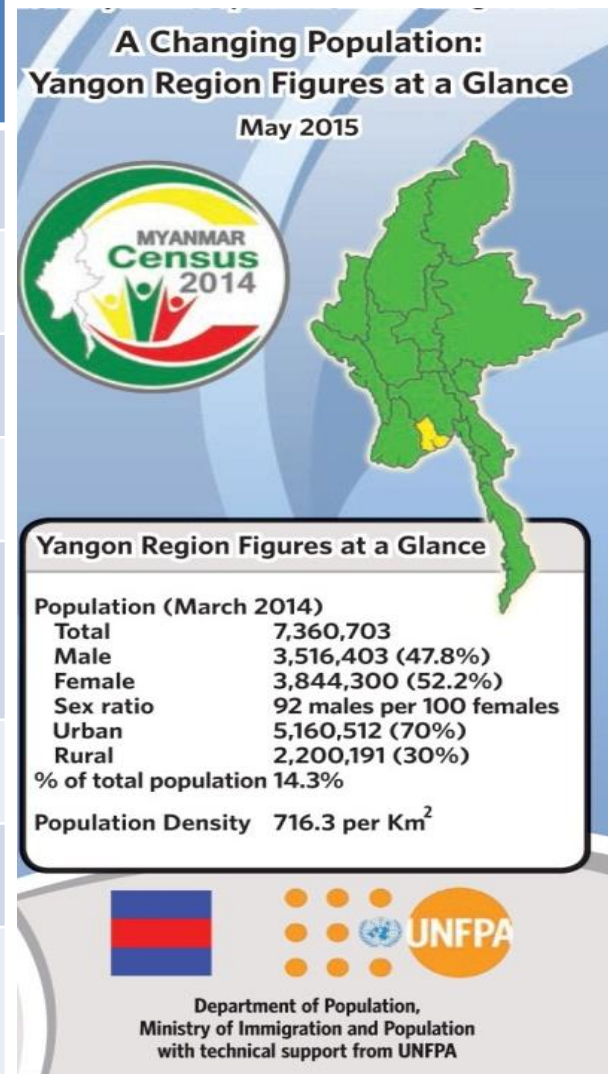


Solid Waste Management in Yangon City

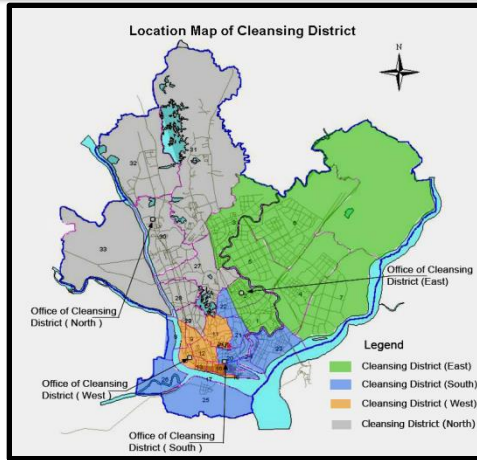
**Presented By
Mr. Cho Tun Aung
Head of Department
Pollution Control and Cleansing Department
Yangon City Development Committee
Myanmar**

Comparison Figures of Yangon Region

Unit		Myanmar	Yangon Region	YCDC
Population	000	51,486	7,361	5,191
	%	100	14	10
Area	Km ²	669,794	9,804	971
	%	100	1.5	0.14
Population Density	(000/Km ²)	77	751	5,346
GRDP	Billion Kyat	65,262	12,359	n.a
	%	100	19	n.a
Per Capita GRDP	(000 Kyat)	1,268	1,679	n.a



Profile of Yangon City



Area

- The administrative boundary of YCDC, in 1985 (133.643 Sq-Miles) (292.426) Square Miles.

Population

- 5.6 million (2017)

Township

- 33 Townships

Generation Rate

- 0.5 Kg / Capita / Day
(Analyzed by ADB,2017)

Household Waste Generated

- 2500 tons per day

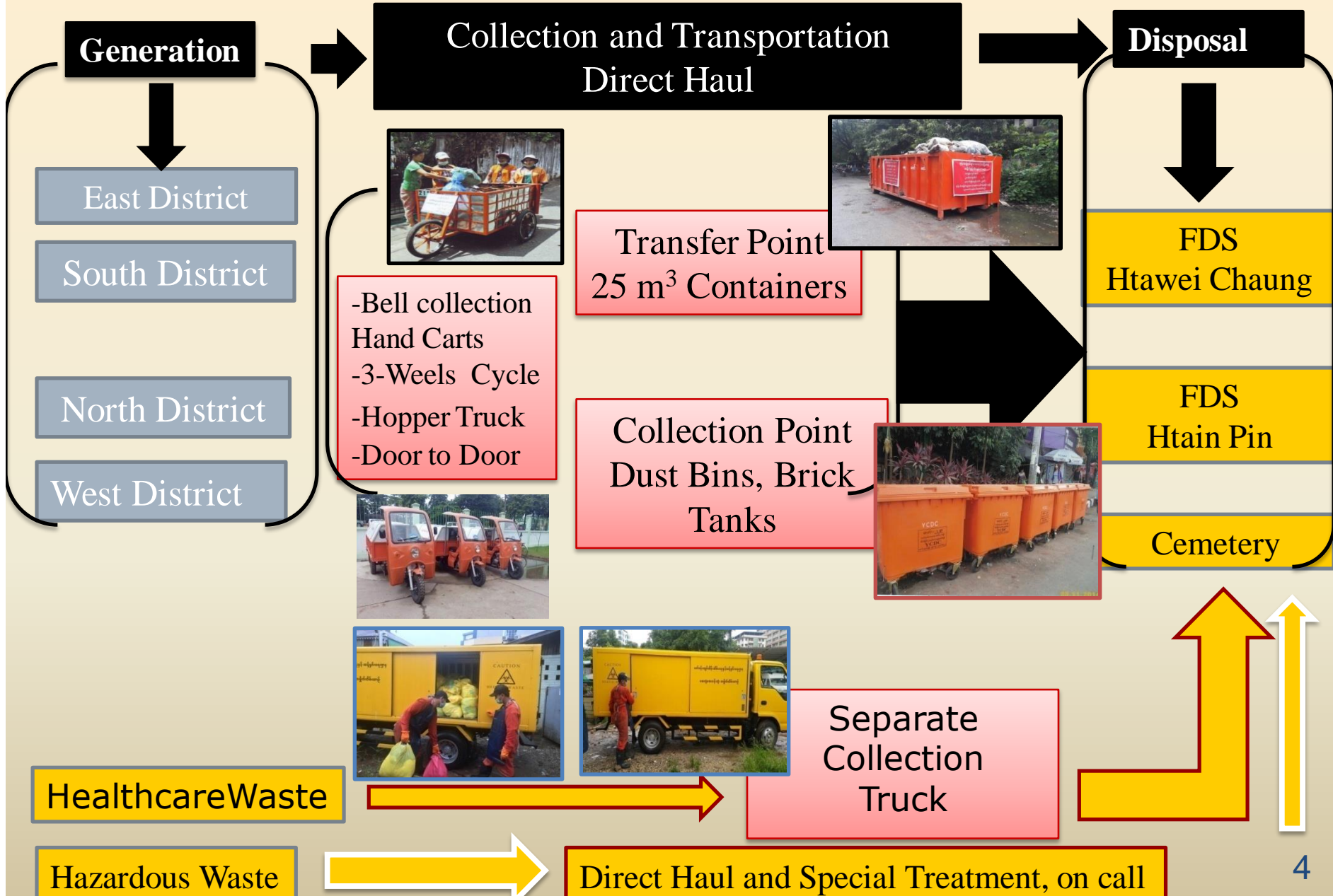
Industrial Waste Generated

- 250 tons per day

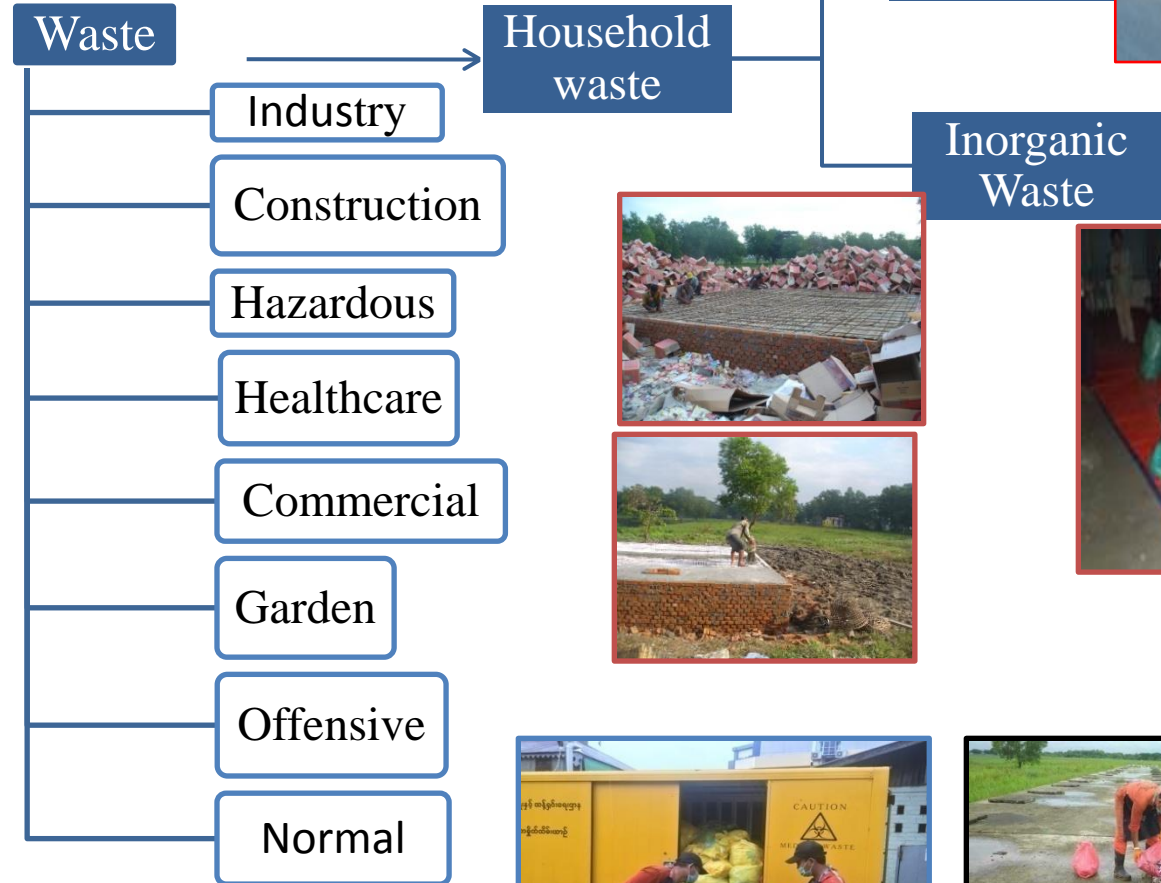
Health Care Waste Generated

- 2.15 tons per day

Waste Flow in Yangon (2018)



Waste Define in Yangon



Yangon Waste to Energy Plant Project

✓ Implemented by the Leap Frog Program JCM Scheme supported by Japan Government.

Specifications

Cooperated Organizations	YCDC-PCCD, JFE Engineering Corporation
Location	Taw KyaungKalay cemetery, ShwePyiThar township
Construction Period	2015-2017
Investments	16 Millions as of the JCM Scheme (8 Millions from YCDC and 8 Millions from Japan Government)
Incineration Capacity	60 ton/day
Power Generation Capacity	700 KW self-sustain about 400KW and 300KW for sale)
Accomplishment	100%



Yangon Waste to Energy Plant Project



Joint Improvement of Waste Management Project Between YCDC-PCCD and Bureau of Environment-Tokyo Metropolitan Government (BoE-TMG)

Project Duration

- ❖ (5) Years, Phase 1 (2013-2014) & Phase 2 (2015-2017)

Project Purpose

- ❖ The Policy and planning skill on the 3Rs and waste management in Yangon City will be improved.

Project Activities

- ❖ Capacity Building Training Programs on Improvement Waste Management
- ❖ Technical exchange on both of school and community awareness programs related to SWM
- ❖ Back to Back Mission

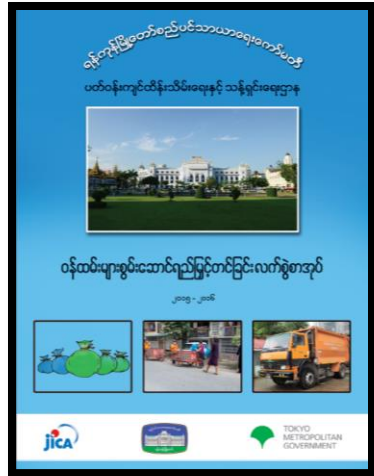
Project Outcomes

- Annual Report
- Staff Manual
- SWM Flyers
- Safety Manual for waste collection and transportation

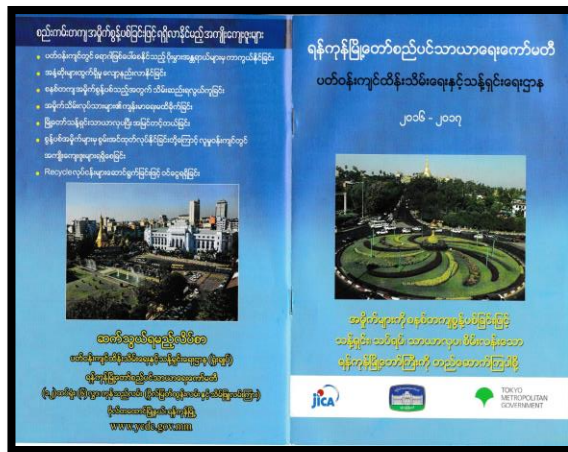
- As of this project, PCCD-YCDC sustainably conducting awareness programs, distribution flyers and also ToT trainings.

Project Materials Outcomes & Activities

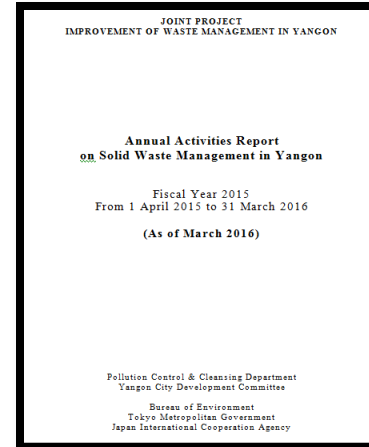
Staff Manual



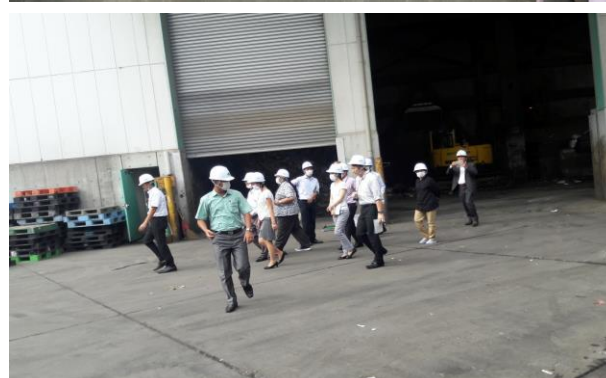
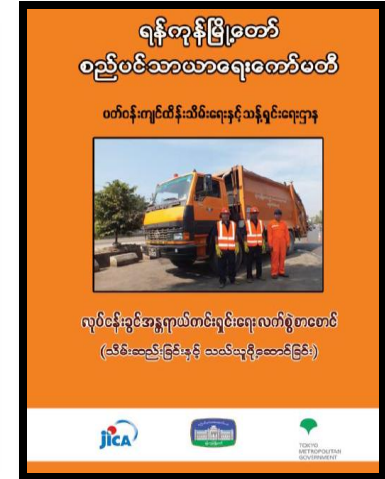
SWM Flyer



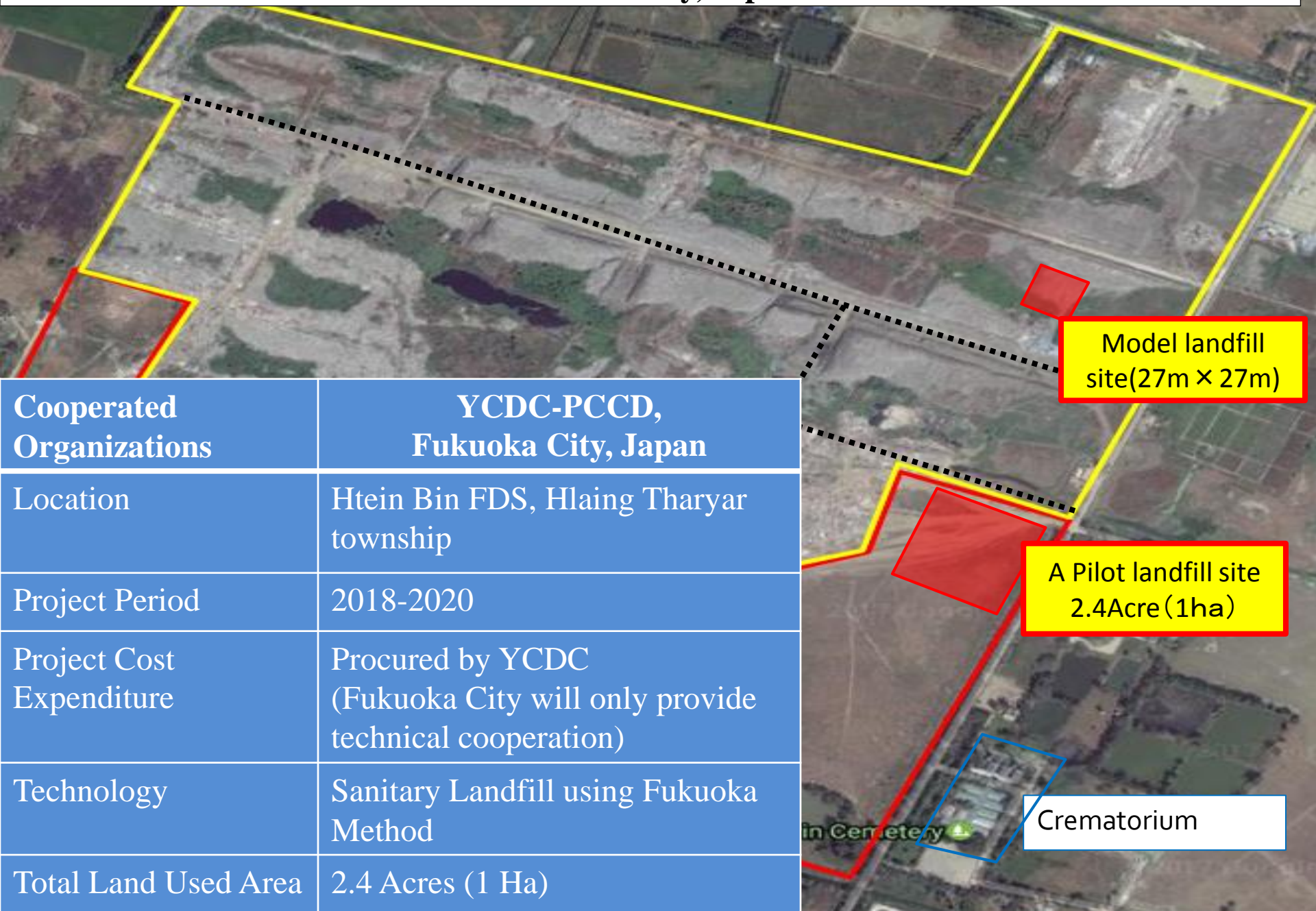
Annual Report



Safety Manual



Proposed Sanitary Landfill Project collaborating between YCDC-PCCD and Fukuoka City, Japan



Cooperated Organizations	YCDC-PCCD, Fukuoka City, Japan
Location	Htein Bin FDS, Hlaing Tharyar township
Project Period	2018-2020
Project Cost Expenditure	Procured by YCDC (Fukuoka City will only provide technical cooperation)
Technology	Sanitary Landfill using Fukuoka Method
Total Land Used Area	2.4 Acres (1 Ha)

Model landfill site(27m × 27m)

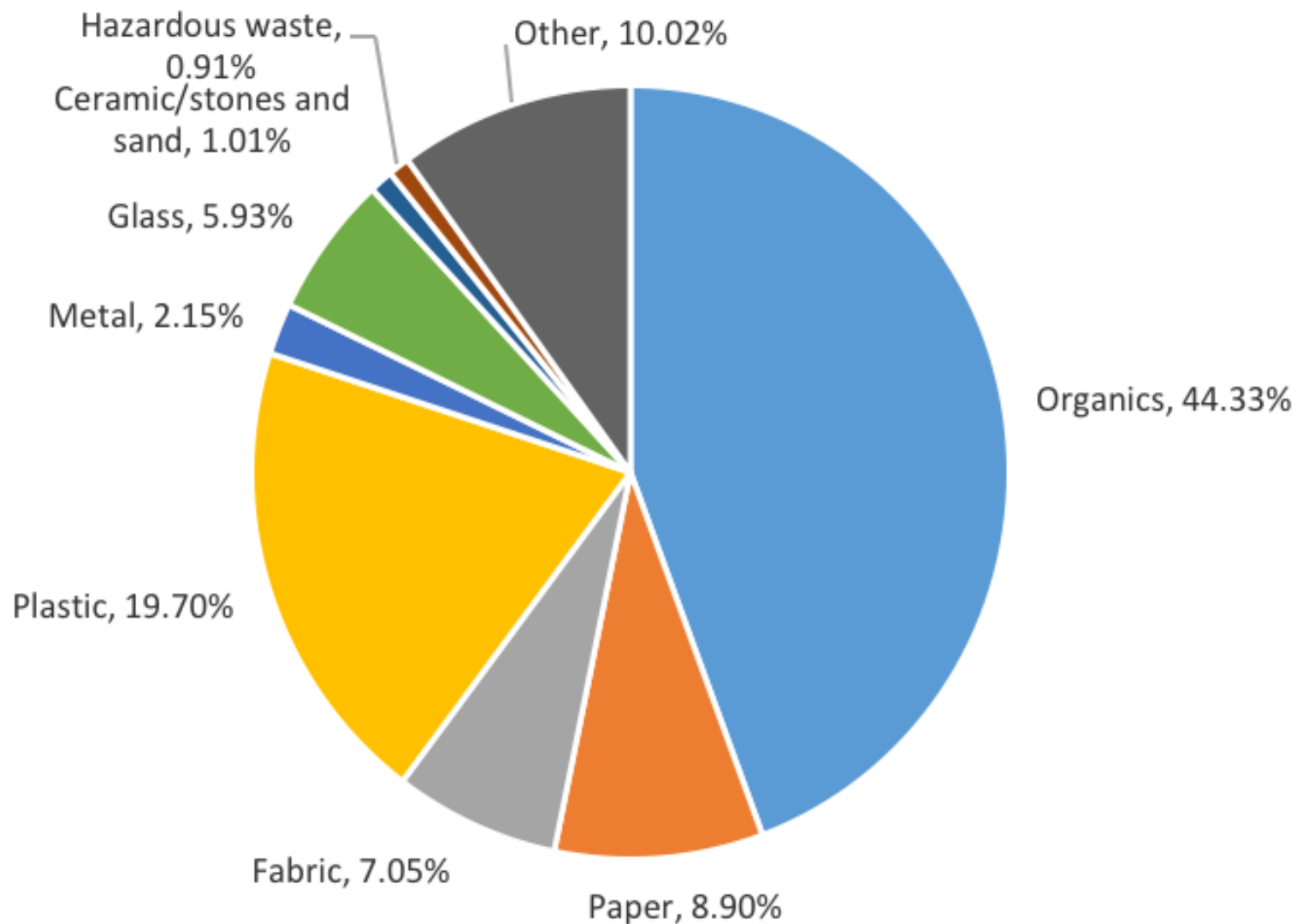
A Pilot landfill site
2.4Acre (1ha)

Crematorium

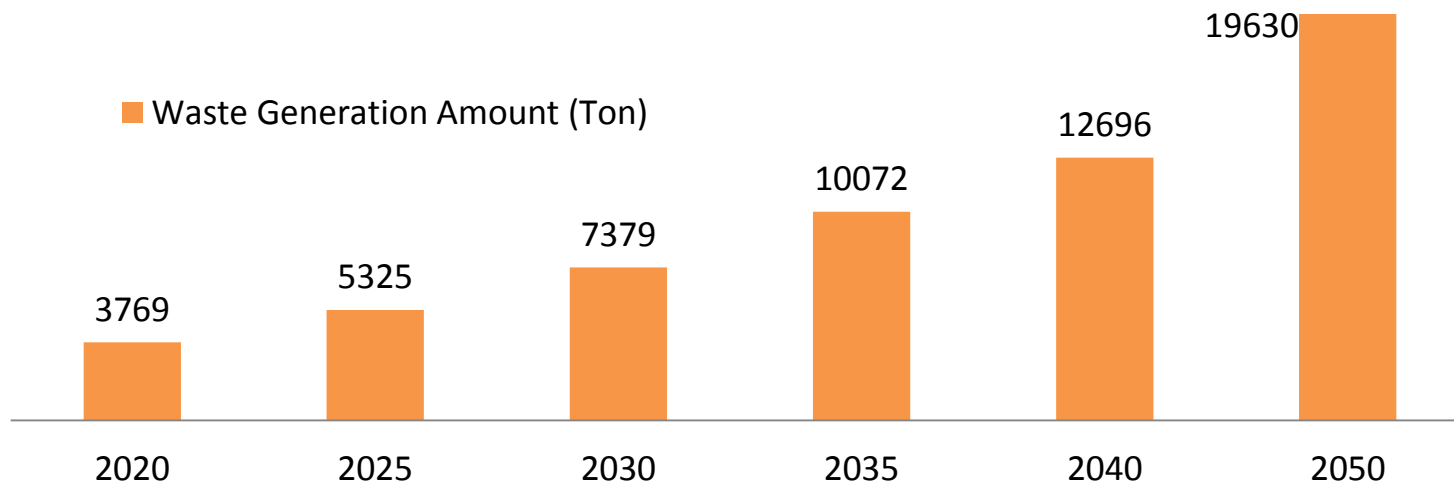
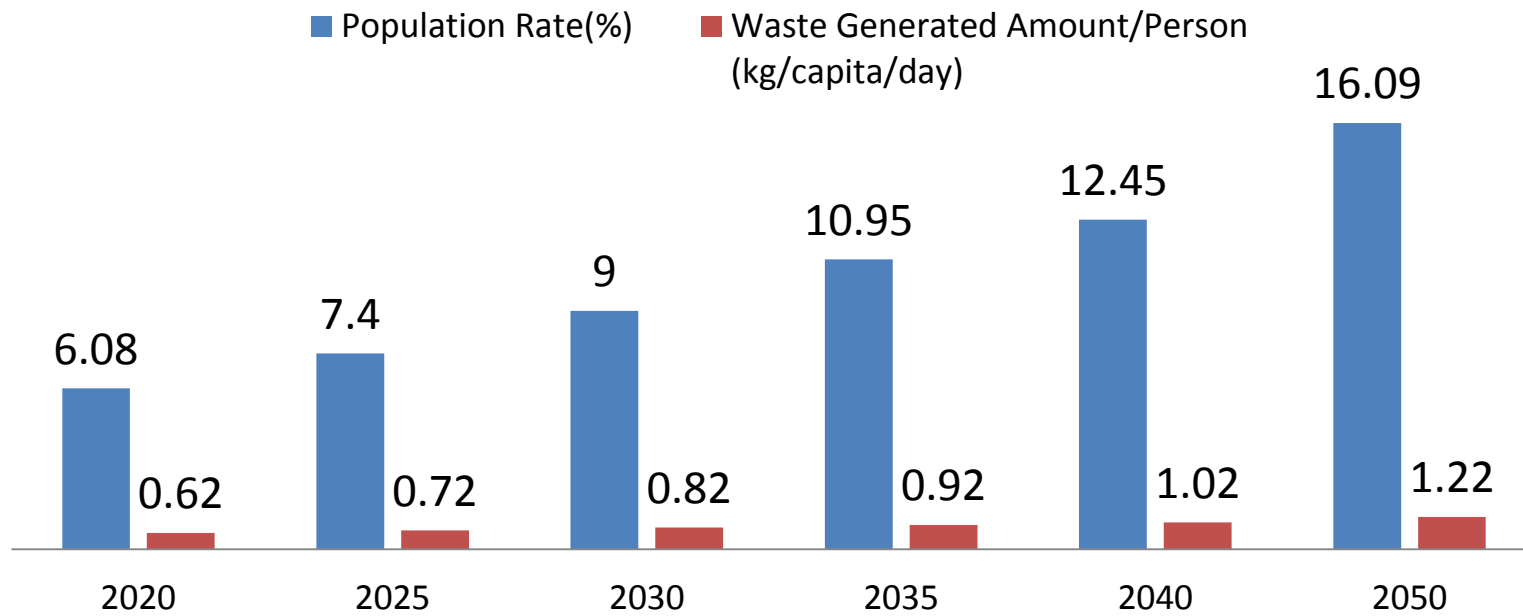
Implementation Fukuoka Landfill Pre Pilot Project (January 2018)



Overall Weighted Average Composition of MSW as Delivered to the FDS Analyzed by YCDC-PCCD and ADB (2017)



Estimation of Waste Generation Amount from 2020 to 2050



Fire Incident in Htein Bin Final Disposal Site, one of the biggest FDSs in Yangon City located in Northern Part of the City (April, 2018)



Started Used Date	2003
Total Land Area	150 Acres (60 Ha)
Daily Waste Disposed Amount	1200 – 1500 tons/day
Fire occurred Date	21 April 2018
Burnt Area	120 Acres (48 Ha)
Completed Fire Extinguishing	3 May 2018
Causes to Fire Incident	<ul style="list-style-type: none"> -Chemical reaction from biological decomposition -heat resulting in high temperatures - it may cause a fire to occur and spread from beneath

Current Situation of Implementing Process in Yangon City

- The current disposing method of MSW is unsystematically so that further activities of awareness campaign is conducting within the City Boundary.
- Planning to integrated existing Final Disposal Sites Management.
- Implementing advanced collection and transportation system for Healthcare Waste by using Box Type Container Vehicle.
- Setting up to construct 20 tons per day Healthcare Waste Incineration Plant.

Strategic Evaluation Factors

- Currently, there are (2) main FDSs and (2) temporary FDSs in Yangon City. The existence of the FDSs are 17 years ago. All waste are mixed and could not apply sorting system and also included recyclable materials.
- As could not apply sorting system and disposing for long time and heat resulting in high temperature, Fire Incidents occurred at Htein Bin FDS in end of May 2018 and complete fire extinguishing period took (12) days.
- PCCD tried transform Integrated Solid Waste Management System with allocated plan since past years although depending on the land scare problem and present situation, need to promote transforming procedures rapidly.
- Plan to implement International Waste Sorting System, Waste to Energy such as Incineration, Sanitary Landfill, Composting, Material Recovery Facility (MRF).
- Government Bodies are also trying to promote Incineration Plant and Sanitary Landfill related with Integrated Solid Waste Management enthusiastically and rapidly and planning to implement in near future.



Thank you for your attention