

# SUSTAINABLE SANDHAI-A CARBON NEUTRAL KOYAMBEDU MARKET

Final Recommendations Based on the 'Social-Stakeholder Engagement' Vertical

MARCH 2024

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## EXECUTIVE SUMMARY

As part of Sustainable Sandhai – A Carbon Neutral Koyambedu Market project, the team engaged with market stakeholders and assessed the governance aspects of the market to understand the social context shaping, limiting, and offering opportunities for making the market more sustainable. This exercise was conducted with the intent of co-creating a vision of a sustainable *sandhai* so that solutions offered are accepted, owned, and maintained by multiple end-users and to ensure that all parties play a critical role and take some responsibility for the positive transformation in the market. The team conducted surveys (216 shops across markets), focus group discussions (4-one in each market), group interviews (7- different user groups), policy assessment and field observations to assess stakeholder priorities, concerns, and willingness to contribute towards betterment of the market ([see baseline study](#)). The learnings and recommendations in this report reflect the voices of the stakeholders and present ideas/recommendations on how government departments and other stakeholders like the trader's associations and shop owners may play a significant role in improving the current state of affairs in the market.

### Challenges

Market stakeholders identified challenges and priorities related to two themes:

- (i) **Lack of access to basic services especially water and sanitation in terms of quantity, quality, reliability and affordability.**
- (ii) **Water-logging and drainage identified as most pressing challenge. Poor solid waste management also observed by field teams.** Lack of identification of waste issues by stakeholders is probably due to a combination of issues, ranging from lack of awareness about the need for sustainable waste management, unwillingness to take responsibility, lack of penalties for violators, and the perception that the official waste collection system will end up mixing segregated waste anyways.

### Cross Sectoral Concerns

A range of other issues emerged during stakeholder engagement and field observations that do not clearly fit into any of the project verticals such as water supply and sanitation and, storm water management, and are cross-cutting in nature with impact on all the verticals. These issues are as follows:

- (i) **Safety Issues: Concerns of theft, vandalism, drug and alcohol abuse, safety for women in the market complex.** Lack of police presence, empty police booths and inefficiency of private security companies to manage market security were all critical concerns. These safety concerns are likely to have an impact on any infrastructural investments made for a carbon neutral market.
- (ii) **Health Issues: Health concerns highlighted include presence of mosquitoes, excessive dust and allergies, exposure to heat, possibility of electrocution due to unmaintained electrical boxes, and slippery unsafe alleyways created by water mixed with vegetable waste during rainy seasons.** Concerns regarding lack of access to public health care facilities, specifically access to first aid, inside the market were also raised as emergencies such as dehydration, heat strokes, and small injuries are common occurrences in the market.
- (iii) **Governance Issues: Tenuous relationship and lack of trust between MMC, trader's associations and shop keepers in general is undermining efficient management of the market.**

## Recommendations

Thematic Area	Recommendations	Market Type
Safety & Security	<ul style="list-style-type: none"> <li>Strengthen Shop Keepers Vigilance Committee to control/report illegal and suspicious activities.</li> </ul>	All four market types
	<ul style="list-style-type: none"> <li>Reinforce existing police force appointed for the market through higher police presence between 12am (midnight) and 8am.</li> </ul>	All four market types
	<ul style="list-style-type: none"> <li>Increase security at entrance gate</li> </ul>	All four market types
	<ul style="list-style-type: none"> <li>Formalise vendors on foot and bikes through issue of ID cards.</li> </ul>	Fruit Market
	<ul style="list-style-type: none"> <li>Install fire extinguisher in market</li> </ul>	All four market types
	<ul style="list-style-type: none"> <li>Create a dedicated police booth for food grains market</li> </ul>	Food Grains Market
Health & Health Care	<ul style="list-style-type: none"> <li>Set up a mini clinic in empty spaces in each market</li> </ul>	All four market types
	<ul style="list-style-type: none"> <li>Demarcate a dedicated space between markets for common Ambulances</li> </ul>	All four market types
	<ul style="list-style-type: none"> <li>Install First Aid Boxes in common points in each market</li> </ul>	All four market types
	<ul style="list-style-type: none"> <li>Use empty plots for Pharmacy</li> </ul>	Food Grains Market
	<ul style="list-style-type: none"> <li>Increase tree cover</li> </ul>	Food Grains Market
	<ul style="list-style-type: none"> <li>Manage cow menace by allocating a dedicated space or specific timings when cattle would be allowed.</li> </ul>	Vegetable Market Fruit Market
Market Governance	<ul style="list-style-type: none"> <li>Organize regular meetings with Trader's associations &amp; strengthen the grievance redressal system</li> </ul>	Koyambedu Market Complex as a whole
	<ul style="list-style-type: none"> <li>Include trader associations representatives in the market management committee</li> </ul>	
	<ul style="list-style-type: none"> <li>Govern and relocate street vendors to designated areas away from market entry points to reduce congestion</li> </ul>	
	<ul style="list-style-type: none"> <li>Provide needed service shops such as ATMs, truck booking agents, tea shops within each market which will also help stop illegal activities in empty spaces.</li> </ul>	
	<ul style="list-style-type: none"> <li>Create a specific timing system to reduce traffic congestion and regulate traffic flow</li> </ul>	
	<ul style="list-style-type: none"> <li>Better signage and enforcement so that only products specific to each market are sold there.</li> </ul>	

### Conclusion: Collaborative Pathways to Market Improvement

For successful transformation of the market, it is important to build collaborative pathways for positive change. This is possible when on the one hand, the responsible authorities including MMC, the police department, the waste management company etc. fulfil their responsibilities with greater commitment and on the other hand, shopkeepers as primary users/owners of the space also become a direct partner in transforming and maintaining that transformation in the long run and are not just involved in expressing grievances. This contribution may be in the form of volunteer time, higher maintenance fees, hands-on participation in maintaining market infrastructure or behavioural transformation towards more sustainable practices.

However, their participation and contribution can be expected to be more effective, once basic service and infrastructure including water and sanitation provisions are improved. This will help build trust and encourage more collaborative efforts for long term sustainability in the market.

## Challenges highlighted by the stakeholders

Stakeholders	Sectors/ Theme specific	Challenges
<b>Primary Stakeholders</b>		
Shop Owners and Laborers	Access to basic services (water, sanitation, health care and electricity)	<ul style="list-style-type: none"> <li>• Shop owners elaborated on their problems in accessing water and spoke of poor water quality and mentioned not having access to any water facility for drinking or washing their hands/face.</li> <li>• Shop owners reported their unhappiness with the maintenance of the toilets saying that it was unclean and unhygienic and not usable. They said either they do not have access to sanitation facilities or had to pay to use the public toilets across all four markets.</li> <li>• Most of them said they had access to some kind of health care service although these were all private services outside the market. There is currently no facility inside the market complex. In fact, the existing clinic remain locked. The team learnt that Apollo Hospitals will be taking over the existing clinic after renovation but until then there is no makeshift facility that can offer first aid to the lakhs of people working in the market. Some reported that occasionally Trade Associations organize health camps.</li> </ul>
	Socio-environmental threats	<ul style="list-style-type: none"> <li>• Water logging and poor drainage are the most commonly reported threat across all four markets. Shopkeepers and laborers also spoke about their difficulty to walk through the alleyways in the market due to slush mixed with dumped vegetable which also results in mosquito menace in the market.</li> <li>• Safety &amp; Security was the other major concern. This included reports on drug and alcohol abuse, theft, especially in the fruit market and lack of safety for women. Shopkeepers complained of drunk people coming into the empty living spaces above their shops with women and disposing off alcohol bottles at night. They emphasized the necessity for security measures to protect both shopkeepers and workers. The absence of police presence, difficulty in reaching the police, and empty police booths were cited as the primary reasons for concern.</li> <li>• Water seepage in the building is easily identifiable through ventilators in the grains market, through the walls and ceiling and into open electricity boxes in other markets creating extremely unsafe conditions.</li> <li>• Dust and pollution were reported specifically from the vegetable market where shopkeepers/laborers linked it to heavy traffic and dust from sacks used to transport supplies.</li> </ul>
Traders Associations	Access to basic services	<ul style="list-style-type: none"> <li>• There is no water facility available within the market. Metro water supplied it for some time but they stopped it</li> </ul>

		<p>long back. Some reported that no water facility has been provided by the MMC for nearly 25 years. Shops are also mandated to pay water tax, and if they don't pay, a penalty is levied. Trader associations are not happy about the tax they have to pay without using any water facilities.</p> <ul style="list-style-type: none"> <li>• Traders also pointed out the lack of sanitation facilities available within the market and mentioned that the ones which are existing are poorly maintained and unhygienic to use. MMC through private contractors is charging the people for using the facilities, but the users feel the charge is high and maintenance is poor pushing people to use open spaces. Laborers working in the shop also need bathing facilities - at present no such facility is available for them.</li> <li>• Traders complain that there was no work done since 1996 for upgrading the electricity facilities in the market by MMC. Cables and wires run across the market without any safety protection. Cattle roaming around the market sometimes die, and there have been occasions where labours have lost life due to the same.</li> <li>• In the food grains market, the Traders Association representatives complained that basic washing facilities were not available within the shops as it is in the other markets. As such, even to wash their hands, they have to use the common toilets, which are maintained poorly.</li> <li>• Traders were in support of source segregation and they wanted private contractors to take responsibilities. They reported finding the waste collectors mixing the waste to increase the weightage since the payment system is based on tonnage. For source segregation to work efficiently they suggested that MMC should change the contract system. Traders were also keen on deriving some monetary benefit from the waste and said that only then source segregation will work properly.</li> </ul>
	Traffic & Transportation	<ul style="list-style-type: none"> <li>• Traders are experiencing decrease in the footfall of public and their business is getting affected due to change in the location of the bus terminal. They requested to operate MTC buses which used to run inside the market earlier. This they believed it will bring the local customers and minimize the wastages due to low sales.</li> </ul>
	Governance	<ul style="list-style-type: none"> <li>• MMC should have representation from these Trader's associations - currently that is not the case. They reported interacting primarily with representatives from the Federation and occasionally with the representatives of other trader's associations on specific issues. While MMC holds a significant influence over market governance, the traders' associations find themselves marginalized without any meaningful representation.</li> </ul>
CMDA/MMC	Access to basic services	<ul style="list-style-type: none"> <li>• MMC highlighted disposal of waste as the primary challenge for them. The system they have now in place is collecting and transporting the waste to Kodingaiyur dumpsite. It's been hard for them to maintain the market</li> </ul>

		with zero garbage without the support from shop owners. MMC also said they are looking at monetizing the waste and they are ready to brain storm the ideas with other institutions.
	Traffic	<ul style="list-style-type: none"> <li>Traffic is another challenge they have highlighted. As of now vehicles of various types are entering the market and they need solutions to optimize traffic flow, minimize congestion, and ensure safe and efficient mobility for all road users.</li> </ul>
	Encroachment	<ul style="list-style-type: none"> <li>MMC carries out occasional raids to confiscate material from informal sellers who encroach in the market- but do not undertake strict steps against these vendors realizing that this is a sensitive issue related to people's livelihood. However, some of the shop owners are unhappy about this as they feel that this effects their business.</li> </ul>
	Ownership and License	<ul style="list-style-type: none"> <li>Irrespective of ownership status everyone is required to renew their license every three years. However, it seems many shop owners and/or tenants are not aware of the licensing requirement. As such, they fail to renew licenses on time. Court disputes between the original allottee and tenant and legal heir issues also complicate and delay the licensing process. MMC loses large amounts of revenue because of this.</li> </ul>

**Secondary/Other Stakeholders**

Load-Men/Gang-Men	Access to basic services	<ul style="list-style-type: none"> <li>The laborers also raised similar concerns about common and paid market toilets which are in poor shape like other stakeholders. Only some of the shops have toilets inside and the people working in those shops use the facilities instead of using the common toilets.</li> <li>Health issues and injuries remained a concern for them and they said there is no good government medical facility available in the market; even for first aid they need to access private facilities outside the market.</li> </ul>
Truck Drivers	Lack of access to shelters, sanitation and health facilities	<ul style="list-style-type: none"> <li>Several of these truck drivers park their trucks in one of the main truck parking areas in the market. Earlier CMDA had a night shelter/hotel available for these drivers at a cost close to the parking area, but now this is being used as a restaurant because there were no takers for these paid rooms. Now the truck drivers mostly live inside their trucks.</li> <li>The truck drivers spoke of sanitation and garbage as the two major problems in this space. While drinking water and bathing/washing facility is available in this parking area, drivers found the cost of these services to be high. One end of the parking space is being used as a dumping place and many of the storm water drains, especially those close to the dumping site remained filled with garbage which understandably leads to drainage issues during rains.</li> <li>They also pointed out the lack of medical facilities and mentioned that they go to any nearby medical shop if required.</li> </ul>

Security Guards	Living conditions	<ul style="list-style-type: none"> <li>Security guards are living behind the CMDA/MMC security office in a temporary arrangement that has been put up using tarpaulin sheets, tin sheets and asbestos roofs. They cook in the open using clay cook stoves. They get access to drinking water by buying canned water and use the toilet inside the MMC building. During rains they all move to the corridor/balcony of the MMC building for shelter. The living condition here is extremely poor. This can be changed if MMC pushes the private contractor to make a more permanent and hygienic living space available for the security guards at a small rent.</li> </ul>
Conservancy/Sanitation Workers	Sanitation	<ul style="list-style-type: none"> <li>They spoke about having access to all basic amenities, but at a cost. Most conservancy workers reported having access to sanitation facility, but mentioned that only common washroom for both men and women were available. One of the sanitation workers mentioned having to clean human faeces by hand without any protective gloves and requested that alternatives should be available to do this sort of work.</li> <li>Many of the sanitation workers are elderly women, migrants from northern states, and live inside the market, in the alleys close to the toilets, under poor hygienic condition.</li> </ul>
Street vendors/ unauthorized vendors	Lack of basic facilities	<ul style="list-style-type: none"> <li>Unauthorized and street vendors face insecurities and lack of access to basic services like water and clean toilets. This group hardly use the public toilets in the area which are extremely dirty and require a fee for use. This is also indicative of the degree of open defecation that most likely results because of poor sanitation facilities.</li> <li>Heat and rain pose obvious threat to these people working in the open – one woman selling flowers (garlands) outside the market complained that there were “too many mosquitoes during the rainy season and skin allergies bothered her during the heat of summer.” Another man selling fruits on a cart, suggested that during rains, he has to raise his shop to avoid the stagnated water and also suffers due to lots of mosquitoes.</li> </ul>
Cattle Owners	Land for grazing	<ul style="list-style-type: none"> <li>Cattle owners have been in conversation with GCC to allocate space for their cattle to graze requesting that the space they currently use near the banks of Cooum informally be officially allocated to them for this purpose. In the meanwhile, cattle are let into the market creating a conflict situation with risks both for the cattle and the people. MMC has clearly stated that they don’t want cattle to be inside the market and occasionally cattle owners are asked to pay fine to both GCC and MMC to rescue their cattle back. Cattle owners still continue to bribe security guards to let the cattle into the market.</li> </ul>

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## INTRODUCTION

As part of Sustainable *Sandhai* – A Carbon Neutral Koyambedu Market project, the team engaged with market stakeholders and assessed the governance aspects of the market to understand the social context shaping, limiting, as well as offering opportunities for making the market more sustainable. Since there are multiple stakeholders who govern, influence, use the market space, it is important to co-create a vision of a sustainable *sandhai* so that solutions offered are accepted, owned, and maintained by the multiple end-users (Figure 1). It is also equally important to ensure that all parties play a critical role and take some responsibility for the positive transformation in the market. Motivated by this intent the team working on the “social-stakeholder engagement” vertical has engaged closely with all stakeholder groups via different means. The team conducted surveys (216 shops across markets), focus group discussions (4-one in each market), group interviews (7- different user groups), policy assessment and field observations to assess stakeholder priorities, concerns, and willingness to contribute towards betterment of the market ([see baseline study](#)). As such the key learnings from this social assessment has:

1. Presented the voices of various stakeholder groups (e.g. MMC, the shop owners, the labourers, the security guards etc) and informed all other verticals in prioritizing and identifying appropriate solutions in sync with stakeholder identified priorities and concerns;
2. Highlighted the need for softer and alternative interventions that do not clearly fit into any one of the other six verticals (storm water management and rain water harvesting; energy utilization and carbon footprint; building structures and engineering for sustainability; water supply and sanitation; waste management; traffic management and transportation), but are largely cross cutting – These include the following:
  - a) improving safety & security conditions
  - b) improving health & health care status and
  - d) strengthening collaborative market governance

The learnings and recommendations in this report are therefore a reflection of the voices of the stakeholders and present ideas that not only direct actions towards the authorities like the Market Management Committee (MMC) or Greater Chennai Corporation (GCC), but also suggest how other stakeholders like the trader’s associations and shop owners may play a significant role in improving the current state of affairs in the market.

Figure 1: Different stakeholder groups in the market



Clockwise: Shopkeepers; street vendors; cattle (owners); conservancy workers; laborers – load-men; truckdrivers

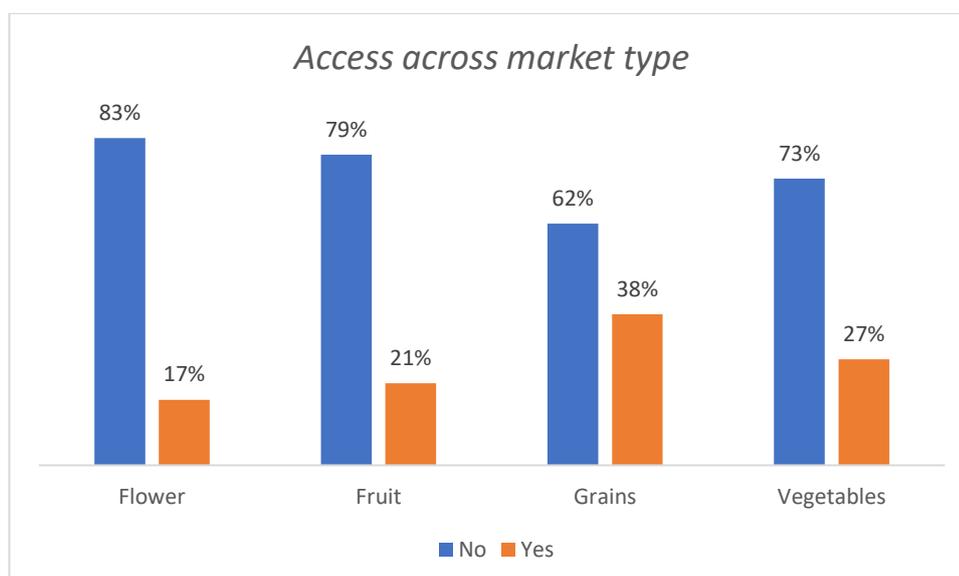
## FINDINGS

### A. Stakeholder identified challenges / priorities

#### i. Access to basic services

Overall, across all market types, more than 60% of respondents stated that they faced issues in accessing either one or all the basic services such as water supply, sanitation facilities, health care, and electricity. However, across the services, variations were reported (Figure 2).

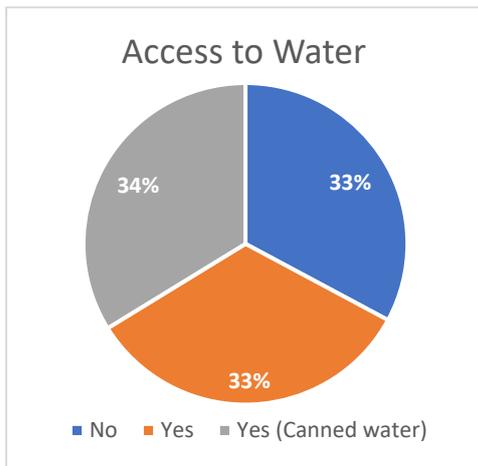
Figure 2: Access to basic services



Water and sanitation stood out as the two key concerns with many complaining about having to buy water (

Figure 3) and/or having to pay water tax despite no existing supply. One shopkeeper explained: “previously we had metro water connection but for past 5 years there is no water supply from metro water but we are paying the water tax.” The MMC at Koyambedu Market reported that they are working towards addressing this issue by constructing six to seven common sumps to store water in each market. Water would be delivered to these sumps by tanker from Chennai Metro Water and from these sumps water will be supplied to the shops through a piped system with water meters installed for each shop. Shopkeepers would have to pay for water as per their consumption.

Figure 3: left: Pie chart showing access to water; right: pots of drinking water filled from a private tanker ready for sales



Similarly, more than 50% of respondents stated that they either do not have access to sanitation facilities (Figure 4) or had to pay to use the “unmaintained” public toilets across all four markets.

Figure 4: Free public urinals and paid toilets



MMC has outsourced maintenance of the common toilets in the markets to a private agency. According to many stakeholders, this agency imposes a minimum fee of Rs.10/- for usage, which poses a financial burden for common users, primarily labourers, loaders, and truck drivers. The cleanliness and maintenance of these toilets by the agency are consistently rated poorly across all markets. Consequently, these users frequently turn to a vacant space within the market for their sanitation needs. The sanitation situation is particularly challenging for the women in the market.

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*As one such, one woman respondent highlighted that “there is no safety for women, especially in the evening as men drink and due to that, using common toilets are difficult and each time we pay for the toilet that is not cleaned.”*

Due to the condition of the sanitation facilities, **trader’s associations across all markets expressed willingness to take on the responsibility to adopt a toilet if granted permission by the MMC.** They also committed to not only maintaining the toilets but also ensure accessibility for all, particularly their labourers, by taking care of the user fees. This opportunity may be worth exploring with MMC handing over the maintenance of common toilets to the associations while overseeing and monitoring the status intermittently. As such MMC has stated that it is working with associations to enable them to appoint a person per toilet block to oversee maintenance while it continues to contract maintenance to external parties.

Across all four markets, **representatives also recommended relocating their urinal facilities or toilets to increase their utilization rates.** They pointed out that the positioning of the urinal facilities creates discomfort for users due to their exposed nature, and/or encroachments by street vendors. The vegetable market has identified the need for toilet facilities closer to their market, considering the inconvenience posed by the current placement near dumping areas, rendering them inaccessible. Meanwhile, the Food grains market requested for individual toilet facilities above the terrace space instead of common ones and the flower market proposed the installation of urinals or toilets at each corner of their market area to improve accessibility, privacy, and hence utilization rate.

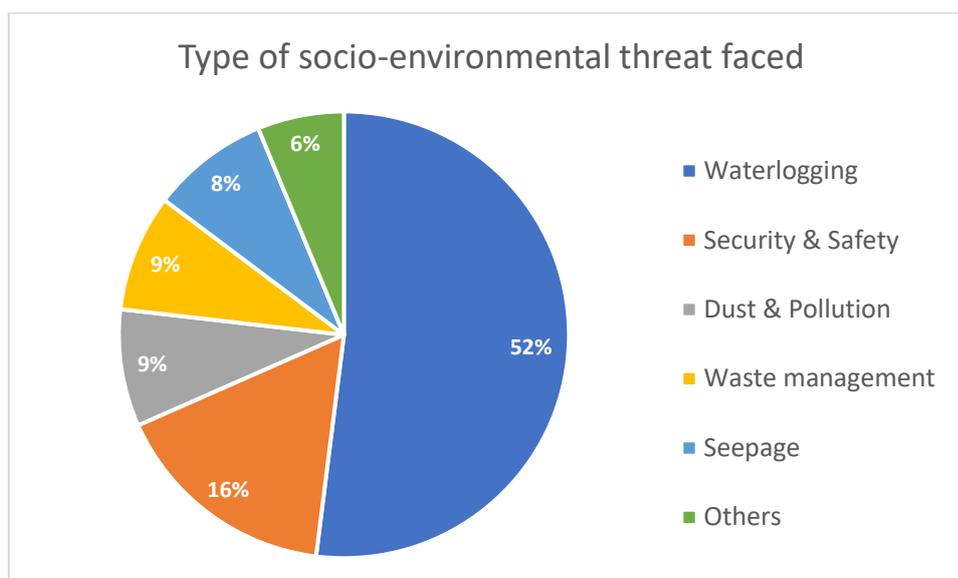
In the food grains market, the trader’s associations highlighted that basic washing facilities were not available within the shops like it is in the other markets. As of now simply to wash their hands, they have to use the common toilets, which are maintained poorly. Therefore, the **need for including basic washing facilities within the shops were identified.**

While water and sanitation were explicitly mentioned in terms of lack of access to services, few spoke of poor healthcare (addressed later) when nudged.

#### *ii. Socio-environmental threats*

In terms of the type of socio-environmental threat, more than 50% reported facing issues of water logging, 16% stated that they face safety related issues while less than 10% highlighted issues like dust and pollution, waste management and water seepage (Figure 5).

Figure 5: Types of threats faced



Interestingly while poor waste management practices were visible throughout the Koyambedu market complex, very few respondents (7%) highlighted it in the survey. This is probably due to a combination of issues, ranging from lack of awareness about the need for sustainable waste management, unwillingness to take responsibility, lack of penalties for violators, to the perception that the official waste collection system will end up mixing segregated waste anyways.

Despite the initial failure to recognize the solid waste management (SWM) issue as a priority area that needs intervention, **the representatives from the flower, vegetable, and fruit markets expressed their willingness to engage in source segregation and provide waste as a resource to others.** Few of the flower market shop owners are already giving their waste flowers to people who are approaching them to buy these as inputs for their businesses (e.g. incense sticks), but this is not happening regularly. Similarly, the vegetable market representatives also recalled having previously given their waste vegetables to some company for composting before the onset of COVID-19, but these efforts have not been sustained.

Both flower and vegetable trader's associations suggest that they are open for handing over the waste to the waste collectors or any company that shows interest. However, they stress **the need for minimal incentives to motivate labourers to undertake segregation.** The vegetable market proposes a minimum incentive of Rs. 1/- per kg for general waste and Rs. 1.50/- per kg for leafy vegetables, with waste collectors collecting from each shop. The flower markets also emphasize the necessity of a minimum wage for labourers who will segregate and handover to collectors. They also suggested that MMC may provide a **list of potential businesses to whom they can sell the waste material** to encourage more shopkeepers to engage in this circular economy. Regarding the fruit markets, there is no mention of incentives, but there is a suggestion for specific waste collection times or designated drop-off points within the market. In contrast, the Food grains market reports minimal waste generation, with most waste being segregated and sold to scrap dealers who collect within the market premises.

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**Use and disposal of single-use plastics in the market was also identified as an issue that needs special attention.** The Greater Chennai Corporation (GCC) is responsible for monitoring single-use plastic usage within market premises. Although inspections occur, they are not conducted regularly, leading to inconsistent enforcement. When inspections do take place, trader's associations are notified, and fines are levied for non-compliance. Trader's associations are also suggesting to the shop owners not to use the single-use plastic and instead explore alternative options. Plastic tea cups are commonly found littered throughout the market area, often used by vendors selling tea from their cycles. Additionally, eateries frequently use plastic for food packaging. To address this issue, fruit market representatives recommended promotion of clay pots as alternatives to tea cups and **building awareness** amongst customers to encourage them to bring their own containers to avoid food packaging. These ideas can be implemented across markets.

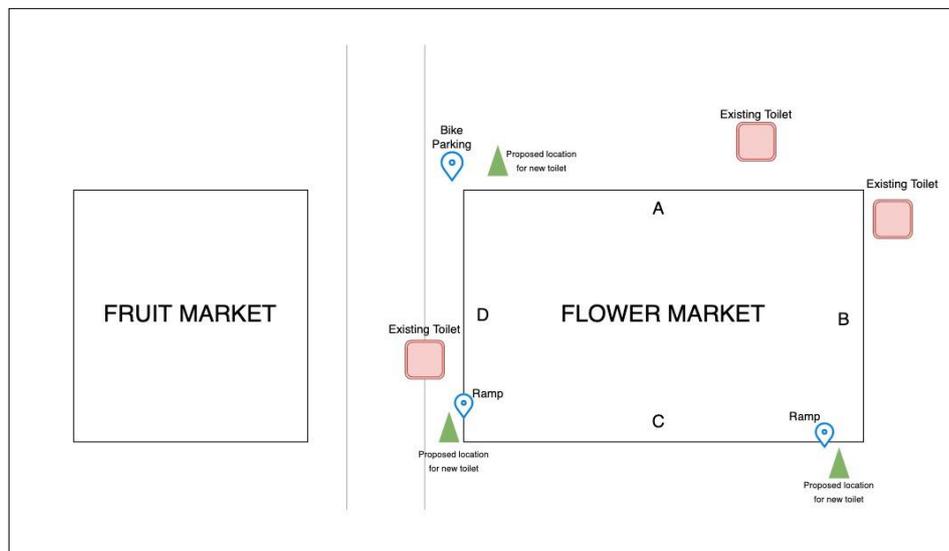
#### *Key Learnings | Stakeholder Identified Priorities*

- ❖ **Access to basic services is limited** in terms of quantity, quality, reliability and costing.
- ❖ Stakeholders identified **access to water and sanitation as key concerns** across all four markets.
- ❖ Stakeholders also highlighted **waterlogging/drainage as the most critical challenge** the market faces during every spell of rain.
- ❖ Very few mentioned **solid waste management** as a problem in the first instance. Only when asked about SWM, stakeholders tended to highlight the gaps and shortcomings of the authorities, but seldom spoke of their responsibilities as waste generators highlighting the need for greater awareness building on this topic.
- ❖ Other than vegetable, fruit, and flower waste, the other major category of waste identified was the single use plastics used by food/beverage sellers in the market. Curbing these needs multipronged approach from **stricter enforcement of single-use plastic ban** to building awareness among end-users in the market.
- ❖ **Trader's associations expressed willingness to share responsibilities** with MMC on better maintenance of basic infrastructures and services (see recommendations).

### Key Recommendations | Stakeholder Identified Priorities

- ❖ **Adopt a Toilet:** Trader associations across all markets expressed willingness to adopt a toilet, i.e. take on the responsibility of maintenance and upkeep, while ensuring access to all, if granted permission by the MMC.
- ❖ **Change of location for improving access to and usage of toilets-**issues of lack of privacy and inaccessibility also affected usage and hence relocating the common toilets as per the stakeholder suggestion should be considered. Proposed toilet locations suggested by stakeholders are shown in Figure 6.

Figure 6: Proposed toilet locations



- ❖ **Provide basic wash facilities in the Food grains market:** unlike other markets Food grains market lack basic washing facilities.
- ❖ **Incentivize the labours for source segregation:** pay a minimum amount to encourage shop helpers/labourers to segregate and dispose of the waste in designated bins/locations.
- ❖ **Vendor List for Recycling/Upcycling:** create a database/list of vendors who are interested in buying/collecting waste material (flowers, vegetables, fruits) as an input for their businesses and share with the shop owners to encourage them to redirect the waste material into a circular economy thus reducing solid waste quantity.
- ❖ **Better enforce the ban on single-use plastics:** GCC may carry out more frequent inspections and levy fines.
- ❖ **Awareness Campaign:** GCC, MMC, and Trader's associations can work together to conduct awareness campaigns across all markets specifically to curb usage of single-use disposable plastics such as food packaging and tea cups and encourage shop keepers/labourers to use their own containers/tumblers.

## B. Cross-sectoral Concerns

The main concerns highlighted by the stakeholders from the market are covered under the key verticals of the project – for instance concerns over access to water and sanitation and water logging are considered in details in the verticals explicitly dedicated to water, sanitation, hygiene (WASH) and flood mitigation. However, a range of issues also emerged during stakeholder engagement (Figure 7) and field observations that one, do not clearly fit into any one of the verticals and two, need softer and alternative interventions with cross-cutting impact on all the verticals. These issues are as follows:

- i) Safety & security conditions
- ii) Health & healthcare status
- iii) Market governance (degree of collaboration)

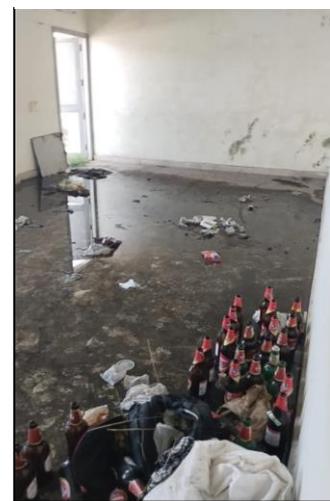
Figure 7: Discussions with trader's associations



### (i) Safety & Security Conditions

Around 16% of respondents highlighted concerns of safety and security across all four market types. These respondents spoke about the market being unsafe specifically for women. They also expressed concerns related to drug and alcohol abuse, theft, especially in the fruit market and the inability to access the police. Lack of police presence and empty police booths in the market was noted during the team visits. Our field visits also showed the presence of a couple of TASMAC shops in the periphery of the market. One shop is opposite the food grains section where shopkeepers complained of drunk people coming into the empty living spaces above their shops with women and disposing off alcohol bottles at night (hardly anyone lives in the Food grains market complex, even none of the labourers) (Figure 8). That the Food grains market is particularly unsafe is further corroborated by a recent stakeholder meeting between the Koyambedu Whole Sale Shop

Figure 8: Alcohol bottles disposed in the rooms above the grain shops



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owners and the Chennai Police Commissioner (06/02/2024)<sup>1</sup> – in this meeting shop owners specifically requested that police patrolling should be increased in the Food grains market from 7.00pm to early morning. During this same stakeholder meeting the Police also promised to undertake the following steps:

- collect the details of vehicles and workers employed by shop owners within 15 days for intensifying the monitoring in the market;
- increase the number of CCTV cameras to stop the trafficking of drugs from other states and inspect goods carrying vehicles coming from outside TN more regularly;
- place more police personnel between 12.00am to 8.00am in the station located within the market when the market is busiest, and be more involved in patrolling the area during the rest of the normal hours.

These discussions highlight that safety and security in the market is a major concern – this on the one hand emphasize the need to make the market environment safer for all including the women. Parallely, it also draws attention to the fact that lack of security is likely to have an impact on any infrastructural investments made for a carbon neutral market. For instance, plans to put up solar panels and LED bulbs need to take into consideration the possibilities and therefore preventive measures against theft or vandalism.

While MMC contracts a private security company to manage market security, based on conversations with different stakeholder groups, it is understood that the security guards mostly limit their activities to managing traffic/parking and solving minor disputes in the market. The more serious security concerns cannot be addressed by them and needs higher police involvement.

#### *Key Learnings | Safety & Security*

- ❖ **Security guards alone are not at all sufficient** to maintain law and order in the marketplace strewn with theft, alcohol abuse, drug trafficking etc.
- ❖ **Stricter monitoring and greater police presence** is needed.
- ❖ The **Food grains market** in particular seems to attract a lot of criminal activity and therefore needs **special attention**.
- ❖ Along with safety of people, **safety of investments under the Carbon Neutral Sandhai project will also be critical** – for instance investments in infrastructures like solar panels or LED lightings may need to be protected from theft or vandalism.

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<sup>1</sup> CMDA, Press Release on 06.02.2024 (<https://www.cmdachennai.gov.in/pdfs/pressnote/KWMC-TradersMeeting-06-02-2024.pdf>.)

**a) Common recommendations across all four markets**

- **Strengthen Shop Keepers Vigilance Committee:** Strengthen the existing WhatsApp platform between Trader's associations and Police to act on reported illegal and suspicious activities. The platform can be linked to complaint redressal software which sets specific timelines on identifying the problem and addressing the issue.

As such, in all four markets, the traders' associations have a common WhatsApp group along with the Police where they report suspicious and illegal activities for the Police to take action. However, these groups are currently ineffective in terms of addressal of the problem. A time-bound system would help both the police and associations to work together to effectively curb illegal activities.

- **Reinforce existing police force appointed for the market:** Higher police presence throughout the market, especially between 12am to 8am, is critical. The existing police booth near the market should have designated officers present 24/7. Also by appointing higher officials to oversee activities could help curb illegal activities more effectively by warning people and increasing trust between the shopkeepers and police.

**b) Recommendations for specific markets**

**Vegetable Market**

- **Increase security at entrance gates:** Increase the security at entrance gates by installing more CCTV cameras and higher number of police personnel. Specifically, stakeholders mentioned increasing security near Gate 16, which is one of the back entrance gates of the vegetable market.

**Fruit Market**

- **Formalize vendors on foot and bikes by giving them IDs:** Provide ID cards and formalize informal vendors who are selling a variety of items either by walking around the Fruit Market on foot or using bikes, cycles. Formalizing these vendors would help the police and MMC keep an eye on their movements and curb any illegal items that they may be selling.

**Flower Market**

- **Install a fire extinguisher in the market:** A fire extinguisher can be installed in the Trader's association room of the market for any emergency use. Currently no such fire extinguisher exists.

**Grain Market**

- **Dedicated Police Booth:** The Food grains market needs special attention as it lacks vigilance during the night when hardly anyone stays here. Therefore, setting up a dedicated police booth or assigning dedicated police security in the Food grains market will be useful.

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(ii) Health & Health Care Status

Health concerns in the market are many although not explicitly articulated by the various stakeholders surveyed, except for mentioning poor sanitation and hygiene. Rather these issues became clear through informal discussions and field visits. These issues included concerns related to mosquitoes, dust and allergies, exposure to heat, possibility of electrocution due to unmaintained electrical boxes, slippery unsafe alleyways created by water mixed with vegetable waste during rainy seasons (Figure 9), and cattle inside the market etc. The concerns varied in nature across the four markets.

Dust and pollution were reported specifically from the vegetable market where respondents linked it to heavy traffic and dust from sacks used to transport supplies. While other respondents discussed the threat from cows in the vegetable and fruit markets. Historically the land allocated for the market were lands where farming and grazing were practised. Since the market has come up the many of original cattle grazers have moved to other livelihoods but nearly 50 families still exist, who continue to depend primarily on cattle rearing for milk. These families allow their cows to roam inside the market, especially in fruits and vegetables market where ample food is available for them (Figure 10). There have been occasions when market users, specifically labourers, have been injured due to these animals and vice versa. On instances, there has also been animal injuries as the cattle get in the way of labourers carrying their load according to the cattle owners.

Some shopkeepers complained that the cattle owners bribe the security guards who then let the animals in to the market. MCC has stated that they penalise cattle owners if they find cattle inside the market and that they do not want cattle in the market area since it is a threat to the people using the space. The cattle and their owners need to be acknowledged as an unexpected stakeholder/user group and plans need to be put in place to handle the cattle – for safety reasons and for protecting any greening and plantation related investments in the market area.

*Figure 9: The slushy slippery mess of vegetable waste along the pathways of the vegetable market*



*Figure 10: Cow menace in the market posing safety threat*



Exposure to extreme heat conditions was most severe in the food grains market which is an area entirely covered by concrete with no shade and no trees (Figure 11). This poses a major health risk for all spending substantial part of their working day in this space. It is therefore pertinent that special attention is given on the food grains market to address heat mitigation strategies which may range from greening, constructing shaded areas, to putting up water kiosks. Shop owners can specifically support in setting up water kiosks or in the tree planting effort by maintaining/watering the trees near/in front of their shops until the saplings are mature and sturdy.

*Figure 11: Food grains market without any tree cover*



When explicitly asked about health care facilities in or near the market, 74% of respondents mentioned having access to private services outside the market. Field observations and discussions with MMC staff revealed that there is currently no facility inside the market complex. In fact, at the time of fieldwork the existing clinic was locked (Figure 12). The team learnt that Apollo Hospitals will be taking over the existing clinic after renovation. This clinic is expected to cater to out-patients free of charge. However, until then there is no makeshift facility that can at least offer first aid to the lakhs of people working in the market. Some reported that occasionally Traders Associations organize health camps. However, these happen irregularly. Speaking with the labourers in the market it was clear that the need for first aid and access to ambulance is critical in the market as a lot of manual labour is used for heavy duty loading/unloading work and ailments related to injuries and dehydration due to extreme heat are common.

Figure 12: The closed healthcare centre



#### Key Learnings | Health and Health Care

- ❖ Cleanliness, proper sanitation facilities, managing waste and waterlogging, all relates to unhygienic, and disease-ridden environment and managing these issues under the WASH, flood mitigation and SWM vertical is critical to improve overall quality of life and mitigate health risks in the market
- ❖ Different market types pose different types of issues which need attention – for instance, managing the cow menace in the vegetable and fruit market is important to avoid uncalled for human-animal conflicts and resulting injuries, whereas, heat mitigation is particularly relevant for the Food grains market which comprises of bare uncovered concrete.
- ❖ Health care facility inside the market is missing. While there are plans of Appollo taking over the currently closed down health care centre there are other ways that access to basic health care and specifically first aid can be improved without too much investment (see recommendations).

**A. Common recommendations across markets**

- **Set up a mini clinic in empty spaces in each market:** Set up a clinic with basic first aid, a nurse and a doctor to cater to the large crowd of people working and moving in and out every day. The clinic could be set up in already existing empty shops/spaces in each market. To ensure accessibility of the clinic for all, especially the labour, the rates could be subsidized and the clinic itself run on a PPP mode along with Traders' Associations who can support with fixed and operational costs.
- **Demarcate a dedicated space for common Ambulances:** Set aside a dedicated space for two ambulances that could be shared between the four markets. These need to be in locations which are easily accessible especially to the mini clinics in each market.
- **Install First Aid Boxes in each market:** All trader's associations office spaces could also be encouraged to have a first aid box for immediate emergency situations such as people fainting, injuries etc. These boxes and their upkeep could be organized through the CSR route with leading hospitals chains in the city.

**B. Recommendations for specific markets**

**Food grains market**

- **Use empty plots for Pharmacy:** Empty shop spaces which exist in the Food grains market can be used for setting up a pharmacy. Currently no such facility exists within the market but is essential and can also feed into the clinic.
- **Increase tree cover:** Unshaded concrete space exposes this market to extreme heat. Planting trees across this market to increase green shaded spaces will be helpful. The maintenance of the trees can be handed over to the trader's associations who are willing to invest in it.

**Vegetable and Fruit Market**

- **Managing the Cow menace:** – MMC may consider creating a shed with a bit of space for grazing for the cattle. Some of the waste from the vegetable and fruit markets can be diverted to the shed as cattle feed. Cattle owners have already been suggesting a similar idea to GCC and are likely to support this intervention if it does not involve any rent. They also expressed a willingness to discuss in further detail, payment structures if GCC or MMC is considering this idea. There have been previous attempts to link food waste and cattle management through what is called the Vellore Model which may be revisited<sup>1</sup>. However, MMC representative has suggested that the preference would be to keep the cattle out of the market space due to safety concerns. To accommodate the cattle owners', need and MMC's preference, the timings when the cattle are allowed may be regulated to avoid peak working hours and thus reduce chances of human-animal conflict

<sup>1</sup>Indian Green Service – Integrated and Sustainable Solid and Liquid Resource Management (SLRM) Project in Koymabedu Market Campus, 2012

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*(iii) Market Governance (degree of collaboration)*

Policy review of The Tamil Nadu Specified Commodities Markets (Regulation of Location) Act 1996 (Act 24 of 1996) and interviews with relevant stakeholders (including representatives from CMDA, the Koyambedu Market Management Committee, and the Traders' Associations) highlight that the Koyambedu Wholesale Market Committee (KWMC) or Market Management Committee (MMC) is responsible for the daily management including overseeing service delivery (e.g. water, sanitation, electricity, traffic management, swm etc). and should have representation from the Trader's associations who bring forth the concerns of the shopkeepers at the table.

The trader's associations are therefore a critical stakeholder group - More than 60% of shopkeepers surveyed were part of some trader's associations irrespective of market type (i.e. flower/ fruit/ vegetable/ grains). These associations could be either for a specific product (e.g. Chikko Traders Association) or generally for the market (e.g. Chennai Wholesale Flower Agents Association). In total, there are about 48 trader's associations across the four markets headed by the Federation of All Associations of Koyambedu Periyar Market.

While on paper, MMC should have representation from these Trader's associations, currently that is not the case<sup>2</sup>. MMC reported interacting primarily with representatives from the Federation and occasionally with the representatives of other trader's associations on specific issues. From interviews with association members, it was apparent that the ground reality varied – while some reported that monthly meetings are conducted where associations can raise their concerns and important decisions are not taken without their inputs, others said that there needs to be more frequent communication with the MMC who “do not get out of their AC rooms!” Therefore, while MMC holds a significant influence over market governance, the traders' associations find themselves marginalized without any meaningful representation. This gap underscores the urgent need for a more inclusive and participatory approach to the management and regulation of the market and more frequent and meaningful exchange between these two critical decision-making stakeholders.

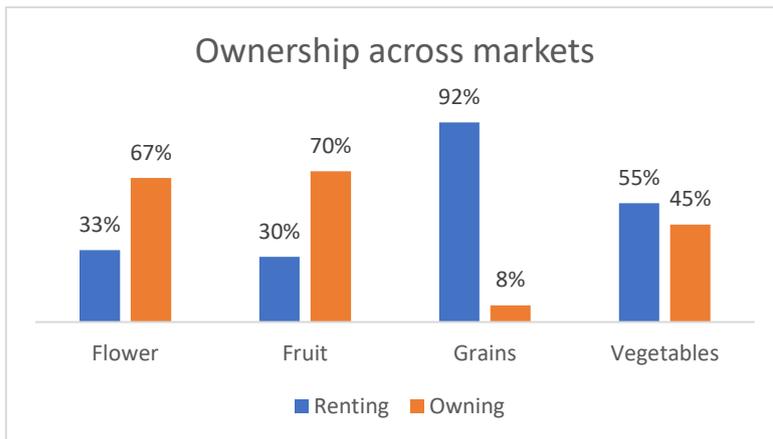
Furthermore, Trader's association leaders expressed their dissatisfaction with the quality of services offered by CMDA/MMC. They highlighted the poor conditions of water and sanitation in the market. Some complained about paying water tax and penalties when CMDA has not been supplying water for several years. These sentiments highlight need for greater accountability and better quality of basic service provision in the market.

The role of the Federation and the Trader's associations also leave scope for greater commitment towards protecting the interests of the members, especially the more vulnerable groups of shopkeepers, shop laborers. While Trader Association leaders spoke of representing the members' concerns to the MMC, and utilizing the membership fees to run medical camps and/or pay Diwali bonus for employees, many of the shopkeepers were uncertain about the degree to which they benefitted from these Trader's associations.

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<sup>2</sup> Tamil Nadu Government has constituted the last Market Management Committee as per the G.O.(MS) No.136 H.UD (UD -111(1) Department dated 12.04.2007 with a total of 18 members headed by Member Secretary, CMDA as its Chairman and other official, non-official members including the traders representatives.

Figure 13: Shop ownership status



While market-level decisions are taken primarily by CMDA/MMC in consultation with the Trader’s association representatives, interventions at the shop-level (e.g. on making physical changes within shops; or changing behaviours) remain dependant on the willingness of shop-owners. Across all four markets, nearly equal number

of responders surveyed owned (51%) and rented (49%) shops. However, there were variances across market type (Figure 13): In the food grains market there were significantly more renters (92%) to owners (8%) whereas the flower (67%) and fruits (70%) markets had predominantly more owners. Irrespective of ownership of the space all shopkeepers have to renew their licence every 3 years or so. This may be leveraged at a critical moment for ensuring that not only maintenance costs are paid properly, but also to encourage any other sustainable practices. For instance, at the time of license renewal shopkeepers can be asked to show certain levels of shop maintenance including for instance maintenance of separate bins for dry and wet waste.

#### Key Learnings | Market Governance

- ❖ **Tenuous relationship between MMC, the Trader’s associations and the member/non-members of the Trader’s associations.**
- ❖ **Stronger enforcement of the market policy** in terms of regular, meaningful, and transparent exchange between the MMC and the Trader’s association representatives is needed; currently there is a lack of trust between MMC and the shopkeepers that needs to be bridged.
- ❖ **Improvements in basic service provisions will be critical to gain trust on MMC’s commitment** and will make it easier to then direct attention to the responsibilities of the shop-keepers.
- ❖ **Trader’s associations’ contribution to the greater good of its constituency remains unclear** - accountability should be increased to gain trust and improve membership.
- ❖ **The license renewal process can be strategically leveraged to ensure appropriate maintenance charges are collected** and also conditions of sustainable practices are imposed on the shopkeepers – renters and owners alike. For instance, license renewal can be refused if shopkeepers are unable to show that they are maintaining separate bins for dry and wet waste.

**A. General Recommendations**

- **Organize regular meetings with Trader's associations & strengthen the grievance redressal system:** There is a grievance redressal mechanism that exists through which traders can raise their concerns to the MMC. However, the traders' associations representatives across all markets complained that while they have lodged written complaints through this system to the MMC, numerous complaints remain unaddressed due to inefficiencies in the system. Trader associations attribute this inefficiency to a lack of streamlined process and inadequate follow-up procedures. MMC's active engagement with Trader's associations through regular discussions or meeting, prioritization of pending complaints, and the implementation of robust monitoring and follow-up mechanisms to ensure timely and satisfactory resolution of traders' concerns are critical. Only through proactive measures can the MMC gain the trust and confidence of the traders.
- **Inclusion of trader associations representatives in the committee:** Traders also advocate for their inclusion in the market management committee. Currently, the committee represents only the CMDA officials and the political entities. However, traders insist that the direct involvement of their representatives in the decision-making process is crucial for ensuring that the committee's actions are in line with the needs of traders. By including the representatives in the committee, a more comprehensive and inclusive approach to market management can be achieved, leading to better communication, understanding, and resolution of issues affecting traders and the overall market ecosystem. This step would not only enhance the transparency and accountability but also foster a sense of ownership and collaboration among all stakeholders involved in market governance.

**B. Specific Recommendations**

- **Governing and relocating street vendors:** Trader associations have identified the presence of street vendors alongside market entry points as an issue as it leads to congestion, particularly during peak hours, making accessibility to the market a challenge. To address this, they suggest for the relocation or regulation of these street vendors to designated areas away from the main market entry points. This measure will address to an extent the traffic issue and also streamline access to the market.
- **Provision of service shops within the market to stop illegal activity:** The Food grains market associations highlighted the necessity for different category of service-oriented shops within the market premises, such as ATMs, truck booking agents, banks, tea shops, eatery etc. They observed that their buildings contain considerable unused space, which often becomes hotspots for illegal activities involving laborers and others. Therefore, utilizing these unused spaces effectively by leasing it out to service-oriented shops will address both concerns. Other markets also highlighted the need for banks and ATMs. The association have already communicated this concern to the MMC, expressing that the fixed lease amount set by them may be unaffordable for the service shops. MMC may need to reconsider the expected rent to ensure viability of these services within the market premises and by extension reduce the illegal activities.
- **Specific timing system to reduce congestion:** The fruit market proposed implementing a timing system to regulate traffic flow in the fruit market. They suggested to allow only material / produce suppliers during a certain time, early in the morning up to a certain time. Then bulk buyers could be allowed in up to a certain time after which individual people buying retail could be allowed. The end of the time slot could be indicated through a siren across the market. Such a time-bound system could potentially be applied to other markets, but further discussion is necessary to ensure it doesn't affect their operations.
- **Better signage and enforcement:** The issue of inadequate signage for the entire market was brought up by the Food grains market associations, highlighting the difficulties it poses for their business. Many visitors to the market are unaware of the presence of the Food grains market's existence within the larger market space. They suggested that improving the signage can greatly address this concern by increasing visibility and directing people to the respective sections of the market. Furthermore, they expressed concern regarding their products being sold in other markets, resulting in customer loss. They highlighted that MMC guidelines prohibits such sales, however, enforcement is lacking, allowing these activities to persist. It would be beneficial if these unauthorized sales can be controlled to uphold fair market practices.

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## CONCLUSION: COLLABORATIVE PATHWAYS TO MARKET IMPROVEMENT

For successful transformation of the market, it is as important to build awareness and a sense of responsibility & ownership amongst all stakeholders, especially the shopkeepers, as it is to ensure that MMC/CMDA is fulfilling its obligations in terms of regular consultations and provision of basic services. Therefore, collaborative pathways to positive change are needed whereby on the one hand, the responsible authorities including MMC, the police department, the waste management company etc fulfil their responsibilities with greater commitment, and on the other hand, the shopkeepers as primary users/owners of the space also become a direct partner in transforming and maintaining that transformation in the long run. In other words, they also need to become part of a collaborative governance system for the market working alongside MMC, not just in expressing preferences/grievances, but also doing their bit to contribute towards better maintenance of the market. This contribution may be in the form of volunteer time, higher maintenance fees, hands-on participation in maintaining market infrastructure or behavioural transformation towards more sustainable practices.

However, their participation and contribution can be expected to be more effective, once basic service and infrastructure including water and sanitation provisions are improved. This will help build trust and encourage more collaborative efforts for long term sustainability in the market.