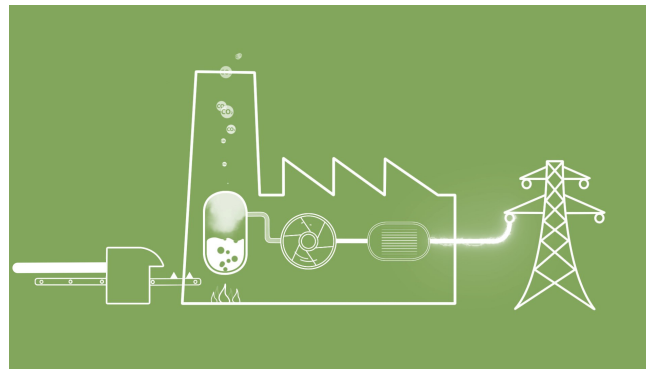




Bio-Waste Management

Kaduwela Municipal Council



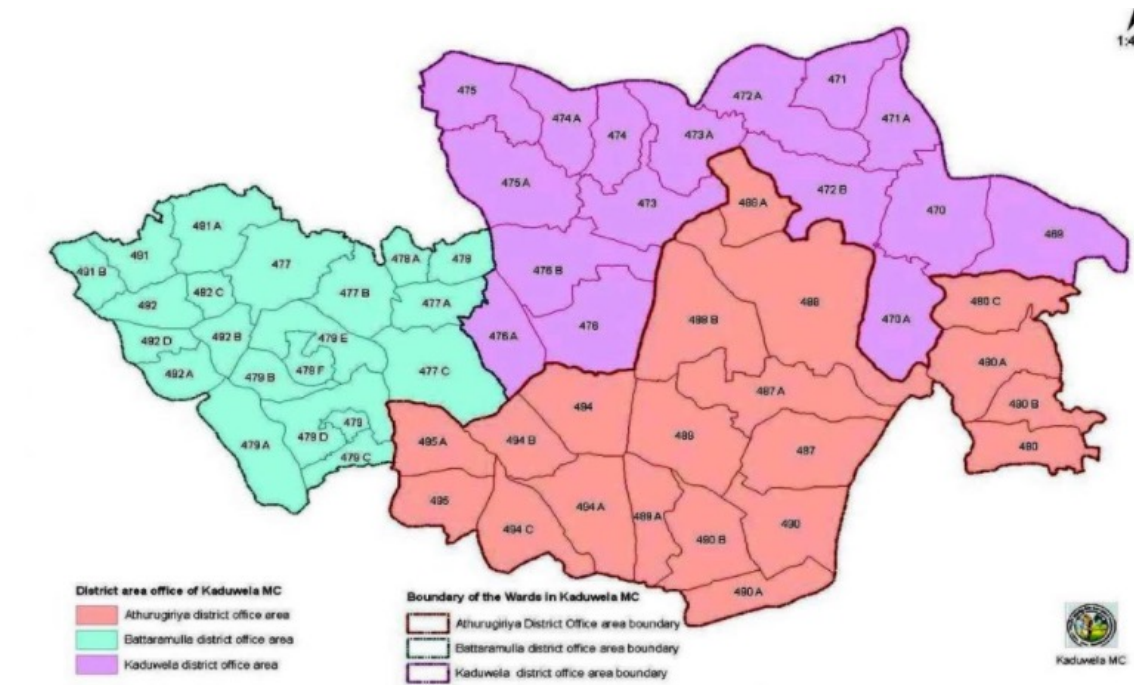
D.M.S.M.Dissanayake,
B.Sc., M.Eng (Reading), AMIESL,AM-ECSL
Municipal Engineer,
Kaduwela Municipal Council,

Introduction of Kaduwela Municipal Council

- Top among municipal divisions in Sri Lanka in terms of size, with a land area of 87.7 km² in Colombo Administrative District
- 57 Grama Niladhari (GN) divisions
- 13.4% of the total land area of Colombo District
- Population – 281,282
- Number of Families – 75,985

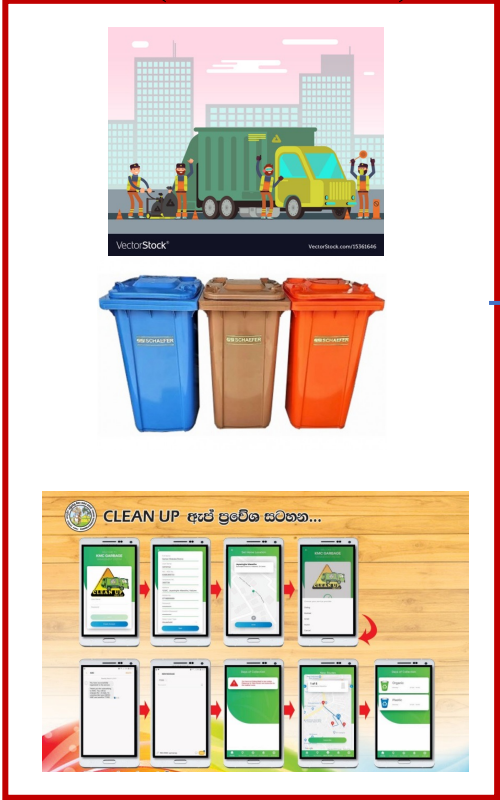
KMC is divided into three sub-area for administrative purpose,

- Kaduwela,
 - Developing area, flood affected, IT Zone
- Battaramulla
 - Developed, Most of gov. services providing city, Defence Head Quarters
- Athurugiriya
 - Highly residential, fast growing rate of residential



Solid Waste Management (KMC)

Daily Waste Collection
(60 -70 MT)



Biodegradable



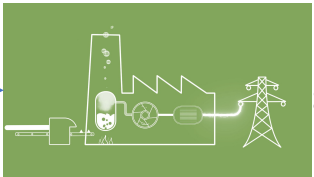
Liquid Fertilizer



Organic Fertilizer

7-8Ton/Day

Remaining (21-25 Ton)



8-10 Ton/Day



Electricity from Bio-Gas

Non-Biodegradable



Sorted and sold to
recyclable buyers



Western Power Project
(Waste to Energy)

70%



INSEE eco-cycle
for Co-processing

30%

Out side of the system boundary
(KMC)

Within the system boundary (KMC)

Biogas unit

- First Pilot Project which connected to National Grid in Sri Lanka.
- Project Cost is about LKR.20,000,000.00
 - From UNDP : LKR 10,000,000.00
 - From KMC : LKR 10,000,000.00
- Average feedstock: 160,000 kg/ month
- Average production: 15,000 – 21,000 m³/month
- Average electricity generation: 1400-1800 kWh/Month
- Average monthly savings from Electricity Bill /Waste Transport cost /Tipping fee in LKR - **Rs.287,500.00 (Net Metering with CEB)**
- Pay back period of project : About 5 Years and 9 Month.



Compost Production

- ❑ Average feedstock 230 Ton/ month
- ❑ Average production 110 Ton/month
- ❑ 250 Ton/Month production capacity is available.
- ❑ Average monthly savings from Waste Transport cost /Tipping fee in about LKR - **Rs.225,000.00**





- Lack of Awareness and Separation at Source.
- Infrastructure and Technology Challenges.
- Liquid fertilizer disposal,
- Financing



- Improve public awareness and participation on waste segregation.
- Expanding capacity of electricity generation from Bio-gas.
- Required to facilitate the liquid fertilizer promoting system.
- Improve composting techniques to strength product quality.



Thank You !