Championing Smart and Sustainable Solid Waste Management in MMR
9th of January, 2020 at CCI, Nariman Point

Dr. Rakesh Kumar (Director of CSIR-NEERI)

- Institutions such as IIT and NEERI must impart knowledge and clear misinformation about waste management technologies and solutions.
- NEERI is currently evaluating CPCB guidelines on waste disposal and incineration, which are occasionally unspecific or inappropriate.

R.A. Rajeev (Commissioner of MMRDA)

- Every waste management technology has its own set of detractors and opposing activists, and while citizen oversight is essential, new technologies should at least be given pilot opportunities so they may be able to solve our waste surplus.
- For example, activism blocked mechanized composting owing to misconceptions about its cost spread. The priority should be 100% waste management even if that preempts specialized and segregated waste solutions.
- We ought to learn from the technological examples of countries in our neighbourhood such as Singapore, where incineration coupled with stringent emission norms have become an effective primary solution for waste management.
- The MMRDA is also interested in automobile processing units, where discarded automobile units can feed into the circular economy of their components.

Mr. Sameer Unhale (CEO of Thane SmartCity, Former Mission Director of Swachha Bharat in Maharashtra)

- Waste is a misconception, as everything is a resource. The relevant department in the MCGM should be rechristened as a ‘Solid Resource Recovery’ department. Current attitudes towards waste stem from social backwardness/ casteism, whereby we stigmatize ‘waste’ as something not to be handled. Unless overcome, these biases will stymie waste management reforms and eventually condemn us all to filthy living conditions.
- Municipalities fall short of meeting contemporary citizen expectations, as they are political institutions subject to votes and opposition. Waste management requires professionalism, and here smart cities have more liberty when raising resources, do not depend solely on taxes and grants, and can connect better with the private and social sectors to improve citizen’s lives. For example, electricity provision needs to be uniform and professional, independent of political whims and budget decisions.
- We need new business models and climate entrepreneurship to tackle issues on an individual basis. Bulk generation is wholly inadequate for waste management and actually reflects casteist ideas of delegating waste management to ‘someone else’. Each of us has to take a more realistic look at the waste footprint our daily urban existence creates, and take responsibility for where this waste ends up.

Mr. Ashok Khaire (Joint Municipal Commissioner (Solid Waste Management) at the MCGM)

- As per 2016 regulations, bulk generators must process their own waste. The MCGM gives seminars and notices to make people segregate their own waste.
- The MCGM has established 54 private segregation centres, which are allotted to NGOs for recycling waste. The residue is returned to MCGM dumping grounds.

Mr. Kiran Dighavkar (Additional Municipal Commissioner of G-North Ward)

- The informal waste management industry is immense and needs to be formalised.
- This can be modelled on German and Austrian Material Recovery Facilities (commercial) which collect dry waste and sell it to recyclers. One such facility is being set up in Cuffe Parade.
- Segregation of waste, as well as recycling and treatment, is being incentivised with a multi-tier system of property tax rebates.

Ms. Rutuja Bhalerao (MPCB)

- The decomposition of waste causes air pollution, and adversely affects local wildlife.
- MPCB rules clearly articulate waste management responsibilities of stakeholders.
- MPCB assistance to various waste management schemes is also present and forthcoming, such as interest-free 3 year loans.

Mr. Suraj Nandkumar (Director of ReCity)

- ReCity aims to integrate sustainable waste management into urban planning.
- If not monetized, waste management is difficult to sustain.
- Issues affect the transportation and storage of waste, and there is inadequate communication between waste generators and collectors.
- Collectors must invest in understanding their customers/generators, and in implementing efficient last-mile connectivity.
- Technology such as mobile phones can socially empower waste workers, and allow waste tracking and mapping of collection locations. Such traceability and accountability are key to making this enterprise profitable. The data generated is also valuable because manufacturers will pay for data useful toward Extended Producer Responsibility purposes.

Mr. Awik Sil (Regional Director of EPRI)

- Waste management is challenged by overwhelming volumes, insufficient space and sanitation difficulties.
- EPRI has pioneered waste management technologies of different scales that are suitable to the unique needs of various customers.

Mr. Rajkumar Sharma (ALM and Networking Action Committee)

- Breaking even is a challenge, as often even after segregation and composting, there are not enough buyers for the end product.
- Companies and housing societies sometimes have their own waste infrastructure, but these also prove inadequate when compared to the full scale of the problem.
- Managing waste itself should be a priority before trying to make it profitable. This is enough as long as the end product is eco-friendly.
- Waste management should not be considered a business, but rather a state-run and subsidized service.

Mr. Srikanth Parab (Director of Asia Affairs, Delta Group Holdings)

- His company provides bespoke waste management solutions, which are end to end and handle both liquid and solid waste.

- Traceability and other data are used to design solutions.

Dr. Dipti Sharma (Founder of TerraNero Environmental Solutions)

- Dharavi residents are admirably skilled and industrious, and if the resource utility and recyclability of various kinds of waste are adequately communicated, they will take the initiative to profit from it (and avoid disposal of waste around rivers and train tracks).
- There must also be psychological changes in those who generate this waste, so they take responsibilities for the environmental threat posed by their behaviour.

Dr. Pratibha Ganesan (TISS)

- The 'circular economy' is a key component of waste management and prevention, and thus this loop needs to be closed to limit landfill waste (as opposed to solutions such as bulk incineration).

Sunil Kumar (NEERI)

- Incinerators are too expensive and not cost-effective, especially for small and mid-sized cities. In big cities, their use should be limited and combined with other methods such as composting. Previous attempts in India and China have shown the unsuitability of incineration, which is egregious considering the substantial capital investment required.

Rahul Nainani (Cofounder and CEO of RaddiConnect)

- RaddiConnect implements a circular economy system around the city by incorporating the informal sector, and collecting waste and turning it into products that can be returned to and used by the waste generators.
- There is a 'Uber-like' aggregated network of raddiwalas, whose services are standardized with technology and tools such as weighing scales or account books.
- RaddiConnect asks generators to give away their waste without cost, so the value generated can be invested in various social causes (including waste-related initiatives such as behavioral change, plastic neutrality or awareness programs).
- Goods such as furniture and toilets have been made out of recycled waste.
- There is a moral imperative to address waste management, as living conditions around dumping grounds have deteriorated and life expectancy in such areas is approximately 37 years.

Shailendra Singh Rajput (Defined Renewables research lab)

- They research technologies for the Indian scenario, such as composting and biogas.
- Research must be combined with on-the-ground implementation and new technologies must be combined with social innovation.

Ms. Monisha Narke (Founder of RUR Greenlife)

- Reducing, reusing and recycling are key to achieving sustainability.
- RUR designs sustainable and decentralized solutions, such as Eco-edutainment and a patented home-composting technology.
- It is useful to incentivise waste management for natural/ aesthetic measures, such as composting for home gardens. Customers are enthusiastic about such opportunities.

Mr. Kedar Sohoni (Green Communities Foundation)

- There is a need to change beliefs and values, to change behaviours. Currently consumers have many mistaken beliefs.
- Customers believe that responsibility for waste is transferred to the MCGM after paying taxes. This causes individual laxity on waste management.
- Customers believe individual action is ineffective due to the scale of the problem and lack of support from the broader public apparatus.
- Customers are satisfied after placing waste in bins, but it is not enough.
- Customers believe the cleanliness of their immediate surroundings is sufficient, but when waste ends up in Deonar, the fumes and refuse come back to affect us all.
- Customers believe waste management should always be a profit centre, which is impractical and unfeasible.
- Customers believe segregation at home is unfeasible, so they hire external agents.
- Customers believe home composting is unpleasant and unsanitary, but in truth this is a question of adequate methodology and technology.
- The binary distinction between liquid and solid waste is wholly inadequate for the wide range of substances and miscellaneous articles in our waste.

Mr. Srikant Parab (Director of Asia Affairs, Delta Group Holdings)

- Success in waste management is achieved gradually and with dedication, thus patience is required.
- There is an imperative to innovate sustainable models, and follow through on their continued efficacy regularly, even long after implementation.
- Successful examples of waste management in housing societies demonstrate that behavioral modification is key.