5,133	3,168	4,975	97%	2,290	72%	36	50
R/C	6,398	4,506	6,388	100%	4,479	99%	44	30
R/N	2,729	2,185	2,619	96%	1,433	66%	39	42
R/S	6,008	4,341	5,991	100%	3,813	88%	21	55
S	6,144	4,480	6,060	99%	3,122	70%	35	48
T	2,737	2,054	2,324	85%	1,571	76%	38	77
Total	**128,145**	**93,774**	**122,925**	**96%**	**76,563**	**82%**	**30**	**39**

Inference:

- The highest numbers of complaints were in K/W (7,456), K/E (6,847) and P/N (6,073) wards in 2020.
- There has been a decline in the percentage of complaints closed in almost all wards i.e. by 15% from 2019 to 2020. The closed complaints numbers dipped from 122,925 in 2019 to 76,563 in 2020.
- 54% complaints in G/N was not closed in 2020.
- Average days to resolve the complaints increased from 30 days in 2019 to 39 days in 2020. T, P/N and R/S wards took maximum days for solving complaints- 77, 57 and 55 days respectively.

Table 39: Ward-wise Status Report of Complaints in 2020

Ward	Total Complaints	Closed (Action taken)		Complaints Registered (Action Pending)		In Process (Not assigned/Re Assigned/Being Attended)	Not related to MCGM
		No.	In (%)	No.	In (%)		
A	1,763	1,319	75	434	25	1	9
B	2,461	1,879	76	381	15	194	7
C	2,888	2,258	78	544	19	80	6
D	3,730	2,986	80	710	19	24	10
E	3,660	3,641	99	4	0	10	5
F/N	3,597	3,555	99	20	1	15	7
F/S	2,444	2,392	98	31	1	18	3
G/N	4,657	2,153	46	2,325	50	176	3
G/S	2,658	2,642	99	12	0	1	3
H/E	3,519	3,377	96	103	3	15	24
H/W	3,481	3,082	89	362	10	35	2
K/E	6,847	6,188	90	591	9	36	32
K/W	7,456	6,130	82	1,265	17	60	1
L	5,862	4,064	69	1,787	30	6	5
M/E	3,525	2,522	72	950	27	45	8
M/W	3,438	2,801	81	621	18	12	4
N	4,981	4,705	94	219	4	52	5
P/N	6,073	4,161	69	1,872	31	35	5
P/S	3,168	2,290	72	754	24	94	30
R/C	4,506	4,479	99	0	0	1	26
R/N	2,185	1,433	66	738	34	9	5
R/S	4,341	3,813	88	419	10	98	11
S	4,480	3,122	70	1,252	28	101	5
T	2,054	1,571	76	477	23	0	6
Total	**93,774**	**76,563**		**15,871**		**1,118**	**222**
In (%)		**82%**		**17%**		**1%**	**0.24%**

Inference:

- G/N ward has the highest percentage of complaints unsolved/pending (50%) in 2020.
- Action Taken Report states, action was initiated for 99.99% of total complaints registered in 2020. However, the CCRS also states that, for 17% (15,871) complaints action is still pending.

Table 40: Ward-wise Number and Percentage of Complaints with Councillor Code filled in 2019 and 2020

Ward	2019			2020		
	Total Complaints	Complaints where councillor code was filled		Total Complaints	Complaints where councillor code was filled	
		Number	%		Number	%
A	2,896	455	16%	1,763	414	23%
B	3,959	961	24%	2,461	767	31%
C	3,596	990	28%	2,888	779	27%
D	5,159	966	19%	3,730	970	26%
E	4,642	1,258	27%	3,660	1,221	33%
F/N	5,304	1,201	23%	3,597	936	26%
F/S	2,857	525	18%	2,444	522	21%
G/N	5,954	1,736	29%	4,657	1,712	37%
G/S	4,192	1,358	32%	2,658	635	24%
H/E	4,397	765	17%	3,519	761	22%
H/W	4,774	994	21%	3,481	951	27%
K/E	9,724	1,896	19%	6,847	1,377	20%
K/W	10,399	1,587	15%	7,456	1,905	26%
L	7,560	1,866	25%	5,862	1,710	29%
M/E	4,334	954	22%	3,525	930	26%
M/W	4,387	1,002	23%	3,438	808	24%
N	6,843	1,619	24%	4,981	1,274	26%
P/N	8,019	1,852	23%	6,073	1,447	24%
P/S	5,133	831	16%	3,168	695	22%
R/C	6,398	1,774	28%	4,506	1,449	32%
R/N	2,729	682	25%	2,185	567	26%
R/S	6,008	1,103	18%	4,341	743	17%
S	6,144	1,350	22%	4,480	1,302	29%
T	2,737	664	24%	2,054	667	32%
Total	**128,145**	**28,389**	**22%**	**93,774**	**24,542**	**26%**

Inference:

- Councillor Code was not filled for 74% of complaints in 2020 across the Mumbai city.
- The wards in which the highest number of Councillor Codes are missing in 2020 are R/S – 83%, K/E – 80% and F/S – 79%.

Table 41: Ward-wise Comparison of Total Complaints and Action Taken on the Complaints in 2019 and 2020

Complaint Type	Total complaints received		Action Taken Report			
	2019	2020	2019		2020	
			In no.	In (%)	In no.	In (%)
A	2,896	1,763	2,896	100%	1,763	100%
B	3,959	2,461	3,945	99.65%	2,457	99.84%
C	3,596	2,888	3,589	99.81%	2,888	100%
D	5,159	3,730	5,158	99.98%	3,730	100%
E	4,642	3,660	4,636	99.87%	3,659	99.97%
F/N	5,304	3,597	5,299	99.91%	3,597	100%
F/S	2,857	2,444	2,856	99.96%	2,444	100%
G/N	5,954	4,657	5,946	99.87%	4,657	100%
G/S	4,192	2,658	4,189	99.93%	2,658	100%
H/E	4,397	3,519	4,394	99.93%	3,519	100%
H/W	4,774	3,481	4,770	99.92%	3,481	100%
K/E	9,724	6,847	9,702	99.77%	6,847	100%
K/W	10,399	7,456	10,382	99.84%	7,456	100%
L	7,560	5,862	7,549	99.85%	5,861	99.98%
M/E	4,334	3,525	4,320	99.68%	3,525	100%
M/W	4,387	3,438	4,384	99.93%	3,438	100%
N	6,843	4,981	6,838	99.93%	4,981	100%
P/N	8,019	6,073	7,998	99.74%	6,073	100%
P/S	5,133	3,168	5,133	100%	3,168	100%
R/C	6,398	4,506	6,394	99.94%	4,506	100%
R/N	2,729	2,185	2,725	99.85%	2,183	99.91%
R/S	6,008	4,341	6,001	99.88%	4,341	100%
S	6,144	4,480	6,127	99.72%	4,480	100%
T	2,737	2,054	2,737	100%	2,054	100%
Total	**128,145**	**93,774**	**127,968**	**99.86%**	**93,766**	**99.99%**

Inference:

- In 2020, 100% Action Taken report was generated in most of the wards except in B, E, L and R/N wards.
- Action Taken Report is a clear contradiction of percentage of closed complaints. It states that the action was taken for 99.99% of total complaints however, the ratio of closed complaints is 82% in 2020.

Table 42: Ward-wise comparison of Total complaints and Complaints Escalated[69] in 2019 and 2020

Complaint Type	Total complaints received		Complaints Escalated			
	2019	2020	2019		2020	
			In no.	In (%)	In no.	In (%)
A	2,896	1,763	16	1%	436	25%
B	3,959	2,461	242	6%	587	24%
C	3,596	2,888	72	2%	624	22%
D	5,159	3,730	94	2%	750	20%
E	4,642	3,660	0	0%	8	0%
F/N	5,304	3,597	0	0%	44	1%
F/S	2,857	2,444	2	0%	56	2%
G/N	5,954	4,657	560	9%	2,523	54%
G/S	4,192	2,658	0	0%	25	1%
H/E	4,397	3,519	30	1%	123	3%
H/W	4,774	3,481	9	0%	407	12%
K/E	9,724	6,847	110	1%	619	9%
K/W	10,399	7,456	495	5%	1,213	16%
L	7,560	5,862	1,401	19%	1,818	31%
M/E	4,334	3,525	374	9%	996	28%
M/W	4,387	3,438	25	1%	646	19%
N	6,843	4,981	11	0%	298	6%
P/N	8,019	6,073	481	6%	1,905	31%
P/S	5,133	3,168	147	3%	771	24%
R/C	6,398	4,506	1	0%	2	0%
R/N	2,729	2,185	105	4%	737	34%
R/S	6,008	4,341	12	0%	557	13%
S	6,144	4,480	95	2%	1,157	26%
T	2,737	2,054	456	17%	511	25%
Total	**128,145**	**93,774**	**4,738**	**4%**	**16,813**	**18%**

Inference:

- The ratio of Complaints escalated has increased for 4% in 2019 to 18% in 2020.
- G/N ward has the highest number of complaints escalated to higher levels i.e. 54% followed by R/N – 34%, L and P/N – 31% each.

[69] Complaints are first escalated to Level 1 based upon the escalation matrix adopted by MCGM to *address the problem of complaints remaining stuck at the lower level of the civic administration, with no way to enforce accountability. Through this, the higher administration can take note of complaints not solved within the stipulated time*. For details of complaints escalated and solved from Level 1 to Level 4, refer Annexure 2.

Table 43: Ward-wise Top Civic Complaints from 2018 to 2020 (Roads and Drainage)

Ward	Population 2011	Road				Drainage			
		2018	2019	2020	Increase from 2019 to 2020 (in %)	2018	2019	2020	Increase from 2019 to 2020 (in %)
A	185,014	346	416	133	-68%	469	622	344	-45%
B	127,290	427	317	130	-59%	710	751	420	-44%
C	166,161	293	316	146	-54%	552	630	482	-23%
D	346,866	536	552	252	-54%	1,296	1,514	816	-46%
E	393,286	291	312	272	-13%	465	595	530	-11%
F/N	529,034	623	524	247	-53%	530	674	336	-50%
F/S	360,972	241	306	131	-57%	360	645	382	-41%
G/N	599,039	665	616	339	-45%	834	969	564	-42%
G/S	377,749	321	362	239	-34%	547	608	361	-41%
H/E	557,239	471	612	209	-66%	856	985	742	-25%
H/W	307,581	577	515	230	-55%	1,027	1,102	752	-32%
K/E	823,885	1,253	1,671	688	-59%	1,353	1,730	1,103	-36%
K/W	748,688	1,131	1,163	511	-56%	2,072	2,357	1,424	-40%
L	902,225	593	861	278	-68%	1,620	1,649	953	-42%
M/E	807,720	466	462	268	-42%	691	774	552	-29%
M/W	411,893	442	576	285	-51%	1,164	1,103	744	-33%
N	622,853	795	832	420	-50%	1,161	1,314	789	-40%
P/N	941,366	855	974	502	-48%	871	1,230	943	-23%
P/S	463,507	527	820	302	-63%	792	910	552	-39%
R/C	562,162	630	736	342	-54%	983	1,309	788	-40%
R/N	431,368	247	307	155	-50%	330	453	333	-26%
R/S	691,229	614	680	313	-54%	627	927	692	-25%
S	743,783	671	857	326	-62%	820	934	600	-36%
T	341,463	443	452	190	-58%	511	482	306	-37%
Total	**12,442,373**	**13,458**	**15,239**	**6,908**	**-55%**	**20,641**	**24,267**	**15,508**	**-36%**

Inference:

- Complaints regarding the Roads and Drainage are highest in K/E, K/W, L and P/N wards in 2020. Also the complaints in these wards regarding Roads and Drainage have been constantly amongst the highest in the last three years.
- Road Complaints are highest in K/E (688), K/W (511) and P/N (502) in 2020.
- Drainage complaints are highest in K/W (1,424), K/E (1,103), L (953) and P/N (943) in 2020.

Table 44: Ward-wise Top Civic Complaints from 2018 to 2019 (SWM and Water supply)

Ward	Population 2011	SWM				Water Supply			
		2018	2019	2020	Increase from 2019 to 2020 (in %)	2018	2019	2020	Increase from 2019 to 2020 (in %)
A	185,014	265	361	258	-29%	205	338	174	-49%
B	127,290	312	391	332	-15%	151	353	151	-57%
C	166,161	730	687	602	-12%	342	445	321	-28%
D	346,866	675	605	548	-9%	352	499	303	-39%
E	393,286	830	840	560	-33%	355	588	470	-20%
F/N	529,034	531	871	755	-13%	407	669	399	-40%
F/S	360,972	268	409	349	-15%	257	261	221	-15%
G/N	599,039	542	661	389	-41%	497	616	402	-35%
G/S	377,749	399	401	291	-27%	213	242	172	-29%
H/E	557,239	429	540	364	-33%	348	544	451	-17%
H/W	307,581	661	659	380	-42%	479	533	384	-28%
K/E	823,885	934	1019	774	-24%	1,266	1,536	1,223	-20%
K/W	748,688	960	1680	983	-41%	1,157	1,321	900	-32%
L	902,225	596	827	459	-44%	947	952	729	-23%
M/E	807,720	463	597	367	-39%	826	653	496	-24%
M/W	411,893	459	507	438	-14%	482	489	334	-32%
N	622,853	890	801	520	-35%	601	856	660	-23%
P/N	941,366	880	1,106	622	-44%	890	1,069	893	-16%
P/S	463,507	845	842	428	-49%	393	484	382	-21%
R/C	562,162	788	997	640	-36%	606	646	760	18%
R/N	431,368	247	345	294	-15%	230	304	338	11%
R/S	691,229	721	922	546	-41%	774	857	633	-26%
S	743,783	762	737	474	-36%	590	988	847	-14%
T	341,463	307	311	222	-29%	279	264	212	-20%
Total	**12,442,373**	**14,494**	**17,116**	**11,595**	**-32%**	**12,647**	**15,507**	**11,855**	**-24%**

Inference:

- Once against K/E, K/W and P/N wards are amongst the highest number of complaints in 2020 regarding SWM and Water supply. Also the complaints in these wards regarding SWM and Water supply have been constantly amongst the highest in the last three years.
- Water supply related complaints in 2020 are highest in K/E (1,223) and K/W (900) and P/N (893).
- SWM related complaints in 2020 are highest in K/W (983), K/E (774) and F/N (755).

Table 45: Ward-wise Top Three Drainage Related Civic Complaints from 2018 to 2020

Drainage										
Ward	Population 2011	Drainage Chokes and Blockages			Overflowing drains of manholes			Replacement of Missing / Damaged Manhole		
		2018	2019	2020	2018	2019	2020	2018	2019	2020
A	185,014	243	308	194	134	188	109	68	91	29
B	127,290	372	341	215	203	318	150	60	57	26
C	166,161	355	310	285	126	214	146	42	55	14
D	346,866	618	667	422	520	651	282	98	124	53
E	393,286	246	285	327	125	222	151	56	57	22
F/N	529,034	284	304	175	127	199	117	86	123	17
F/S	360,972	187	269	174	89	260	132	66	76	34
G/N	599,039	413	437	298	183	338	169	165	130	40
G/S	377,749	300	270	185	145	242	111	62	57	30
H/E	557,239	611	674	555	134	162	114	74	105	32
H/W	307,581	671	784	563	166	162	118	142	115	40
K/E	823,885	762	986	690	244	311	200	253	288	84
K/W	748,688	1,508	1,673	1,094	305	308	185	173	290	94
L	902,225	1,007	940	542	348	404	258	124	177	66
M/E	807,720	352	421	279	160	171	126	98	76	30
M/W	411,893	743	650	425	227	188	165	97	136	48
N	622,853	784	779	499	209	282	175	94	97	35
P/N	941,366	418	679	562	203	278	204	156	160	66
P/S	463,507	434	607	366	165	129	95	133	121	43
R/C	562,162	677	915	567	145	173	126	103	164	47
R/N	431,368	223	306	237	34	60	53	35	53	19
R/S	691,229	398	584	483	73	136	95	98	136	41
S	743,783	454	553	326	143	181	141	137	116	32
T	341,463	343	335	186	82	68	66	49	52	24
Total	**12,442,373**	**12,403**	**14,077**	**9,649**	**4,290**	**5,645**	**3,488**	**2,469**	**2,856**	**966**

Inference:

- 62% of the total 15,508 drainage complaints are related to chokes and blockages while 22% are related to overflowing drains.
- D, K/E, K/W, L, P/N and R/C are the wards with the major number of complaints on top three drainage related issues in 2020.

Table 46: Ward-wise Top Three Solid Waste Management Related Civic Complaints from 2018 to 2020

Solid Waste Management (SWM)										
Ward	Population 2011	Garbage not lifted from House/Gully/ Municipal Market/Road/ Authorised collection point			Removal of Debris			Lifting of Tree Cutting		
		2018	2019	2020	2018	2019	2020	2018	2019	2020
A	185,014	101	151	94	42	51	23	28	34	64
B	127,290	129	164	145	38	39	52	37	11	4
C	166,161	463	440	356	101	72	72	11	4	18
D	346,866	277	252	209	138	99	63	48	46	111
E	393,286	274	391	266	112	129	103	47	53	40
F/N	529,034	193	381	381	94	106	57	44	71	61
F/S	360,972	83	84	85	50	75	76	35	50	66
G/N	599,039	155	181	111	105	137	50	51	68	67
G/S	377,749	85	114	83	101	61	25	35	53	52
H/E	557,239	150	152	91	75	88	46	27	55	39
H/W	307,581	222	206	120	131	107	46	95	134	89
K/E	823,885	252	332	225	165	139	101	95	119	105
K/W	748,688	295	685	299	172	209	108	78	157	218
L	902,225	237	262	139	92	132	74	44	63	57
M/E	807,720	152	208	131	48	99	44	33	47	47
M/W	411,893	135	130	144	55	67	55	64	78	69
N	622,853	331	250	131	135	132	79	58	109	75
P/N	941,366	332	362	171	95	133	71	57	102	79
P/S	463,507	339	315	123	71	88	37	98	82	64
R/C	562,162	271	290	186	65	123	63	80	138	85
R/N	431,368	66	65	71	20	38	17	30	69	49
R/S	691,229	240	320	188	72	115	45	40	70	44
S	743,783	279	262	130	117	105	55	43	93	62
T	341,463	96	89	64	28	27	33	63	47	25
Total	**12,442,373**	**5,157**	**6,086**	**3,943**	**2,122**	**2,371**	**1,395**	**1,241**	**1,753**	**1,590**

Inference:

- Of the total 11,595 SWM complaints, 34% were related to the garbage not being lifted, the highest being in F/N ward (381) in 2020.
- E, C, D, F/N, K/E and K/W are the wards with major number of complaints on top three SWM related issues in 2020.

Table 47: Ward-wise Top Four Water Supply Related Ward-wise Civic Complaints from 2018 to 2020

Water Supply													
Ward	Population 2011	Shortage of Water Supply			Leaks in Water Lines			Unauthorised Tapping of Water Connection			Contaminated Water Supply		
		2018	2019	2020	2018	2019	2020	2018	2019	2020	2018	2019	2020
A	185,014	99	113	51	38	89	36	14	8	7	21	78	51
B	127,290	77	147	48	15	36	25	20	14	12	25	119	44
C	166,161	138	145	120	40	28	38	25	32	23	82	205	102
D	346,866	120	176	109	102	114	85	21	10	15	43	124	44
E	393,286	117	222	130	97	140	94	33	47	54	69	97	129
F/N	529,034	93	176	152	121	201	121	64	98	37	38	50	26
F/S	360,972	115	71	49	57	95	70	19	25	38	24	20	22
G/N	599,039	75	92	104	152	193	126	145	163	72	50	52	24
G/S	377,749	32	53	59	84	83	49	39	18	15	11	28	19
H/E	557,239	89	177	143	123	182	139	27	32	27	41	54	62
H/W	307,581	147	206	134	180	104	108	24	31	17	42	126	36
K/E	823,885	362	493	423	535	655	424	78	73	75	64	44	35
K/W	748,688	333	444	295	322	380	262	224	101	56	136	217	116
L	902,225	150	224	200	447	418	232	130	88	99	47	64	47
M/E	807,720	271	218	186	281	261	158	71	42	40	68	32	32
M/W	411,893	130	96	81	177	219	115	67	48	33	29	34	14
N	622,853	86	165	167	309	397	251	58	59	55	43	47	47
P/N	941,366	243	271	300	293	335	259	81	104	77	113	215	91
P/S	463,507	114	153	159	140	164	97	25	37	15	36	51	36
R/C	562,162	163	197	333	236	236	169	11	10	15	68	74	109
R/N	431,368	66	95	113	73	100	91	18	18	18	28	40	41
R/S	691,229	347	282	228	223	285	190	55	50	26	51	107	75
S	743,783	75	252	266	301	431	238	49	40	26	19	49	141
T	341,463	34	36	64	145	148	57	10	10	7	8	13	26
Total	**12,442,373**	**3,476**	**4,504**	**3,914**	**4,491**	**5,294**	**3,434**	**1,308**	**1,158**	**859**	**1,156**	**1,940**	**1,369**

Inference:

- 33% of total 11,855 water related complaints are of shortage of water, whereas 29% are of leakage in water pipelines and 12% are related to contaminated water.
- The top four wards with a shortage of water supply complaints in 2020 are K/E, R/C, P/N and K/W wards.
- The top four wards with Water Contamination complaints in 2020 are S, E, K/W, R/C and C wards.

Table 48: Ward-wise Top Three Road Related Civic Complaints from 2018 to 2020

Roads										
Ward	Population 2011	Bad Patches / Potholes on the Roads			Municipal Land - Road/ Footpath/SWD			Resurfacing of Road		
		2018	2019	2020	2018	2019	2020	2018	2019	2020
A	185,014	125	223	46	67	68	41	59	40	24
B	127,290	101	87	38	208	138	40	59	36	18
C	166,161	73	136	34	118	101	53	35	28	20
D	346,866	168	178	75	135	159	84	128	121	36
E	393,286	93	146	68	63	53	81	48	39	57
F/N	529,034	270	265	121	137	91	28	46	62	42
F/S	360,972	85	153	43	58	63	25	16	30	21
G/N	599,039	141	256	109	252	205	99	63	39	24
G/S	377,749	94	143	75	85	93	57	30	37	42
H/E	557,239	216	349	72	131	127	54	37	31	24
H/W	307,581	235	213	60	138	152	69	48	26	30
K/E	823,885	641	916	261	218	262	197	78	173	52
K/W	748,688	470	461	142	270	319	175	97	85	39
L	902,225	181	404	77	157	102	73	45	76	25
M/E	807,720	182	188	76	97	110	78	29	31	25
M/W	411,893	190	257	97	84	143	66	33	36	30
N	622,853	256	323	97	215	159	130	75	89	46
P/N	941,366	345	509	168	186	173	126	75	78	53
P/S	463,507	188	505	93	133	109	79	52	84	45
R/C	562,162	205	255	138	144	173	66	45	42	41
R/N	431,368	77	111	43	65	87	50	26	23	15
R/S	691,229	191	259	85	171	155	52	50	39	43
S	743,783	254	529	97	144	98	81	69	64	36
T	341,463	137	225	60	98	84	50	38	23	14
Total	**12,442,373**	**4,918**	**7,091**	**2,175**	**3,374**	**3,224**	**1,854**	**1,281**	**1,332**	**802**

Inference:

- Of the total 6,908 complaints regarding Roads in 2020, 2,175 complaints were of the Bad Patches / Potholes on the Roads.
- K/E, K/W and P/N are the wards with the major number of complaints regarding Potholes/Bad Patches on Roads in 2020.

Table 49 : Ward-wise civic complaints on Potholes on the Roads from the year 2019 & 2020

Ward	Central Complaint Registration System (CCRS)			mybmcpotholefixit Data[70]			Total	
	2019	2020	Increase from 2019 to 2020 (in %)	2019[71]	2020	Increase from 2019 to 2020 (in %)	2019	2020
A	223	46	-385%	45	23	-96%	268	69
B	87	38	-129%	75	17	-341%	162	55
C	136	34	-300%	61	27	-126%	197	61
D	178	75	-137%	93	25	-272%	271	100
E	146	68	-115%	134	43	-212%	280	111
F/N	265	121	-119%	82	38	-116%	347	159
F/S	153	43	-256%	95	26	-265%	248	69
G/N	256	109	-135%	250	108	-131%	506	217
G/S	143	75	-91%	221	42	-426%	364	117
H/E	349	72	-385%	55	37	-49%	404	109
H/W	213	60	-255%	171	117	-46%	384	177
K/E	916	261	-251%	478	100	-378%	1,394	361
K/W	461	142	-225%	149	58	-157%	610	200
L	404	77	-425%	376	98	-284%	780	175
M/E	188	76	-147%	91	72	-26%	279	148
M/W	257	97	-165%	143	61	-134%	400	158
N	323	97	-233%	145	32	-353%	468	129
P/N	509	168	-203%	383	160	-139%	892	328
P/S	505	93	-443%	218	79	-176%	723	172
R/C	255	138	-85%	264	69	-283%	519	207
R/N	111	43	-158%	110	25	-340%	221	68
R/S	259	85	-205%	199	41	-385%	458	126
S	529	97	-445%	297	39	-662%	826	136
T	225	60	-275%	183	23	-696%	408	83
Other Agency	-	-	-	1,610	379	-325%	1,610	379
Grand Total	**7,091**	**2,175**	**-226%**	**5,928**	**1,739**	**-241%**	**13,019**	**3,914**

Inference:

- The top four wards with Pothole complaints in 2020 are K/E, P/N, G/N, and R/C wards.

[70] http://www.mybmcpotholefixit.com/
[71] Data available from September 2019

D. Services compared to Complaints, Budget & Human Resources

Table 50: Budget Estimates and Actual Expenditure of Road, Traffic Operations, Bridges & Costal Roads departments in Crores

Roads, Traffic Operations, Bridges & Costal Road		2017-18	2018-19	2019-20	2020-21	2021-22
Budget Estimate	RE	806	848	881	699	658
	CE	2,480	3,270	3,821	4,700	5,862
	Total	3,286	4,118	4,702	5,399	6,520
Revised Estimate	RE	649	734	809	636	-
	CE	1,500	2,665	2,685	3,725	-
	Total	2,149	3,399	3,493	4,361	-
Difference (in %)	RE	-19%	-13%	-8%	-9%	-
	CE	-40%	-19%	-30%	-21%	-
	Total	-35%	-17%	-26%	-19%	-
Actuals	RE	813	990	843	-	-
	CE	1,350	1,692	2,779	-	-
	Total	2,163	2,682	3,622	-	-
Percentage Utilised	RE	125%	135%	104%	-	-
	CE	90%	63%	104%	-	-
	Total	101%	79%	104%	-	-

Inferences:

- The revised budget estimate for Roads, Traffic Operations, Bridges and Coastal road department has doubled from 2,149 in 2017-18 to 4,361 in 2020-21. The budget estimated for 2021-22 is 6,520.
- The difference in revised and budget estimates for both revenue and capital expenditure has always been decreased in the last four years yet the amount was over-utilised in 2019-20.

Table 51: Comparison of Citizens Complaints, Time taken to resolve Complaints, Budget Utilisation and Human Resources

Department	Citizens' Complaints			Average days to resolve a complaint			Budget Utilisation			Human Resources (Vacant Post)		
	2018	2019	2020	2018	2019	2020	2017-18	2018-19	2019-20	2018	2019	2020
Roads, Coastal road & Traffic Department	13,458	15,239	6,908	40	31	52	101%	79%	104%	40%	41%	42%

Inferences:

- The complaints related to roads have decreased in 2020 yet average days taken to resolve the complaints increased from 31 days in 2019 to 52 days in 2020.
- The budget utilisation has increased from 79% in 2018-19 to 104% in 2019-20 yet, there is shortage of manpower by 42% in 2020.

Table 52: Ward-wise Average Number of Days for Closing Complaints in 2020 (1/2)

Complaint to be attended as per Citizens' Charter	Drainage Chokes and Blockages	Overflowing drains or manholes	Odour (Foul Smell) from Drains	Replacement of Missing / Damaged Manhole	Raising of Manhole (except in Monsoon)	Cleaning of septic tank	Repairs to pipe sewers/ main sewers	Contaminated Water Supply	Leaks in Water Lines
To resolved as per Citizens' Charter	1	1	1	1	7	7	7	1	7
Actual time taken to resolve in 2020	30	48	48	51	68	50	52	28	29
A	44	36	20	14	-	-	34	66	35
B	23	26	19	23	-	29	16	10	5
C	20	11	11	26	20	22	16	9	11
D	89	73	124	102	-	66	105	11	14
E	8	7	7	10	-	36	17	6	8
F/N	6	5	12	5	-	8	8	8	12
F/S	23	19	24	21	7	17	20	24	16
G/N	72	73	114	65	-	124	85	14	10
G/S	57	59	11	64	26	88	76	50	38
H/E	15	35	33	33	60	61	50	17	13
H/W	12	32	32	30	-	43	22	10	11
K/E	31	64	54	68	208	50	59	19	18
K/W	17	97	66	134	-	21	61	21	20
L	31	40	53	37	66	40	46	54	43
M/E	39	40	27	57	55	47	46	81	56
M/W	29	31	25	32	-	32	49	48	46
N	44	69	63	51	-	78	63	35	26
P/N	39	70	33	68	145	82	66	55	60
P/S	25	87	74	52	-	44	42	32	41
R/C	11	20	31	31	-	11	32	41	46
R/N	3	32	6	3	-	4	-	12	15
R/S	21	48	52	47	-	25	36	25	22
S	69	95	86	126	-	101	109	58	42
T	136	188	200	78	-	158	173	13	18

Inference:

- None of the basic complaints were closed in an average specified days as per the Citizens Charter.
- It took an average of 52 days to close the complaints related to Repairs to pipe sewers/main sewers in 2020. The highest days were taken by T, S and D Wards.
- It took an average of 50 days to clean a septic tank in 2020, the highest being in T, G/N and S wards.
- Replacement of Missing / Damaged Manhole took an average of 51 days in 2020 with the highest days taken by K/W, S and D wards.
- Complaints related to Overflowing drains or manholes took an average of 48 days and Drainage Chokes and Blockages 30 days to close in 2020 and the highest days are taken by T Ward.

Table 53: Ward-wise average number of days for closing complaints in 2020 (2/2)

Complaint to be attended as per Citizens' Charter	Shortage of Water Supply	Burst Water Main	Garbage not lifted - Co-authorised Point	Collection point not attended properly	Garbage lorry not reported for service/ Lorry not covered	Providing/removing/replacing dustbins	Sweeping of road	Removal of Dead Animals	Non-attendance at public toilets
To resolved as per Citizens' Charter	2	1	1	1	1	8	1	1	2
Actual time taken to resolve in 2020	30	30	44	45	57	43	48	54	46
A	25	34	47	1	6	34	33	58	69
B	8	5	17	22	17	22	15	16	23
C	16	13	16	11	11	15	12	16	-
D	11	12	60	50	64	108	66	44	-
E	6	9	19	11	21	20	8	4	13
F/N	9	10	21	28	21	13	28	17	28
F/S	18	15	34	58	29	44	61	44	9
G/N	11	6	58	51	68	23	66	87	181
G/S	54	33	38	52	55	34	39	31	114
H/E	10	10	23	30	32	20	31	22	34
H/W	11	19	33	37	10	11	35	34	4
K/E	11	19	36	37	47	17	39	22	31
K/W	16	21	61	43	75	52	54	83	17
L	52	43	27	48	38	16	30	24	18
M/E	75	54	34	24	12	56	16	17	12
M/W	49	56	39	53	35	41	49	46	40
N	31	25	37	34	40	25	32	31	24
P/N	40	58	50	80	87	70	81	80	49
P/S	52	44	87	84	95	96	100	94	105
R/C	46	36	51	32	63	21	29	39	37
R/N	15	16	44	55	46	44	65	47	55
R/S	38	25	114	112	100	93	96	112	85
S	49	46	90	58	82	82	68	53	90
T	18	20	147	199	195	130	211	174	135

Inference:

- Garbage lorry not reported for service/ Lorry not covered related complaints took an average of 57 days, Collection point not attended properly 45 days and Garbage not lifted - Co-authorised Point 44 days to close in 2020 with the highest days taken by T Ward.
- Shortage of Water Supply related complaints took an average of 30 days in 2020 to close, with the highest number of days taken by M/E, G/S, L and P/S Wards.
- G/N, T, G/S and P/S wards took 181, 135, 114 and 105 days respectively to solve a complaint of no attendee at public toilets.

D. Recommendations

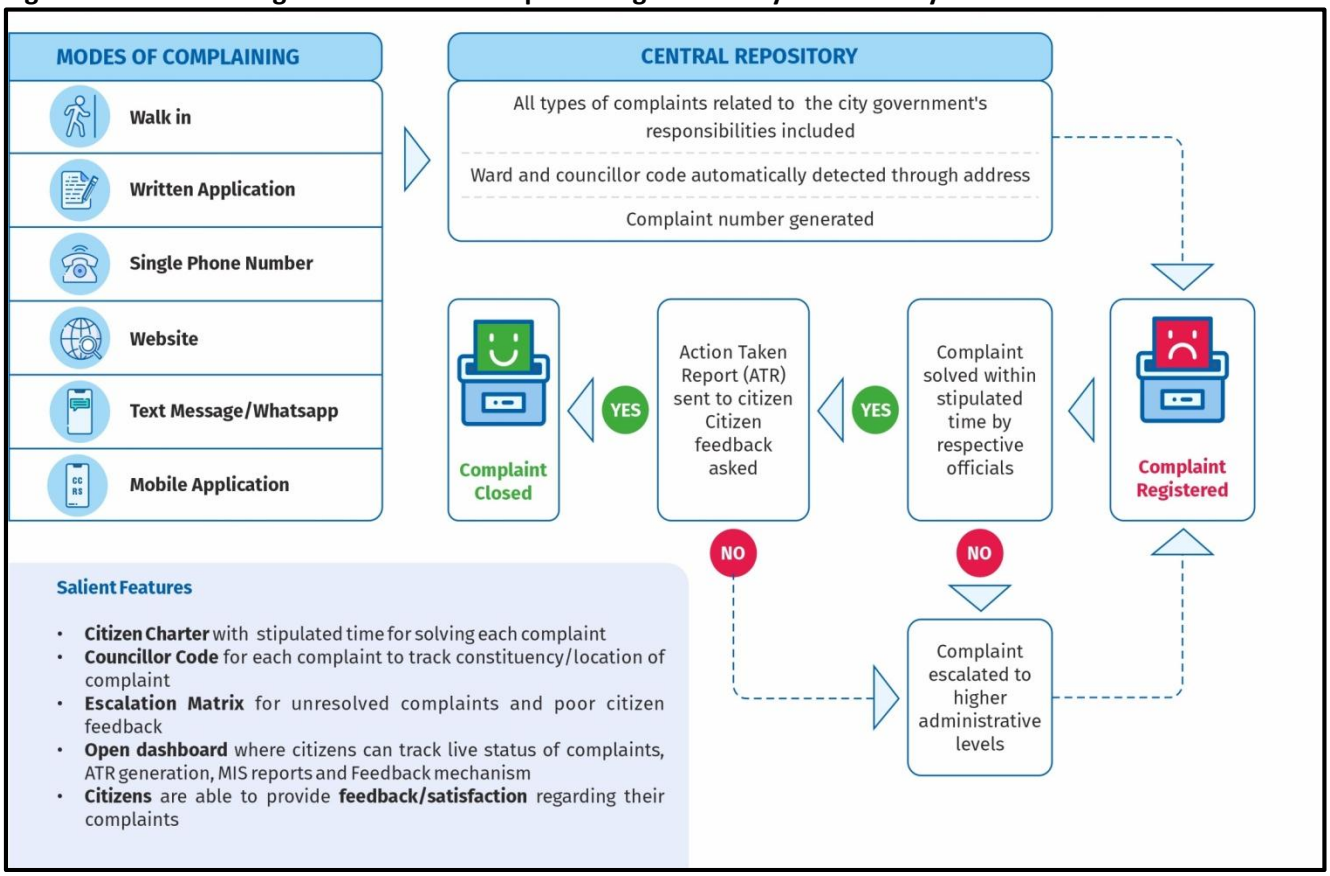
- **Councillor Code:** The councillor code is the constituency number of the councillor that is to be fed into the management system for locating the constituency of every complaint. This enables the councillor to be aware of complaints filed and to hold the administration accountable for the timely solving of complaints. Proper implementation of mandatory entry of councillor code for every complaint must be done for better accountability in the system. Recently, entering the name of the administrative ward in the online form has been made compulsory, however instead of using the address entered by the complainant of the ward, councillor code should be automatically detected in the CCRS.

- **Citizen Feedback**: The complaint management system must incorporate a feedback and suggestion mechanism whereby complainants can express their satisfaction. This will also enable more accountability within the system so that the concerned officers can better perform their functions. Also the Action Taken Report mechanism needs to be re-evaluated for effective tracking and monitoring.

- **Type of Complaints:** The complaint management system includes various types and sub-types of complaints under which a complaint can be filed. However, under the medical officer of health (MOH) for health services only complaints such as license of food stalls, unauthorised food selling, births and deaths are included. The CCRS should therefore include the entire gamut of services that the MCGM undertakes, one example is including sub-heads for all kinds of complaints regarding health services such as dispensary timings, doctor's service, the infrastructure of hospitals/dispensaries, etc.

- **Complaints Dashboard:** As a step towards Open Government Data, an openly available dashboard regarding complaints should be set up by the MCGM. This will increase citizen awareness, enable feedback, and allow elected representatives and administration officials to better monitor and evaluate the corporation's performance on a real-time basis.

Figure 1: Ideal Working of Centralised Complaint Registration System for City Governments



Section V: Analysis of Municipal Budget Related to Civic Issues[72]

A. Key Highlights

The Budget allocations and actual expenditures of the Municipal Corporation reflect the priority areas of the government and highlight whether revenue generated has been effectively spent in development of the city and its people, especially on the core functions of local governments- provision of key civic services.

Department-wise Budgetary Allocation:

- Budget share allocation of ***revised estimates for departments related to Civic issues*** has remained almost same in the last four years ***except water operations department***.
- Revised estimates have reduced from the budget estimates in most of the civic departments except water and sewerage operations department in 2020-21.
- Budget share for ***water operations department*** reduced from 10% of the total budget in 2017-18 to 7% in revised estimates of 2020-21. Whereas, ***revised estimates for water operations department was increased by 28% from the budget estimate of 1,713 crores*** in 2020-21.
- However, once again the ***budget estimate for water operations department has been reduced by 28%*** in 2021-22.
- Revised estimates for ***sewerage project department was increased by 200% from 2017-18 to 2020-21***. However, the same was ***decreased by 39% from the budget estimate in 2020-21***. The budget estimates for same shows increase by 44% in 2021-22 from revised estimates of 2020-21.
- Of all the departments, water, sewerage and drainage, and solid waste management are the key civic issues faced by citizens and the primary duties of the local government. In 2020-21 the ***revised estimates allocated to these were 22% and budget estimates for 2021-22 is 23%.***

Budgetary Process:

- The ***revised estimates are consistently lower than the budget estimates from 2015-16 to 2020-21***, indicating the required budget estimates amount are being over-estimated throughout these years. It also raises a question on budget making process and planned activities under capital expenditure for this significant difference in budget and revised estimates.
- Apart from the specificities of the budget, it is also important to look at the budgetary process, which should be ***participatory and inclusive***.
- The national and state budgets are ***prepared and presented*** by their respective finance ministers, both of which fall in the deliberative (elected) wing of governments. At the city level in Mumbai however, the budget is prepared and presented by the Municipal Commissioner, a bureaucrat and an unelected executive appointed by the state government.
- The elected bodies, namely the standing committee and the Corporation then debate on it and make modifications, following which the budget goes into effect for the financial year. Although the ward committees have considerable powers for proposing budgetary requirements before the budget is prepared, it is at the discretion of the administration to accept them.
- Further, the ***chief auditor*** of MCGM is also an appointee of the state government and its report is not presented to the entire house but only the standing committee.

[72] All figures are in crores unless specified otherwise. All figures have been taken from the Municipal Commissioner's speeches from 2015-16 to 2020-21, available on MCGM website: www.mcgm.gov.in.
Note: 'RE' stands for Revenue Expenditure and 'CE' stands for Capital Expenditure

B. Overall Budget Analysis

Table 54: Overall MCGM Budget from 2015-16 to 2021-22 (in crores)

Overall MCGM Budget			
Financial Year	**Budget Estimates**	**Revised Estimate**	**Difference (in %)**
2015-16	33,511.41	26,247.92	-22%
2016-17	37,047.49	23,973.36	-35%
2017-18	25,138.91	21,977.14	-13%
2018-19	27,251.05	23,515.39	-14%
2019-20	30,685.69	30,025.39	-2%
2020-21	33,434.50	31,168.16	-7%
2021-22	39,027.32	-	-

Inferences:

- The revised estimates have always been lower than budget estimates in the last six years.
- Although the difference has declined in the last two years, the difference between budget and revised estimates under capital expenditure is contributing significantly for this difference.

Table 55: Budget Estimates in Revenue Expenditure from 2015-16 to 2021-22 (in crores)

Revenue Expenditure			
Financial Year	**Budget Estimates**	**Revised Estimates**	**Difference (in %)**
2015-16	21,675.41	18,617.32	-14%
2016-17	24,172.71	18,573.69	-23%
2017-18	17,011.83	15,866.07	-7%
2018-19	17,723.25	15,717.83	-11%
2019-20	19,205.27	19,240.31	0%
2020-21	18,796.74	20264.58	8%
2021-22	20276.33	-	-

Inference:

The revised estimates from 2015-16 to 2018-19 were lesser than the budget estimates, however in 2019-20 & 2020-21 revised revenue expenditure estimates was more than the budget estimates.

Table 56: Budget Estimates under Capital Expenditure from 2015-16 to 2021-22 (in crores)

Capital Expenditure			
Financial Year	**Budget Estimates**	**Revised Estimates**	**Difference (in %)**
2015-16	11,836.00	7,630.60	-36%
2016-17	12,874.78	5399.67	-58%
2017-18	8,127.08	6,111.07	-25%
2018-19	9,527.80	7,797.56	-18%
2019-20	11,480.42	10,785.08	-6%
2020-21	14,637.76	9,276.57	-37%
2021-22	14,111.05	-	-

Inference:

The revised estimates of capital expenditures from 2015-16 to 2020-21 are consistently lower than the budget estimates indicating the required budget estimate amount has been over-estimated throughout these years. It also raises a question on budget making process and planned activities under capital expenditure for this significant difference in budget and revised estimates.

C. Budget Analysis of Key Civic Departments

Table 57: Budgetary Allocation of Departments Related to Civic Issues from 2018-19 to 2021-22 (in crores)

Department	2017-18			2018-19			Budget 19-20			Budget 20-21			Budget 21-22	
	B.E.	R.E	Allocation RE %	B.E.	R.E	Allocation RE %	B.E.	R.E	Allocation RE %	B.E.	R.E	Allocation RE %	B.E	Allocation BE %
Solid Waste Management Department	2,430	2,241	10%	2,606	2,343	10%	2,889	2,762	9%	3,291	2,791	9%	3,659	9%
Storm Water Drains Department	844	913	4%	929	1,193	5%	1,303	1,491	5%	1,339	1,194	4%	1,699	4%
Roads & Traffic Department	1,884	1,964	9%	2,059	2,233	9%	2,383	2,311	8%	2,280	2,080	7%	2,232	6%
Water Operation Department	2,250	2,153	10%	2,244	2,376	10%	1,875	2,310	8%	1,713	2,197	7%	1,677	4%
Water Supply Project Department	328	229	1%	453	160	1%	620	536	2%	1,185	456	1%	702	2%
Sewerage Operation Department	810	769	4%	798	858	4%	621	799	3%	611	768	2%	655	2%
Sewerage Project Department	163	105	0%	147	186	1%	270	269	1%	347	210	1%	303	1%
Mumbai sewerage Disposal Project	456	140	1%	549	279	1%	489	219	1%	424	380	1%	1,974	5%
Others Department	15,973	13,463	61%	17,467	13,886	59%	20,236	19,329	64%	22,246	21,092	68%	26,127	67%
Overall	**25,139**	**21,977**	**100%**	**27,251**	**23,515**	**100%**	**30,686**	**30,025**	**100%**	**33,435**	**31,168**	**100%**	**39,027**	**100%**

Note: R.E is Revised Estimate and B. E is Budget Estimate

Inference:

- The share of department wise budgetary allocation on civic issues has remained almost the same in the last four years expect of a Water Operations department where a noticeable decline in share appears, i.e. from 10% in 2017-18 to 7% in revised estimates of 2020-21. However, revised estimates increased by 28% from the budget estimate in 2020-21.
- However, the revised estimate of Water Supply Project Department dropped by 62% in 2020-21.
- The revised budget allocation for Sewerage Project department has doubled from 105 in 2017-18 to 210 in 2020-21. However, the revised estimate went down by 39% from budget estimate in 2020-21.
- The revised budget for Mumbai Sewerage Disposal project has increased by 171% i.e. 140 in 2017-18 to 380 in 2020-21 however, the revised estimate was decreased by 10% from budget estimates in 2020-21.
- Of all the departments water, sewerage and drainage, and solid waste management are the key civic issues faced by citizens and the primary duties of the local government.

Table 58: Budget Estimates and Actual Expenditure of Storm Water Drains (SWD) Department from 2017-18 to 2021-22 (in crores)

Storm Water Drainage		2017-18	2018-19	2019-20	2020-21	2021-22
Budget Estimate	RE	369	363	478	427	549
	CE	475	566	825	912	1,150
	Total	844	929	1,303	1,339	1,699
Revised Estimate	RE	314	335	446	361	-
	CE	544	830	1,013	767	-
	Total	858	1,164	1,460	1,128	-
Difference (in %)	RE	-15%	-8%	-7%	-15%	-
	CE	14%	47%	23%	-16%	-
	Total	2%	25%	12%	-16%	-
Actuals	RE	441	489	609	-	-
	CE	599	822	997	-	-
	Total	1,040	1,312	1,606	-	-
Percentage Utilised	RE	140%	146%	136%	-	-
	CE	110%	99%	98%	-	-
	Total	121%	113%	110%	-	-

Note: R.E is Revenue Expenditure and C.E is Capital Expenditure

Inference:

- There has been a constant decrease in difference between SWD budget and revised estimates of revenue expenditure in the last four years. In fact, there was a reduction of 16% from budget to revised estimates in the overall budget for SWD in 2020-21.
- The overall actual utilisation percentage has dropped from 121% in 2017-18 to 110% in 2019-20.

Table 59: Comparison of Citizens Complaints, Time take to resolve Complaints, Budget Utilisation and Human Resources

Department	Citizen Complaints			Average days to resolve a complaint			Budget Utilisation			Human Resources (Vacant Post)		
	2018	2019	2020	2018	2019	2020	2017-18	2018-19	2019-20	2018	2019	2020
Storm Water Drainage	1,548	2,155	1,409	62	34	62	121%	113%	110%	40%	42%	43%

Inference:

- Budget utilisation for SWD is higher than the estimates however, average number days taken to resolve citizen complaints is as high as 62 days in 2020.

D. Recommendations

- **Focus on Civic Departments:** There is a need for greater focus on key civic departments to ensure that amounts allocated are effectively spent in development works, especially the capital budget, since in these departments capital budget allocations account for a new establishment, replacement, repair and maintenance of basic civic infrastructure.

- **Budget Making Process:** Just like the 'power of the purse' at the national level is with the Lok Sabha, the elected House, the responsibility to demand accountability of budgetary spending should rest with the elected (deliberative) body of the MCGM. The audit report of the government should also be presented and deliberated by the elected wing of the MCGM.

- **Outcome Based Budgeting:** The Budget also needs to set some basic service-level benchmarks in terms of outcomes of the budget. A budget's core purpose is rendered moot if there is no outcome-based approach, which encourages monitoring and tracking of the result of spending.

Section VI: Performance of Ward Committees

A. Key Highlights

Overall Performance:

- In 2020, ward committee ***attendance of councillors has fallen from 79% in 2018 to 76% in 2020***.
- Average number of ward committee meetings per month ***increased from 22 in 2017-19, to 28 (from October to December) in 2020***. ***Virtual telecommunications stimulated the increase*** in the frequency of the meetings.
- Despite no meetings held from March to September 2020, average frequency of ward committee meetings between October to December 2020 was increased ***and 512 questions*** were raised.
- However, if MCGM would have ***adapted to virtual technology sooner***, the meetings would have been conducted earlier, and it would have ***led to even more effective and inclusive decisions***. This which could have helped reduce the woes of citizens better.

Issue-wise Questions:

- ***132 questions were raised on issues other than key civic responsibilities*** (such as on environment, crime, corporation management related, building, estate etc.). These were more than the questions on SWM (40), water (29) and drainage (17) put together.
- The second most asked questions were related ***to roads (115).***
- ***80 questions were asked on naming and renaming*** of roads/monuments/etc., reflecting misplaced priorities of the councillors in deliberation.

Type of Questions and Administrative Response:

- Most of the questions raised ***(66%) were 'point of orders'.*** This shows that councillors prefer using those devices that also entail discussion rather than just written answers from the administration.
- However, administrative response to questions has been lackadaisical with total number of ***pending replies increasing from 549 questions in 2016 to 1165 questions in 2020.***
- The average number of days taken to answer them has improved drastically in the last 5 years, from 306 in 2016 to 58 in 2020. This clearly indicates the improvement in MCGM's capability of responding to pending point of order questions whereby, the amount of pending responses shows lack of seriousness.

B. Performance of Ward Committees

The 74th Constitutional Amendment Act (CAA) provides for the formation of ward committees in municipalities with a population of more than three lakhs, intending to decentralise governance and strengthen grassroots democracy.

Praja's pan-India study of 29 cities across 28 States and National Capital Territory (NCT) of Delhi[73] shows that, as per the provision in the 74th Constitution Amendment Act, 1992 there is provision for formation of ward committee in the Municipal Corporation Act of all States except Meghalaya, Nagaland and Sikkim. But ward(s) committees are constituted in 12 out of 29 cities namely Agartala, Ahmedabad, Aizawl, Bhubaneswar, Bhopal, Delhi, Dharamshala, Imphal, Ranchi, Kochi, Mumbai, and Udaipur. Of these ward(s) committees are functional in only 9 out of 29 cities namely Ahmedabad, Aizawl, Bhubaneswar (functional until last term i.e., until January 2019), Agartala, Delhi, Dharamshala, Imphal, Kochi and Mumbai. Ward committees in Delhi, Mumbai, Panaji, Coimbatore, Vijayawada and Raipur are formed at zonal level while in other cities, ward committees are at councillor ward constituency level

There are 17 Ward Committees in Mumbai at the administrative ward level, consisting of all the councillors within the administrative jurisdiction of the respective wards. Ward Committees are one of the most crucial

[73] https://praja.org/praja_docs/praja_downloads/UGI2020.pdf

mechanisms available to Municipal Councillors for conducting deliberations for delivering effective governance. Issues of prime significance to citizens' daily lives related to civic amenities such as road, water supply, drainage, etc. including budgetary suggestions can be taken up and redressed effectively in this forum.

Questions and issues raised and debated in the ward committee are indicative of how the councillors have performed in bringing up and solving civic issues. There are various devices used in the ward committee including short-notice questions, notice of motion, adjournment motion, amendments, agenda and point of order. (Refer Annexure 6)

Table 60: Total number of Meetings, Attendance and Questions Asked in Ward Committees

Ward Committee			
Year	**Total Meeting**	**Attendance in (%)**	**Total Questions**
Mar'17 to Dec'17	240	82%	856
Jan'18 to Dec'18	279	79%	1,046
Jan'19 to Dec'19	280	73%	952
Jan'20 to Dec'20	138	76%	512

Inference:

- The total number of meetings have decreased from 279 in 2018 to 138 in 2020. At the same time there is slight decline in Councillors attendance from 79% in 2018 to 76% in 2020.
- The number of question have dropped significantly from 1,046 in 2018 to 512 in 2020, which is more than 50% decline.

Table 61: Number of Questions Asked by Councillors in Ward Committees

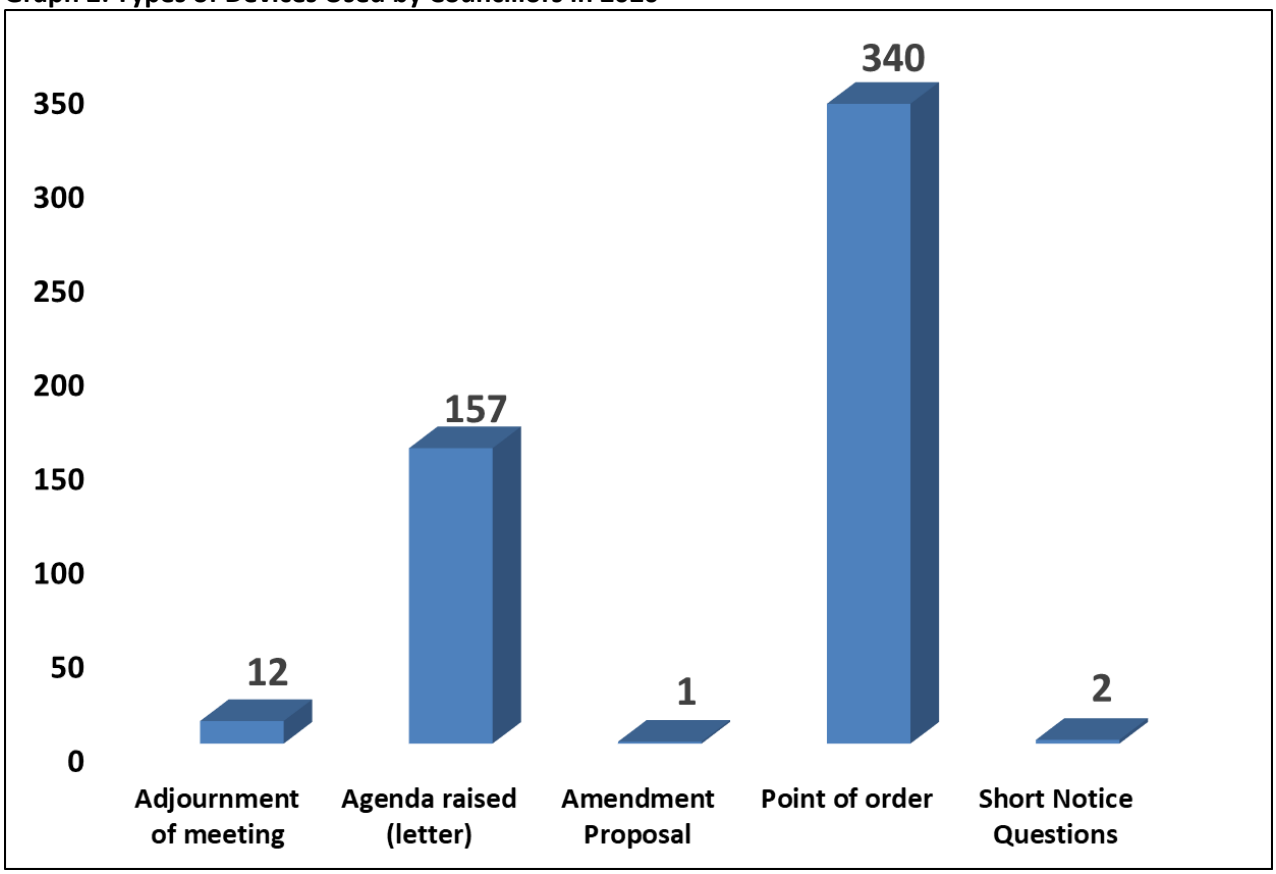
Category	**No. of Members**			
	Mar'17 to Dec'17	**Jan'18 to Dec'18**	**Jan'19 to Dec'19**	**Jan'20 to Dec'20**
Zero Question	38	31	32	71
1 to 5 Question asked	134	122	137	133
6 to 10 Question asked	46	53	39	21
Above 10 Question asked	10	21	19	2
Total Members	**228***	**227**	**227**	**227**

Note (*): - Shailaja Girkar was elected in March 2017 but passed away in September 2017, and Pratibha Girkar was elected in her place. Shailaja Girkar's questions till August 2017 have been considered. Hence, the number of councillors has been shown as 228 and not 227.

Inference:

- A maximum of 133 councillors asked between 1 to 5 questions in 2020.
- 71 councillors have not asked even a single question in 2020.Only 2 councillors asked more than 10 questions in ward committee in 2020 as compared to 19 councillors in 2019.

Graph 2: Types of Devices Used by Councillors in 2020



Inference:

Point of Order has been, by far the most frequently used device by Councillors in 2020 (340 times). This shows that a Councillors are using Point of order device to gain the administration's attention on most of the issues. Consequently, 'short notice questions' was used only twice, indicating councillors prefer devices that entail discussions rather than written answers from the administration.

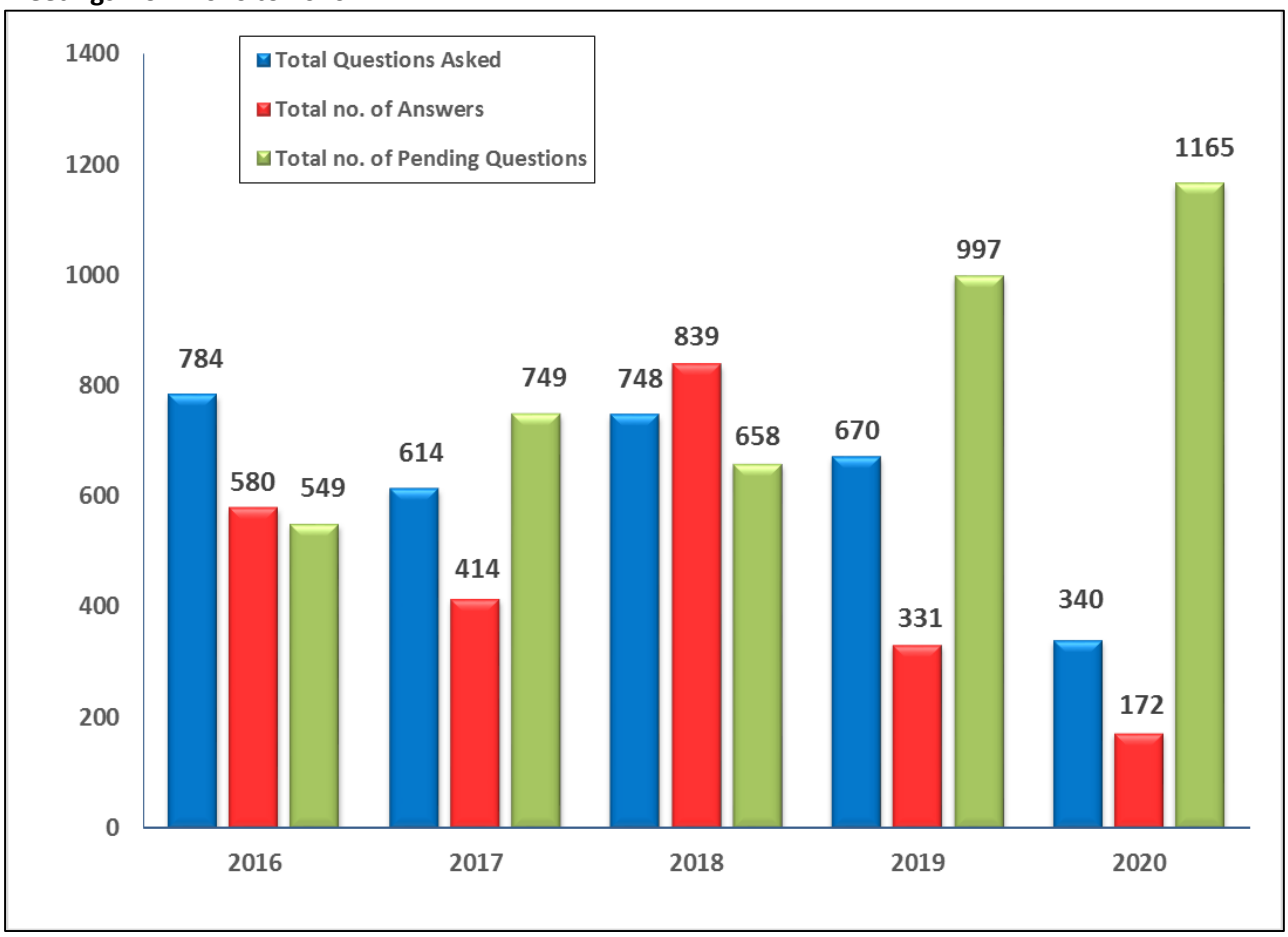
Table 62: Types of Devices Used by Councillors from March 2017 to December 2020

Types of devices	Mar '17 to Dec '17	Jan '18 to Dec '18	Jan '19 to Dec '19	Jan '20 to Dec '20
Adjournment of meeting	8	20	15	12
Agenda raised (letter)	257	275	264	157
Amendment Proposed	0	0	0	1
Point of order	588	748	670	340
Short Notice Questions	0	3	3	2
Notice of Motion	3	0	0	0
Total	**856**	**1,046**	**952**	**512**

Inference:

- Point of Order is a frequently used device by Councillors, although its utilisation decreased from 670 times in 2019 to 340 times in 2020.
- Agenda raised has also dropped from 264 in 2019 to 157 in 2020.Throughout 2018 to 2020, the Notice of Motion device was not used even once. Also Amendment Proposed was used only once in the last four years.

Graph 3: Answers Given by Administration to Point of Order Questions Raised in Ward committee Meetings from 2016 to 2020

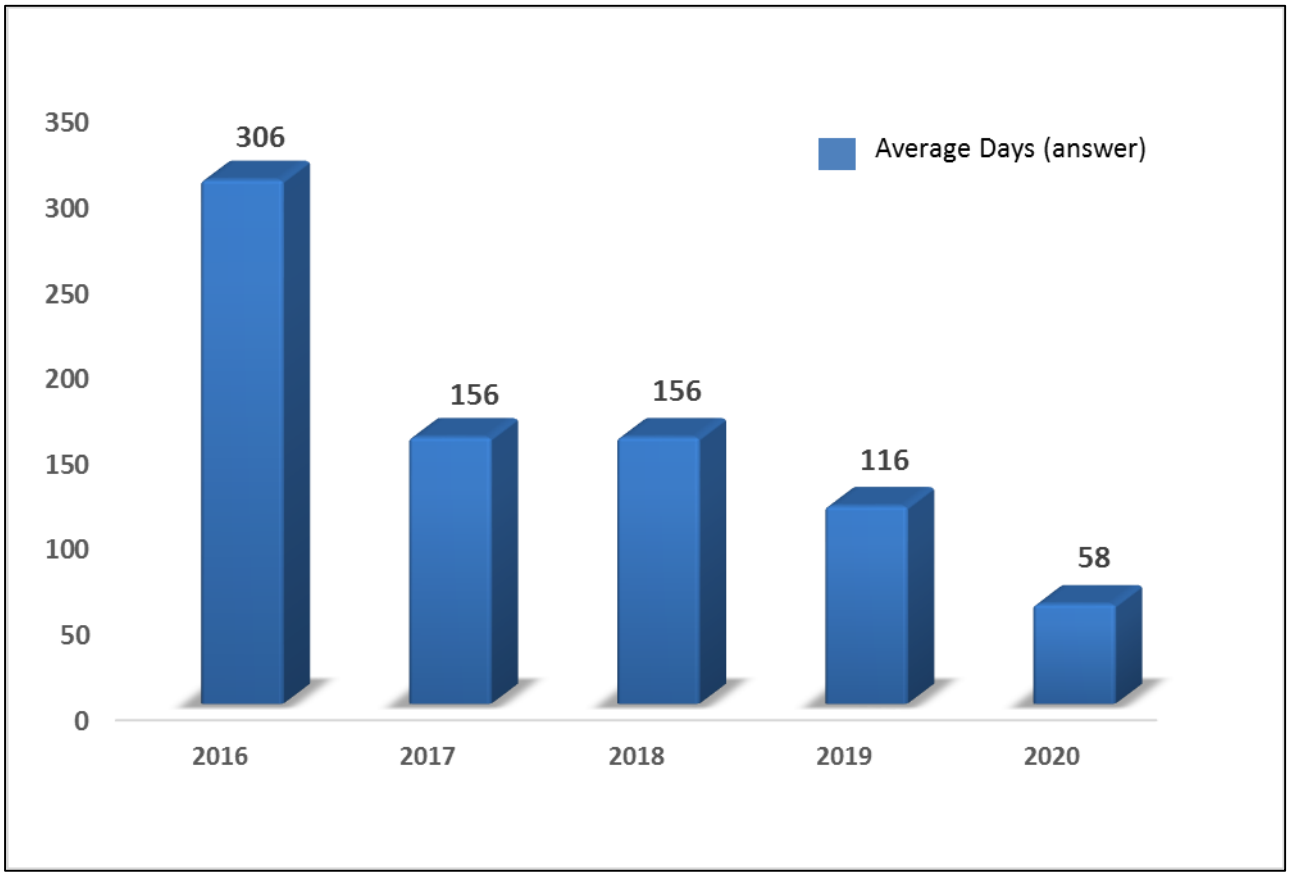


Note: Pending questions from previous years have been added to the following years. Hence, the figures are progressive in nature.

Inference:

- The total Number of pending questions has escalated every year, from 549 questions in 2016 to 1,165 questions in 2020, indicating responses from the administration has been lackadaisical.
- The Point of Order device is used to question serious issues. The Ward Committee must take a stand to ensure all these questions are answered promptly, for better governance.

Graph 4: Comparison of the Average Days Taken to Answer Point of Order Questions in the Ward Committees from 2016 to 2020



Inference:

Although the amount of pending point of order replies is high, the average number of days taken to answer them has improved drastically in the last 5 years, from 306 in 2016 to 58 in 2020. This clearly indicates the improvement in MCGM's capability of responding to pending point of order questions whereby, the amount of pending responses shows lack of seriousness.

Table 63: : Top three wards in maximum proportion of complaints received with ward population and questions raised

Top three Ward in complaints	M/E	R/N	T
Population 2011	807,720	431,368	341,463
No. of councilor	15	8	6
Total Complaints	3,525	2,185	2,054
Total Question	40	26	10

(*****Note: selection of the 3 wards is in accordance to the proportion of Ward Population to/by total complaints received in 2020)*

Inference:

- M/E (3,525), R/N (2,185) and T (2,054) are the top three wards with the highest number of complaints in proportion to their population.
- The number of questions asked are comparatively low to the complaints received, like ward M/E received 3525 complaints but only 40 questions were asked, while in R/N – 2185 complaints yet only 26 questions and in T ward – 2054 complaints with only 10 questions asked.

Table 64: Top three wards with the maximum number of complaints received and questions raised in 2020

Top three wards in complaints	K/W	K/E	P/N
No. of Councillors	13	15	18
Total Complaints	7,456	6,847	6,073
Total Questions	25	23	63

Inference:

- Wards K/W (7,456), K/E (6,847) and P/N (6,073) had the highest number of complaints registered in 2020. The proportion of total questions asked by councillors in these wards are comparatively low, with only 25 questions asked in K/W, 23 questions in K/E and 63 questions asked in P/N.

Table 65: Top three wards in proportion of questions raised to the Number of Councillors Elected from the Ward in 2020 and total complaints

Top three ward in total question	G/S	P/N	R/N
No. of councillor	7	18	8
Total Question	68	63	26
Total Complaints	2,658	6,073	2,185

Inference:

- G/S (68), P/N (63) and R/N (26) are the top three wards with highest questions asked in proportion to the number of Councillors.
- Even though P/N ward has the highest number of Councillors and citizen complaints, the questions asked by Councilors are comparatively low from G/S ward.

Table 66: Issue-wise Questions Asked by Councillors in Ward committees 2020

Sr. No.	Ward	Drainage	SWM	Water Supply	License	Roads	Garden	Community Development	Health	Education	Naming/ Renaming of Road	Other issues related	Total
1	**Ward Committee A, B and E**												
	A					1					1		**2**
	B					1					3		**4**
	E		1							1	7	2	**11**
2	**Ward Committee C and D**												
	C			1	1	2	1				3	1	**9**
	D		2	1		5					5	1	**14**
3	**Ward Committee F/South and F/North**												
	F/N		1		1	1		2			3	4	**12**
	F/S	1	1	1	1				1		4	2	**11**
4	**Ward Committee G/North**		2	2	3	2		1	1			2	**13**
5	**Ward Committee G/South**	3	8	5	1	26	5	2			1	17	**68**
6	**Ward Committee H/East and H/West**												
	H/E	1	1	1	2	6		1			3	3	**18**
	H/W			1	4	1	1				2	7	**16**
7	**Ward Committee K/East**			1	4	6	1			1		10	**23**
8	**Ward Committee K/West**	1	1	3	3	6	1		2		3	5	**25**
9	**Ward Committee L**		1	1	1	2	1				16		**22**
10	**Ward Committee M/E**	1	7	3	1	10		3	1	2		12	**40**
11	**Ward Committee M/W**	1	1			3		4	2	2		4	**17**
12	**Ward Committee N**			1		1			1		1	1	**5**
13	**Ward Committee P/North**	1	4	3	8	17	6	3	1	2	2	16	**63**
14	**Ward Committee P/South**		1		2	5		1			7	4	**20**

Sr. No.	Ward	Drainage	SWM	Water Supply	License	Roads	Garden	Community Development	Health	Education	Naming/ Renaming of Road	Other issues related	Total
15	**Ward Committee R/Central and R/North**												
	R/C	4	3	1	3	4	1				2	13	**31**
	R/N		1	1	2	10	1				1	10	**26**
16	**Ward Committee R/South**	3		1	2	4	3	1			3	11	**28**
17	**Ward Committee S and T**												
	S	1	4	2	1	2	2				6	6	**24**
	T		1				1				7	1	**10**
	Total	**17**	**40**	**29**	**40**	**115**	**24**	**18**	**9**	**8**	**80**	**132**	**512**

Inference:

- The highest number of questions were raised by the G/S ward committee (68) in 2020.
- The most number of questions raised were related to roads (115), followed by naming and renaming (80), SWM and License (40 each).
- Very less questions were asked on the issues which had direct impact of Covid-19 in the ward committees; such as Education – 8, Health – 9, Drainage – 17.
- Councillors from wards A, B, C, N and T did not even ask a total of more than 10 questions.

C. Recommendations

- **Raising Civic Issues:** The ward committee data shows that the councillors need to lay more focus on key civic issues rather than naming/renaming.

- **Practice of Agenda Raised Device**: Councillors are mostly raising the questions through Point of Order device in the ward committee for which administration takes time to answer. However, if using Agenda Raised device through a letter to Ward Committee Chairperson/ Municipal Secretary before the meeting, would enforce the respective departments to prepare the answers to the questions for the scheduled ward committee meeting further enabling both Councillors and administration towards focused discussion on specific issues. Due to which policies and programs will be framed in an effective and timely manner.

- **Timely Administrative Response:** For the ward committee to be an effective forum, the timely response of the administration to issues raised is necessary and the councillors need to proactively pursue their issues.

- **Citizen involvement**: For the forum to be truly participatory, citizen involvement is important. The ward committees have a provision for including 3 members from the civic society; however, this has not been implemented. Mumbai also has a provision for area sabhas, which enable participation of people in the planning and budget-making process; however, this has not been implemented in practice.

Section VII: Human Resources in MCGM

A. Vacancies in MCGM Human Resources

Table 67: Department-Wise MCGM Human Resources in 2019 and 2020

Department	2019			2020		
	Posts			Posts		
	Sanctioned	Available	Vacant (%)	Sanctioned	Available	Vacant (%)
Municipal Secretary Department	447	293	34%	456	292	36%
Municipal Auditor's Department	989	524	47%	980	502	49%
Municipal Commissioner office	1,028	651	37%	1,065	647	39%
Auditor's Department	1,800	1,472	18%	1,800	1,465	19%
Security Department	4,257	2,659	38%	4,257	2,579	39%
Water Supply and Sewerage Department	464	383	17%	462	370	20%
Central Procurement Dept.	96	64	33%	96	62	35%
Labour Department	218	39	82%	218	42	81%
Public Relations Department	44	37	16%	51	40	22%
Mumbai Fire Brigade	4,185	3,006	28%	3,184	2,384	25%
Enquiry Department	118	103	13%	118	99	16%
Assessor and Collector Department	3,308	1,656	50%	3,298	1,591	52%
Legal Department	354	256	28%	354	238	33%
Solid Waste Management Department	35,223	28,952	18%	35,218	29,959	15%
Storm Water Drains Department	3,377	1,969	42%	3,377	1,916	43%
Mechanical & Electrical Department	1,005	534	47%	1,007	528	48%
Development & Planning Department	480	353	26%	494	336	32%
City Engineer's Department	4,234	2,586	39%	4,235	2,561	40%
Water Engineer's Department	10,851	6,803	37%	10,742	6,798	37%
Water Supply project Department	554	245	56%	554	244	56%
Sewerage Propulsion Department	7,816	4,423	43%	7,803	4,671	40%
Sewerage Project	454	191	58%	454	188	59%
Civic Training Institute and Research Centre	72	55	24%	72	57	21%
Roads & Traffic Department	6,350	3,740	41%	6,351	3,710	42%
Mumbai Sewerage Project	89	54	39%	89	54	39%
License Department	971	826	15%	971	810	17%
Education Department	21,995	11,762	47%	21,951	11,509	48%
Garden & Recreation Department	1,626	787	52%	1,626	771	53%
Shops & Establishment Department	259	202	22%	259	195	25%
Municipal Printing Press	478	227	53%	478	226	53%
Health Department	12,276	8,250	33%	12,274	8,028	35%
KEM and Medical college	5,820	3,552	39%	5,758	3,525	39%
LT Marg and Medical college	4,493	2,859	36%	4,480	2,788	38%
BYL Nair and Tora Medical College	4,109	2,356	43%	4,108	2,330	43%
Nair Hospital Dental College	319	216	32%	321	217	32%
Deonar Abattoir	821	318	61%	622	309	50%
Planning Department	71	31	56%	41	16	61%
Estate Department	1,541	1,177	24%	1,541	1,186	23%
Markets Department	1,109	627	43%	1,109	605	45%

Department	Posts			Posts		
	Sanctioned	Available	Vacant (%)	Sanctioned	Available	Vacant (%)
Encroachment and Elimination Department	91	83	9%	92	81	12%
Information and Technology Department	43	39	9%	43	38	12%
Suburban Hospitals	9,579	5,412	44%	8,828	5,194	41%
Disaster Management Cell	281	71	75%	281	63	78%
Bridges Department	180	94	48%	180	100	44%
Dr. Rustam N Kapoor Medical College	664	250	62%	535	204	62%
Zoo	216	94	56%	216	94	56%
Coastal Road Project	64	29	55%	45	34	24%
Building shielding	264	193	27%	264	191	28%
Total	**1,55,083**	**1,00,503**	**35%**	**1,52,758**	**99,847**	**35%**

Inference:

- For the effective functioning of the government, it is essential to have adequate human resources. Overall 35% of the posts in MCGM were vacant in 2020.
- In 2020, labour department had the highest vacancy (81%) followed by Disaster Management Cell (78%).
- In key departments of civic services, the vacancy is as follows; Education 48%, Storm Water Drains 43%, Roads & Traffic 42%, Water & Sewerage 38%, Overall Health Services 38% and SWM 15%.

B. Recommendations

The MCGM should ensure that key departments related to the delivery of basic services do not have high vacancies. Further, sanctioned posts should be revised based on the annual requirements for each department and should be accordingly filled.

Annexure 1: Number of Days for Resolving Complaint According to Citizen's Charter

Sr. No.	Complaint	To be resolved (in days)
1	Drainage Chokes and Blockages	1
2	Overflowing drains or manholes	1
3	Odour (Foul Smell) from Drains	1
4	Replacement of Missing / Damaged Manhole	1
5	Raising of Manhole (except in Monsoon)	7
6	Cleaning of septic tank	7
7	Repairs to pipe sewers/main sewers	7
8	Contaminated Water Supply	1
9	Leaks in Water Lines	7
10	Shortage of Water Supply	2
11	Burst Water Main	1
12	Garbage not lifted - Co-authorised Point	1
13	Collection point not attended properly	1
14	Garbage lorry not reported for service/ Lorry not covered	1
15	Providing/removing/replacing dustbins	8
16	Sweeping of road	1
17	Removal of Dead Animals	1
18	No attendance at public toilets	2

Annexure 2: Details of Complaints Escalated in 2020

Table 68: Issue-wise Details of Complaints on Level 0 in 2020

Issues		Level 0		
	Total Complaints	No. of Complaints on which action was taken	Closed Complaints	Average Days
Roads	6,908	6,905	4,659	52
Buildings	14,712	14,712	8,261	54
Drainage	15,508	15,508	12,919	36
Water Supply	11,855	11,855	11,299	29
Solid Waste Management (SWM)	11,595	11,595	10,485	43
License	10,148	10,148	8,868	41
Pest control	10,971	10,969	10,554	26
Garden	4,522	4,521	4,393	22
Colony Officer	1,045	1,045	539	65
Storm Water Drainage	1,409	1,409	993	62
Shop and Establishment (S & E)	986	986	941	40
Medical Officer Health (MOH)	889	889	538	63
MCGM Related	760	760	433	61
Estate	645	645	434	67
Toilet	618	618	526	50
Pollution	220	220	119	64
School	31	31	15	70
Nuisance due to vagrants on municipal roads, footpaths, gardens	952	950	587	70
Total	**93,774**	**93,766**	**76,563**	**39**

Table 69: Issue-wise Details of Complaints on Level I in 2020

Issues		Level I		
	Total Complaints Escalated	No. of Complaints on which action was taken	Closed Complaints	Average Days
Roads	2,236	0	0	0
Buildings	6,493	191	6	37
Drainage	2,612	0	0	0
Water Supply	3	0	0	0
Solid Waste Management (SWM)	1,175	0	0	0
License	1,324	0	0	0
Pest control	447	0	0	0
Garden	149	0	0	0
Colony Officer	494	0	0	0
Storm Water Drainage	423	0	0	0
Shop and Establishment (S & E)	39	0	0	0
Medical Officer Health (MOH)	354	0	0	0
MCGM Related	324	0	0	0
Estate	170	0	0	0
Toilet	93	0	0	0
Pollution	101	0	0	0
School	16	0	0	0
Nuisance due to vagrants on municipal roads, footpaths, gardens	360	0	0	0
Total	**16,813**	**191**	**6**	**37**

Table 70: Issue-wise Details of Complaints on Level II in 2020

Issues		Level II		
	Total Complaints Escalated	No. of Complaints on which action was taken	Closed Complaints	Average Days
Roads	2,236	0	0	0
Buildings	6,493	197	2	39
Drainage	2,612	1	0	0
Water Supply	3	0	0	0
Solid Waste Management (SWM)	1,175	0	0	0
License	1,324	0	0	0
Pest control	447	0	0	0
Garden	149	0	0	0
Colony Officer	494	0	0	0
Storm Water Drainage	423	0	0	0
Shop and Establishment (S & E)	39	1	0	0
Medical Officer Health (MOH)	354	0	0	0
MCGM Related	324	0	0	0
Estate	170	0	0	0
Toilet	93	0	0	0
Pollution	101	0	0	0
School	16	0	0	0
Nuisance due to vagrants on municipal roads, footpaths, gardens	360	0	0	0
Total	**16,813**	**199**	**2**	**39**

Table 71: Issue-wise Details of Complaints on Level III in 2020

Issues		Level III		
	Total Complaints Escalated	No. of Complaints on which action was taken	Closed Complaints	Average Days
Roads	2,236	7	0	0
Buildings	6,493	172	3	48
Drainage	2,612	132	4	35
Water Supply	3	0	0	0
Solid Waste Management (SWM)	1,175	0	0	0
License	1,324	0	0	0
Pest control	447	2	0	0
Garden	149	1	0	0
Colony Officer	494	0	0	0
Storm Water Drainage	423	3	0	0
Shop and Establishment (S & E)	39	0	0	0
Medical Officer Health (MOH)	354	0	0	0
MCGM Related	324	0	0	0
Estate	170	0	0	0
Toilet	93	1	0	0
Pollution	101	0	0	0
School	16	0	0	0
Nuisance due to vagrants on municipal roads, footpaths, gardens	360	0	0	0
Total	**16,813**	**318**	**7**	**40**

Table 72: Issue-wise Details of Complaints on Level IV in 2020

Issues		Level IV			Total Unresolved Escalated Complaints
	Total Complaints Escalated	No. of Complaints on which action was taken	Closed Complaints	Average Days	
Roads	2,236	2,229	55	91	2,181
Buildings	6,493	5,933	106	119	6,376
Drainage	2,612	2,479	65	100	2,543
Water Supply	3	3			3
Solid Waste Management (SWM)	1,175	1,175	78	109	1,097
License	1,324	1,324	53	78	1,271
Pest control	447	445	45	52	402
Garden	149	148	30	34	119
Colony Officer	494	494	7	181	487
Storm Water Drainage	423	420	10	111	413
Shop and Establishment (S & E)	39	38	5	55	34
Medical Officer Health (MOH)	354	354	8	68	346
MCGM Related	324	324	5	125	319
Estate	170	170	6	113	164
Toilet	93	92	2	194	91
Pollution	101	101	2	178	99
School	16	16			16
Nuisance due to vagrants on municipal roads, footpaths, gardens	360	360	1	172	359
Total	**16,813**	**16,105**	**478**	**95**	**16,320**

Table 73: Ward-wise Details of Complaints on Level 0 in 2020

Ward		Level 0		
	Total Complaints	Complaints with action taken report	Closed Complaints	Average Days
A	1,763	1,763	1,319	44
B	2,461	2,457	1,879	37
C	2,888	2,888	2,258	31
D	3,730	3,730	2,986	50
E	3,660	3,659	3,641	12
F/N	3,597	3,597	3,555	18
F/S	2,444	2,444	2,392	35
G/N	4,657	4,657	2,153	40
G/S	2,658	2,658	2,642	42
H/E	3,519	3,519	3,377	23
H/W	3,481	3,481	3,082	30
K/E	6,847	6,847	6,188	39
K/W	7,456	7,456	6,130	36
L	5,862	5,861	4,064	42
M/E	3,525	3,525	2,522	42
M/W	3,438	3,438	2,801	38
N	4,981	4,981	4,705	42
P/N	6,073	6,073	4,161	57
P/S	3,168	3,168	2,290	50
R/C	4,506	4,506	4,479	30
R/N	2,185	2,183	1,433	42
R/S	4,341	4,341	3,813	55
S	4,480	4,480	3,122	48
T	2,054	2,054	1,571	77
Total	**93,774**	**93,766**	**76,563**	**39**

Table 74: Ward-wise Details of Complaints on Level I in 2020

Ward		Level I		
	Total Complaints Escalated	Complaints with Action Taken Report	Closed Complaints	Average Days
A	436	0	0	0
B	587	12	6	37
C	624	13	0	0
D	750	4	0	0
E	8	0	0	0
F/N	44	1	0	0
F/S	56	0	0	0
G/N	2523	23	0	0
G/S	25	1	0	0
H/E	123	17	0	0
H/W	407	10	0	0
K/E	619	1	0	0
K/W	1213	14	0	0
L	1818	28	0	0
M/E	996	12	0	0
M/W	646	6	0	0
N	298	5	0	0
P/N	1905	16	0	0
P/S	771	1	0	0
R/C	2	0	0	0
R/N	737	9	0	0
R/S	557	12	0	0
S	1157	4	0	0
T	511	2	0	0
Total	**16,813**	**191**	**6**	**37**

Table 75: Ward-wise Details of Complaints on Level II in 2020

Ward		Level II		
	Total Complaints Escalated	Complaints with Action Taken Report	Closed Complaints	Average Days
A	436	1	0	0
B	587	7	2	39
C	624	10	0	0
D	750	15	0	0
E	8	0	0	0
F/N	44	0	0	0
F/S	56	0	0	0
G/N	2523	10	0	0
G/S	25	1	0	0
H/E	123	5	0	0
H/W	407	5	0	0
K/E	619	0	0	0
K/W	1213	13	0	0
L	1818	35	0	0
M/E	996	4	0	0
M/W	646	7	0	0
N	298	4	0	0
P/N	1905	29	0	0
P/S	771	12	0	0
R/C	2	0	0	0
R/N	737	6	0	0
R/S	557	27	0	0
S	1157	7	0	0
T	511	1	0	0
Total	**16,813**	**199**	**2**	**39**

Table 76: Ward-wise Details of Complaints on Level III in 2020

Ward		Level III		
	Total Complaints Escalated	Complaints with Action Taken Report	Closed Complaints	Average Days
A	436	7	0	0
B	587	34	2	48
C	624	18	0	0
D	750	36	0	0
E	8	0	0	0
F/N	44	1	1	49
F/S	56	14	1	26
G/N	2523	43	1	26
G/S	25	1	1	66
H/E	123	2	0	0
H/W	407	8	0	0
K/E	619	6	0	0
K/W	1213	9	1	21
L	1818	37	0	0
M/E	996	14	0	0
M/W	646	6	0	0
N	298	17	0	0
P/N	1905	21	0	0
P/S	771	9	0	0
R/C	2	0	0	0
R/N	737	2	0	0
R/S	557	12	0	0
S	1157	14	0	0
T	511	7	0	0
Total	**16,813**	**318**	**7**	**40**

Table 77: Ward-wise Details of Complaints on Level IV in 2020

Ward		Level IV			Total Unresolved Escalated Complaints
	Total Complaints Escalated	No. of Complaints on which action was taken	Closed Complaints	Average Days	
A	436	428	8	77	428
B	587	534	14	68	563
C	624	583	16	51	608
D	750	695	17	102	733
E	8	8	0	0	8
F/N	44	42	9	72	34
F/S	56	42	6	58	49
G/N	2523	2,447	30	51	2,492
G/S	25	22	12	119	12
H/E	123	99	17	73	106
H/W	407	384	15	43	392
K/E	619	612	15	69	604
K/W	1213	1,177	41	133	1,171
L	1818	1,718	38	59	1,780
M/E	996	966	11	42	985
M/W	646	627	20	126	626
N	298	272	32	79	266
P/N	1905	1,839	29	79	1,876
P/S	771	749	14	63	757
R/C	2	2	0	0	2
R/N	737	720	8	55	729
R/S	557	506	47	118	510
S	1157	1,132	36	99	1,121
T	511	501	43	198	468
Total	**16,813**	**16,105**	**478**	**95**	**16,320**

Annexure 3: Ward Committee and Ward-wise Number of Meetings, Attendance (%) and No. of Questions Asked from January 2020 to December 2020

Sr. No.	Ward	No. of Councillors	No. of Meetings	Attendance (in %)	Total Question asked	No. of questions asked by councillors			
						Zero Que.	1 to 5 Que.	6 to 10 Que.	Above 10 Que.
1	**Ward Committee A, B and E**								
	A	3	8	58	2	1	2	0	0
	B	2		56	4	0	2	0	0
	E	7		52	11	2	5	0	0
2	**Ward Committee C and D**								
	C	3	7	95	9	0	2	1	0
	D	6		93	14	2	3	1	0
3	**Ward Committee F/South and F/North**								
	F/N	10	7	70	12	4	6	0	0
	F/S	7		86	11		7	0	0
4	**Ward Committee G/North**	11	7	69	13	5	6	0	0
5	**Ward Committee G/South**	7	8	86	68	2	3	0	2
6	**Ward Committee H/East and H/West**								
	H/E	10	8	65	18	4	5	1	0
	H/W	6		73	16	1	4	1	0
7	**Ward Committee K/East**	15	8	82	23	7	8	0	0
8	**Ward Committee K/West**	13	11	73	25	5	7	1	0
9	**Ward Committee L**	16	8	77	22	7	7	2	0
10	**Ward Committee M/East**	15	8	68	40	3	11	1	0
11	**Ward Committee M/West**	7	8	86	17	1	5	1	0
12	**Ward Committee N**	11	9	75	5	7	4	0	0
13	**Ward Committee P/North**	18	7	82	63	4	9	5	0
14	**Ward Committee P/South**	9	6	80	20	3	5	1	0
15	**Ward Committee R/Central and R/North**								
	R/C	10	11	79	31	2	6	2	0
	R/N	8		68	26	1	5	2	0
16	**Ward Committee R/South**	13	10	78	28	5	6	2	0
17	**Ward Committee S and T**								
	S	14	7	84	24	4	10	0	0
	T	6		76	10	1	5	0	0
	Total	**227**	**138**	**76**	**512**	**71**	**133**	**21**	**2**

Annexure 4: Party Wise Questions Raised by Councillors in Ward Committees

Table 78: Party-wise Number of Questions Asked by Councillors in 2019 and 2020

Political Party Name	Total Members		Zero Question		1 to 5 Question asked		6 to 10 Question asked		Above 10 Question asked	
	2019	2020	2019	2020	2019	2020	2019	2020	2019	2020
Akhil Bharatiya Sena	1	1	0	1	1	0	0	0	0	0
All India Majlis-e-Ittehad-ul Muslimeen	2	2	1	1	0	1	1	0	0	0
Bharatiya Janata Party	83	82	8	23	52	49	15	10	8	0
Independent	1	1	0	0	1	1	0	0	0	0
Indian National Congress	31	29	6	8	15	16	7	5	3	0
Maharashtra Navnirman Sena	1	1	1	1	0	0	0	0	0	0
Nationalist Congress Party	9	9	3	3	6	6	0	0	0	0
Samajwadi Party	6	6	0	1	4	4	2	1	0	0
Shiv Sena	93	96	13	33	58	56	14	5	8	2
Total Members	**227**	**227**	**32**	**71**	**137**	**133**	**39**	**21**	**19**	**2**

Table 79: Party-wise Number of Questions Asked on Civic Issues in 2019 and 2020 (1/2)

Political Party Name	No. of Members		Road		Drainage		SWM	
	2019	2020	2019	2020	2019	2020	2019	2020
Akhil Bharatiya Sena	1	1	0	0	0	0	1	0
All India Majlis-e-Ittehad-ul Muslimeen	2	2	3	1	0	0	1	0
Bharatiya Janata Party	83	82	78	28	20	5	42	12
Independent	1	1	0	0	0	0	0	0
Indian National Congress	31	29	26	15	5	1	11	6
Maharashtra Navnirman Sena	1	1	0	0	0	0	0	0
Nationalist Congress Party	9	9	3	1	0	1	2	1
Samajwadi Party	6	6	9	4	2	0	3	3
Shiv Sena	93	96	84	43	19	10	41	18
Total	**227**	**227**	**203**	**92**	**46**	**17**	**101**	**40**

Table 80: Party-wise Number of Questions Asked on Civic Issues in 2019 and 2020 (2/2)

Political Party Name	Water Supply		Naming/ Renaming of Roads / Chowk		Other related issues		Total	
	2019	2020	2019	2020	2019	2020	2019	2020
Akhil Bharatiya Sena	0	0	0	0	0	0	1	0
All India Majlis-e-Ittehad-ul Muslimeen	0	0	0	0	2	3	6	4
Bharatiya Janata Party	24	8	49	34	157	94	370	181
Independent	0	0	1	0	1	1	2	1
Indian National Congress	13	3	13	10	65	41	133	76
Maharashtra Navnirman Sena	0	0	0	0	0	0	0	0
Nationalist Congress Party	1	0	3	2	11	8	20	13
Samajwadi Party	0	0	0	1	10	7	24	15
Shiv Sena	24	18	39	33	189	100	396	222
Total	**62**	**29**	**105**	**80**	**435**	**254**	**952**	**512**

Annexure 5: Details of Devices used in Ward Committees

Functioning of the Ward Committees:

'Ward Committees' are one of the most crucial mechanisms available to Municipal Councillors for conducting deliberations for delivering effective governance. Issues of prime significance to citizens' daily lives related to civic amenities such as road, water supply, drainage, etc. could be taken up and redressed effectively in this forum. Almost all civic issues are to be resolved through this mechanism. This was precisely the aim of the 74th Constitutional Amendment, which mandated the creation of the Ward Committees, to bring in grassroots democracy and strengthen it.

Devices for raising questions/grievances in ward committee meetings:

Councillors use various devices to enable them to know about the functioning of various committees, monitor performance of Administration and resolve citizen's problems.

1. **Short Notice Questions**: Councillors can raise civic issues and follow up on them with the Administration through Short Notice Questions. These questions should be of urgent civic importance, for instance, those causing harm to lives of citizens, such as building collapse or fire etc. Such urgent matters are admitted and the Commissioner is accountable to answer them. In cases of not to so urgent matters, the written questions are sent by the Councillors to the Assistant Commissioner, who sends answers to respective Councillors. The Short Notice Question should be specific and related to only one matter at a time and should be framed in not more than 2-3 sentences. For example, 1) is it true that Mumbai city is severely caught up with Swine Flu? 2) How many patients are being treated in Mumbai in Kasturba and other hospitals? 3) Why has the indigenous vaccine for Swine Flu not yet been procured in Mumbai? Please give detailed information. The Short Notice Questions are not discussed in the House.

2. **Notice of Motions**: Councillors may ask for a statement to be made by the Commissioner on an urgent matter relating to the Administration by giving at least one hour notice before the meeting. The Commissioner answers the notice in writing and no discussion can be done on the answers. The Councillors may present a Notice of Motion on matters of importance and in the interest of Mumbai city. The Motion should be presented in a general form and should be in the interest of the public at large.

3. **Adjournment Motion**: The Councillors may bring to the notice of the House any incidences where citizens are facing severe problems due to specific reasons, and the concerned officers and ward in-charge have not taken due action despite bringing the matter to their attention. In such cases, Councillors can propose an Adjournment Motion, as a protest against the inaction of the Administration. The notice for the Adjournment Motion should be given at least half an hour before the meeting of the House. The proposal is accepted by majority vote. In case the Councillors directly present an Adjournment Motion in the House without prior notice, then it is treated as a Simplicitor, which is not discussed in the House and passed only with unanimous voting.

4. **Amendments proposed**: When a Councillor has any objection about a topic on the meeting agenda, if s/he thinks it is inadequate, s/he can present a notice to the Administrative office for Amendment in order to reconsider the topic. If a Councillor wants to present an Amendment, it is customary that s/he is allowed to speak first.

5. **Proposal raised/agenda raised/ letter to raise issues**: When a Councillor wants to raise any agenda or question, s/he writes a letter for the same, following which it appears in the agenda for discussion in the meeting.

6. **Point of Orders**: The Councillor, in order to bring any serious incident in his/her constituency to the notice of the House, can raise a Point of Order. There are specific rules on when and how the Point of Order can be raised apart from precedents. The Point of Order can be raised while a subject is being discussed in the house, provided it is related to that subject. The Committee Chairperson has a right to decide whether or not to allow a discussion on the Point of Order and announces the decision on the Point of Order. In case the information provided is inadequate to reach a decision, it is presented in the subsequent meeting. The decision by the Ward Committee Chairperson is deemed final and in cases of disagreements, it can only be challenged in the Court.

Source: Corporation Procedure Rules and Regulation Mumbai: Municipal Printing Press, 2001.