



Current Situation of Solid Waste Management in Yangon City

Presented by

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Yangon City Development Committee

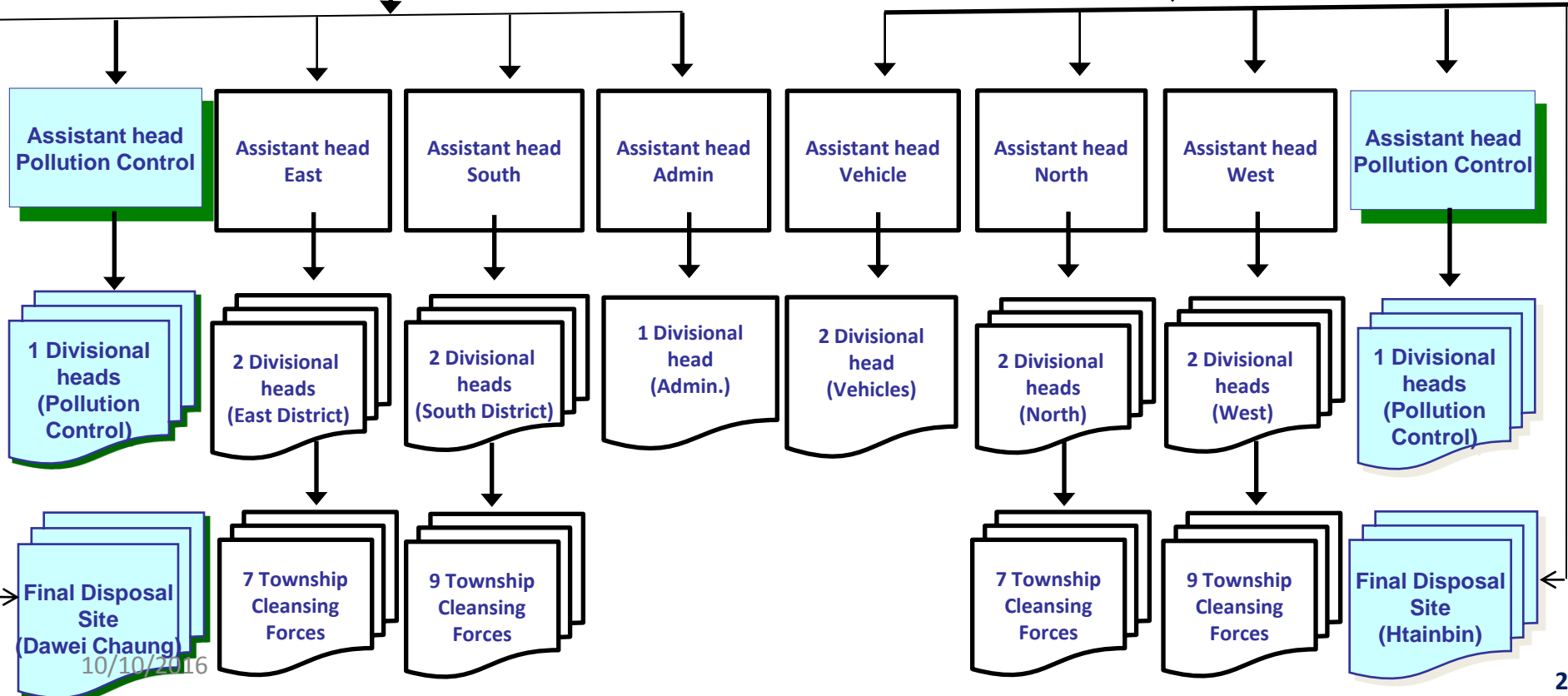
Organizational Chart of Pollution Control and Cleansing Department

-Officer = 36
-Other Rank = 1085
-Labor = 3864

Head of Dept.

Deputy Head (East+South)

Deputy Head (North+West)



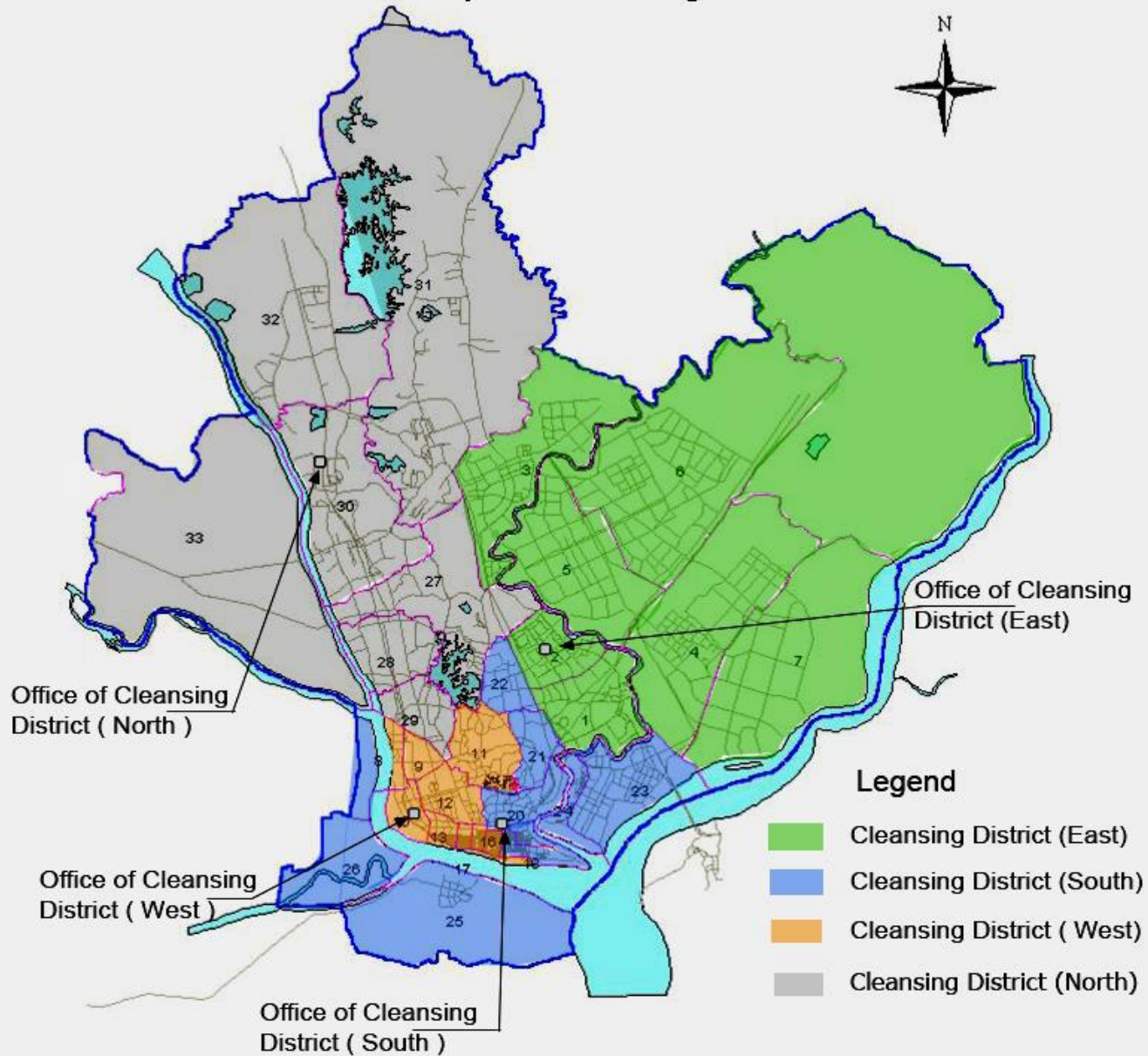
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Profile

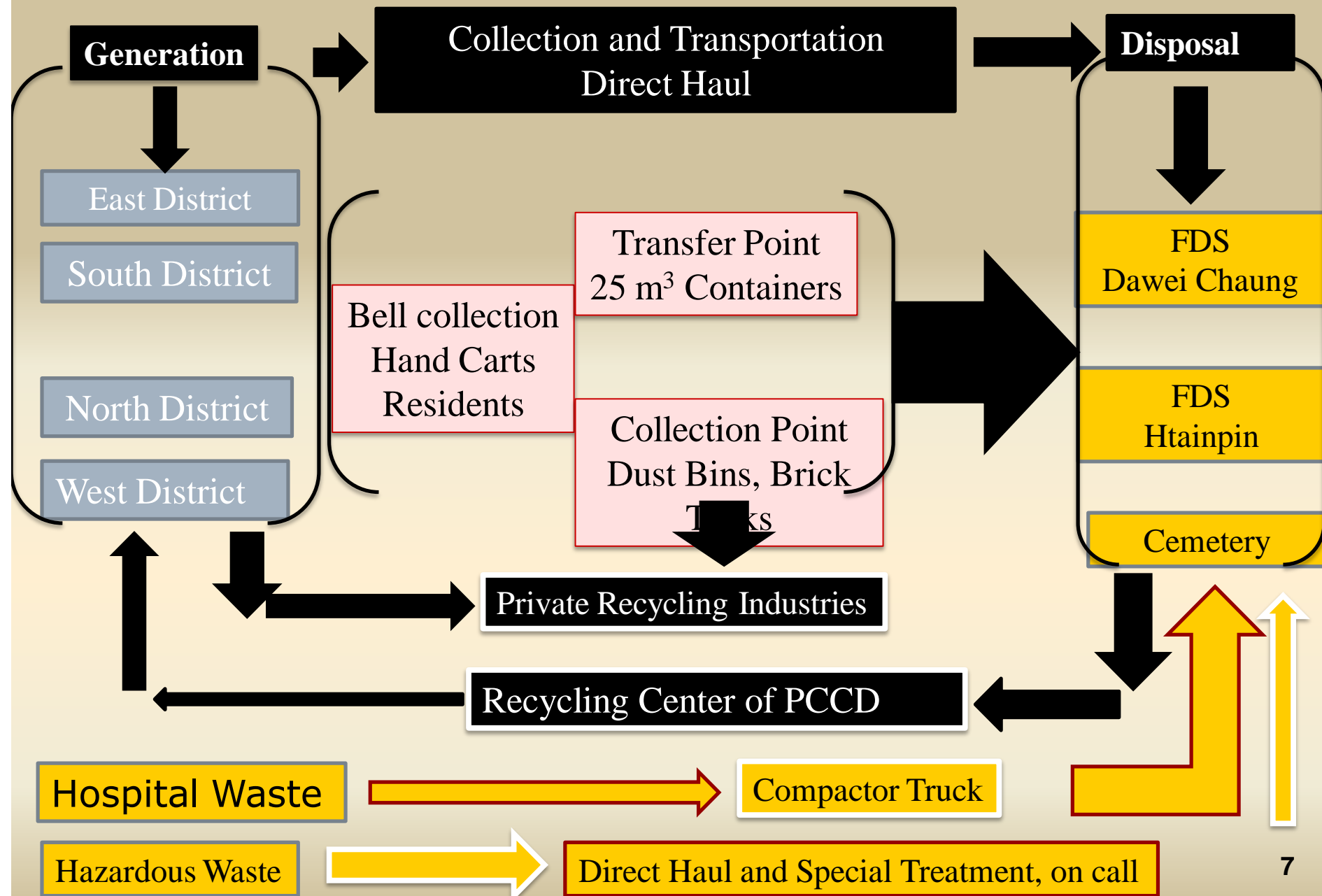
Area	-	The administrative boundary of YCDC, in 1985 (133.643 Sq-Miles) and now a day (292.426) Square Miles.
Population	-	5.8 million (2014)
Township	-	33 Townships
Generation Rate	-	0.41 Kg / Capita / Day
Household Waste Generated	-	2000 tons per day
Industrial Waste	-	150 tons per day

Area Map

Location Map of Cleansing District



Waste Flow in Yangon (2012)





Dry Waste

Yangon People
&
House Hold
Source Separation

Wet Waste



Waste Define in Yangon



Waste

Household waste

Organic Waste

Inorganic Waste

Industry

Construction

Hazardous

Hospital

Others



Collection and Transportation



Public
(Household)

Carts

Dust Bins

Trucks

Containers

Truck

Truck

Truck

RORO

FDS



Industrial Waste Management



Containers



Tipping Fee at site, 5000 kyat par tons and exceed ton about added 2000 kyat.

Industries

On call System

FDS



Structure of Recycling Market



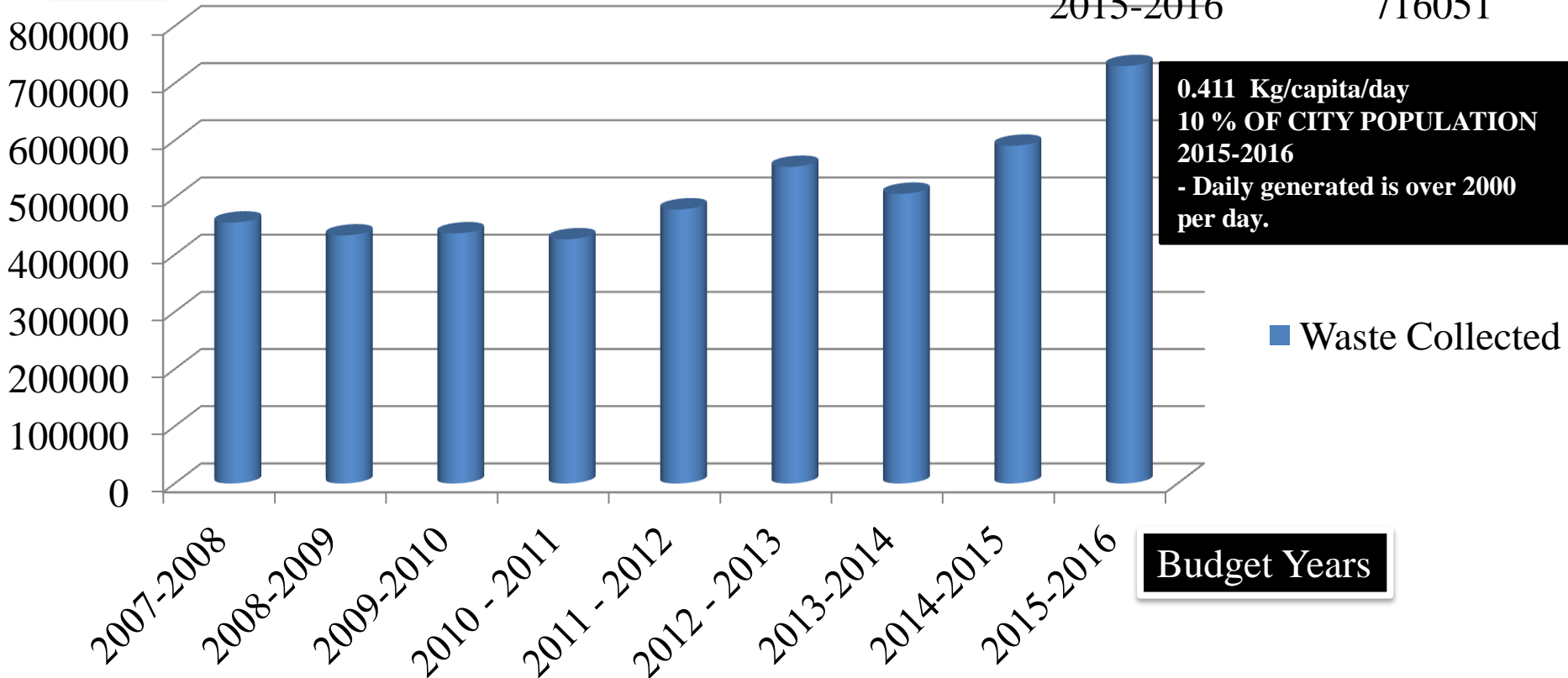
Yearly Waste Collected

Waste Collected

2007-2008	456344
2008-2009	433764
2009-2010	437472
2010 - 2011	426999
2011 - 2012	479280
2012 - 2013	553719
2013-2014	506657
2014-2015	590632
2015-2016	716051

Tons

Waste Collected



Budget Years

Waste to Energy Project

Incineration Facility in Htawei Chaung FDS North Dagon Township has been implemented since 2012 fiscal year .

- Incineration Capacity – 600ton/day
- Power Generation Capacity – 17.4 MGW
- The Power Purchase Agreement (PPA) for electric between Ministry of Electrical Power is still negotiated.



Sanitary Landfill in Htain Bin FDS Hlaing Thar Yar Township has been implemented since 2012 fiscal year .

- Land Fill Capacity – 800ton/day
- Power Generation Capacity – 20 MGW
- The Power Purchase Agreement (PPA) for electric between Ministry of Electrical Power is still negotiated.

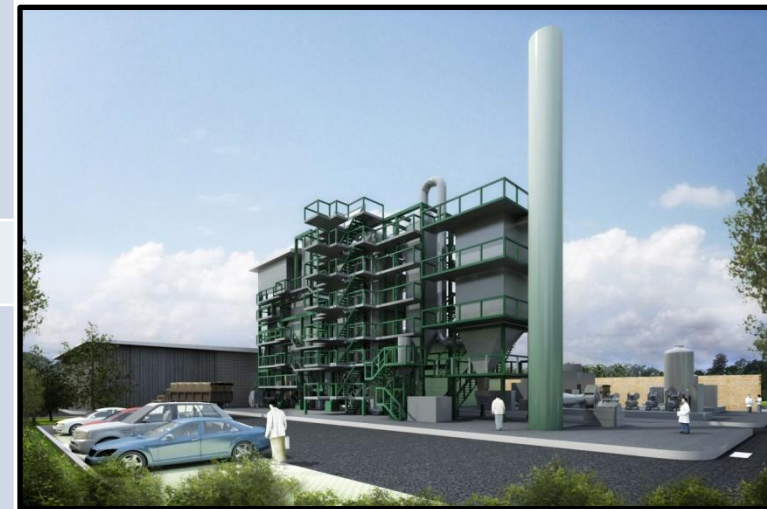


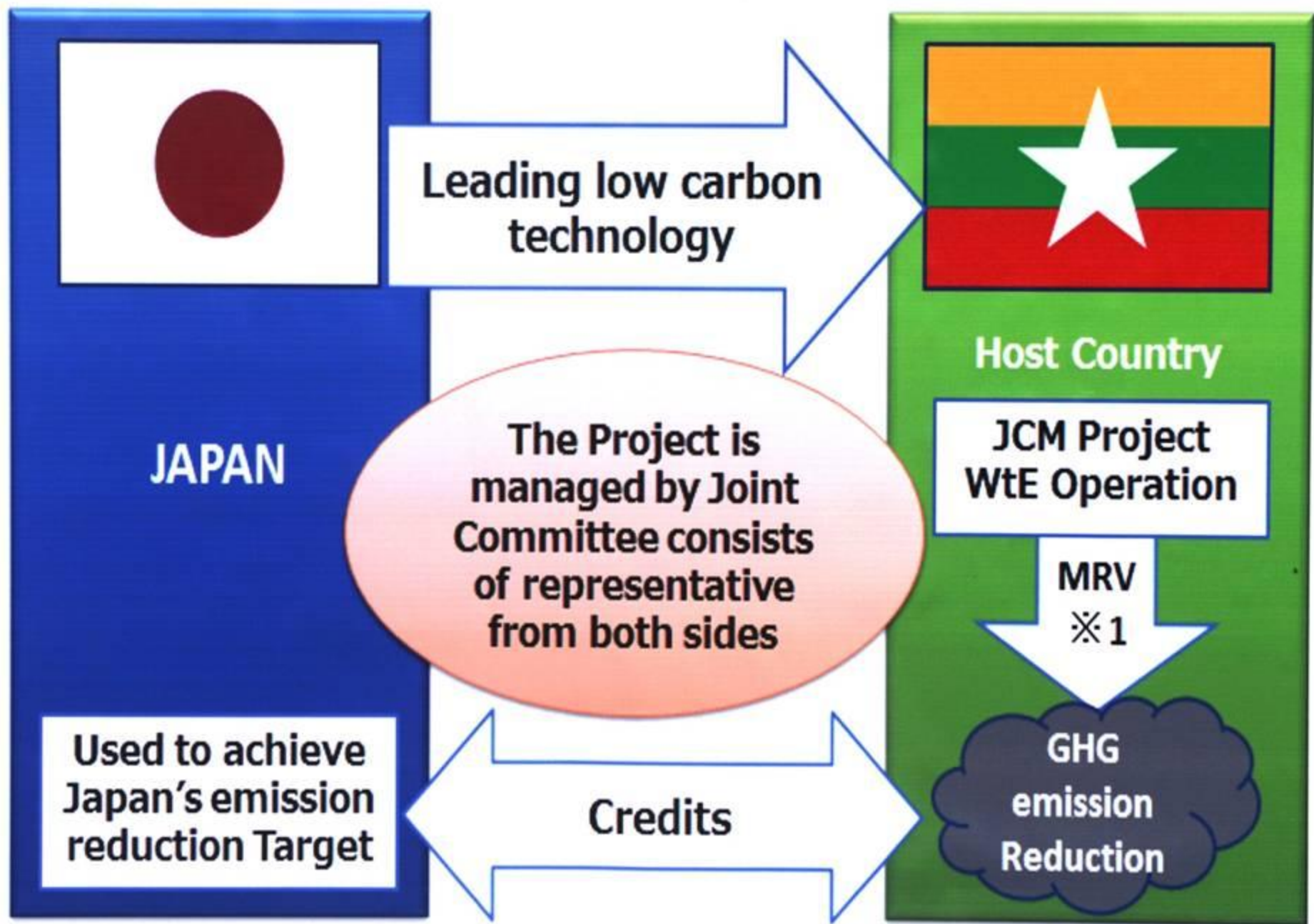
Yangon Waste to Energy Plant Project

✓ 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	89 %





*1 measurement, reporting, verification

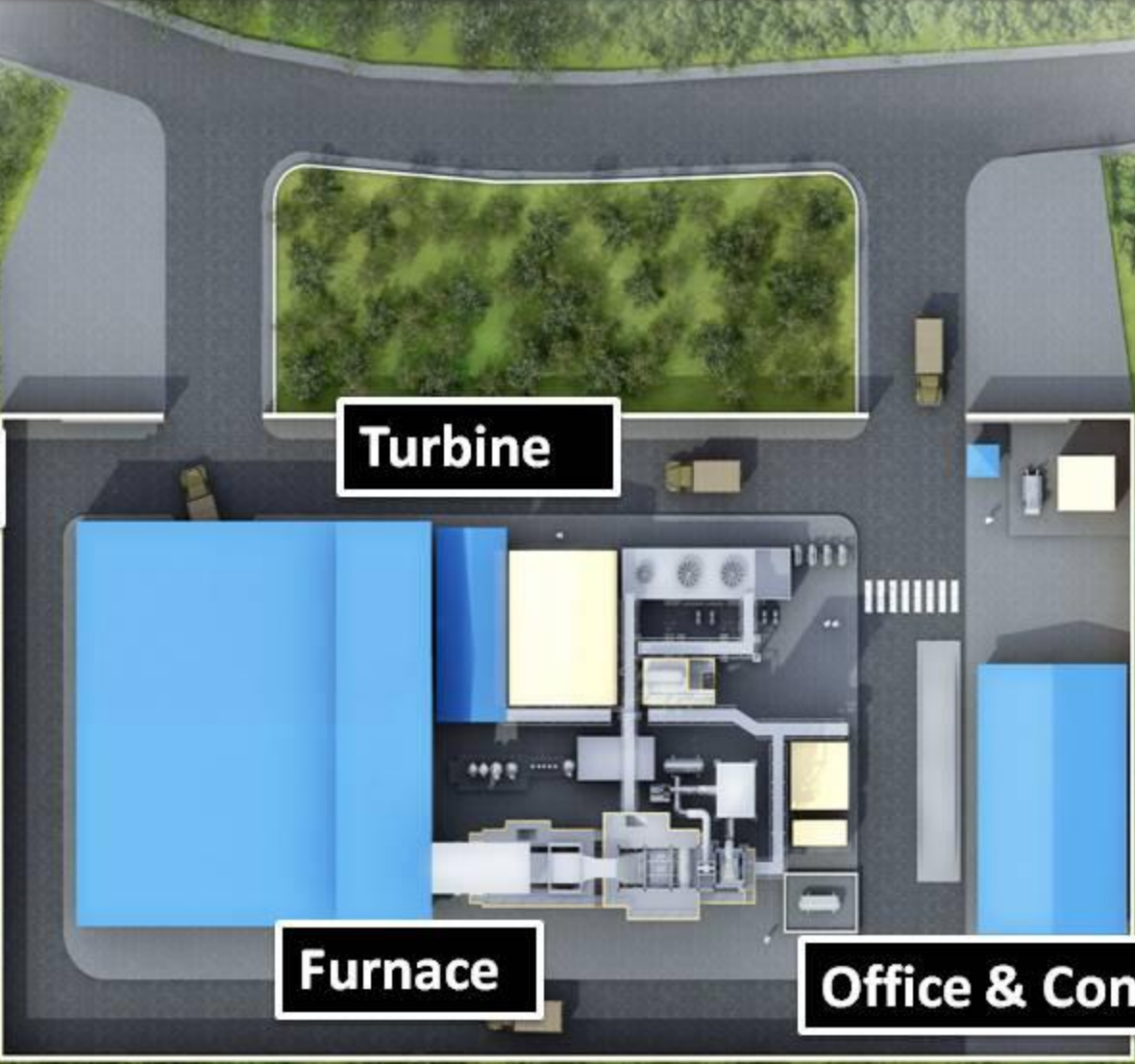
ရန်ကုန်အမှိုက်မှစွမ်းအင်ထုတ်လုပ်သည့်စက်ရုံစီမံကိန်း

Waste Yard

Turbine

Furnace

Office & Control Room



ရန်ကုန်အမှိုက်မှစွမ်းအင်ထုတ်လုပ်သည့် စက်ရုံစီမံကိန်း



Existing Used Main (2) Final Disposal Sites & (4) Temporary Small FDS

N O	Location of FDS site	Constructed Year	Planned Capacity	Site (Plant) Area	Dispose Ton Per Day (Current)	Remark
1	HtainBin	2002	-	<u>150- Acre</u> Used- 70 Ac	950	Open Dumping
2	Htwei Chaung	2001	-	<u>147 – Acre</u> Used-47.4 Ac	800	Open Dumping
3	Dala	2003	-	1.3- Acre	20	Low Landfill Temporary site
4	Seikkyi Khanaung To	2003	-	0.25 - Acre	5	Low Landfill Temporary site
5	Mingalardon	2003	-	0.91 - Acre	72	Low Landfill Temporary site
6	Shwe Pyi Thar	2005	-	1 - Acre	60	Low Landfill Temporary site

Current Situation of Air Quality Monitoring

Type of Air Quality Monitoring Device	HAZ-SCANNER Modern EPAS
Parameters monitored by AQM Device	7 parameters (CO ₂ , CO, CH ₄ , NO ₂ , SO ₂ , PM _{2.5} and PM ₁₀ (Relative Humidity, Wind Speed, Wind Direction and Temperature)
Proposed locations for monitoring	67
AQM Stations (Fixed)	3
AQM Mobile	64 (industrial zones, public area, parks, disposal sites, cemeteries, etc.)

Air Quality Monitoring in Public Area



AQM – Mobile Vehicle in 2016



Clinical Waste Management

Categorize into three types as follows-

- Yellow color (infectious waste)
- Red color (sharpening and syringes, needles, etc)
- Blue & Green (domestic waste)



Yellow Bags

- (incineration process)

Red Bags

- (submerge to concrete deep well – process)

Blue and Green Bags

- (disposed at site)



• Services are also provided for the destruction of expired dated drugs.

EXPIRED MEDICINE

Incineration Process



Submerge to Deep Well Process



Hazardous Waste Disposal at Designated Landfill Yard



Awareness Activities organized by PCCD

- ❖ School Awareness Activities of SWM to school children in order to make the best practice of SWM since childhood



- ❖ Community Awareness Activities of SWM in order to raise public aware and interests in participation SWM programs



Joint Project on Improvement of Waste Management in Yangon

between

Yangon City Development Committee—

Pollution Control and Cleansing Department

and

Tokyo Metropolitan Government, Japan

Phase 1 (2013-2014)

Back to Back Mission Program

Project Purpose

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

Yangon Mission from TMG



Tokyo Mission from YCDC,PCCD



Phase 2 (2015-2017)

Project Purpose

To establish a framework to implement well-planned and integrated waste management while gaining the cooperation of residents toward a realization of 3R-oriented society in Yangon.

❖ **YCDC-PCCD and TMG, conducted the following activities;**

- ✓ Department's Annual Activities Report
- ✓ Staff Capacity building Booklet
- ✓ Flyers of SWM
- ✓ Safety Manual Booklet

❖ **Performed the trainings program below;**

- ✓ Awareness Training conducted by TMG
- ✓ Training for explanation about staff manual ,SWM Flyers to township level staffs, fee collectors and employees
- ✓ Awareness ToT Training to school teachers performed by PCCD

Yangon Mission from TMG



Tokyo Mission from YCDC, PCCD



8 Pages of Solid Waste Management Awareness Flyer

စည်းကမ်းတကျ အမှိုက်စွန့်ပစ်ခြင်းဖြင့် ရရှိလာနိုင်မည့် အကျိုးကျေးဇူးများ

- ပတ်ဝန်းကျင်တွင် ရောဂါဖြစ်ပေါ်စေနိုင်သည့် ဝိုးမွှားအန္တရာယ်များမှ ကာကွယ်နိုင်ခြင်း
- အနံ့ဆိုးများထွက်ရှိမှု လျော့နည်းလာနိုင်ခြင်း
- စနစ်တကျ အမှိုက်စွန့်ပစ်သည့်အတွက် သိမ်းဆည်းရလွယ်ကူခြင်း
- အမှိုက်သိမ်းလုပ်သားများ၏ ကျန်းမာရေးမထိခိုက်ခြင်း
- မြို့တော်သန့်ရှင်းသာယာလှပပြီး အမြင်တင့်တယ်ခြင်း
- စွန့်ပစ်အမှိုက်များမှ စွမ်းအင်ထုတ်လုပ်နိုင်ခြင်းတို့ကြောင့် လူမှုဝန်းကျင်တွင် အကျိုးကျေးဇူးများရရှိစေခြင်း
- Recycle လုပ်ငန်းများဆောင်ရွက်ခြင်းဖြင့် ဝင်ငွေရရှိခြင်း



ဆက်သွယ်ရမည့်လိပ်စာ

ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးနှင့်သန့်ရှင်းရေးဌာန (ရုံးချုပ်)

ရန်ကုန်မြို့တော်စည်ပင်သာယာရေးကော်မတီ

(၁၂)ထပ်ရုံး၊ (၆)လွှာ၊ ကုန်သည်လမ်း (ဗိုလ်မြတ်ထွန်းလမ်းနှင့်အိမ်ဖြူလမ်းကြား)

ဗိုလ်စာထောင်မြို့နယ်၊ ရန်ကုန်မြို့

www.ycdc.gov.mm

ရန်ကုန်မြို့တော်စည်ပင်သာယာရေးကော်မတီ

ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးနှင့်သန့်ရှင်းရေးဌာန

၂၀၁၆ - ၂၀၁၇



အမှိုက်များကို စနစ်တကျစွန့်ပစ်ခြင်းဖြင့်
သန့်ရှင်း၊ သပ်ရပ်၊ သာယာလှပ၊ စိမ်းလန်းသော
ရန်ကုန်မြို့တော်ကြီးကို တည်ဆောက်ကြပါစို့

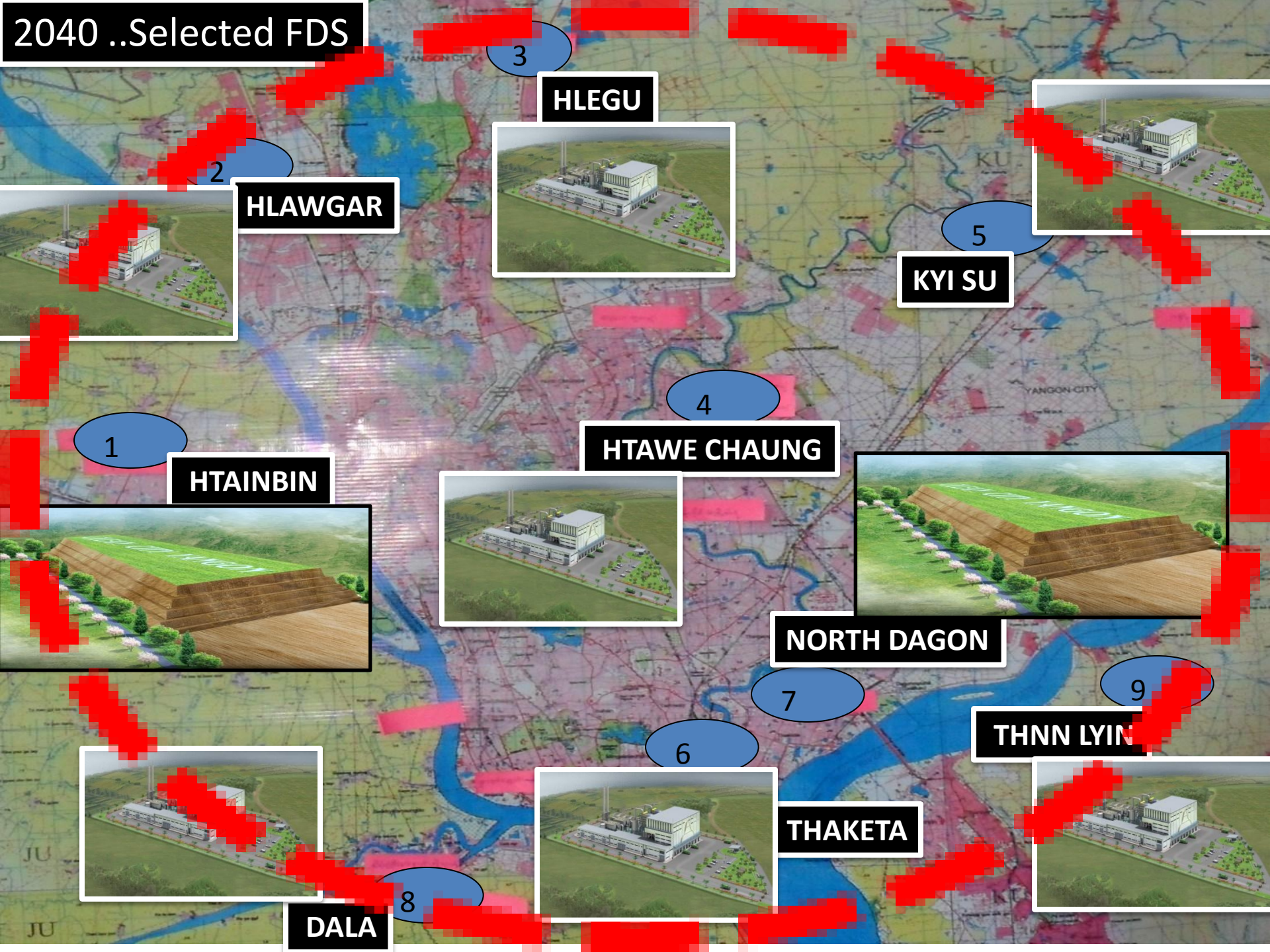


TOKYO
METROPOLITAN
GOVERNMENT

Future Plan

- To Construct small incineration plants in relevant areas and districts.
- To promote the Integrated Solid Waste Management through with Public Private Partnership(PPP) not only whole townships but also pilot township.
- Necessary for Waste Water Mini Laboratory at least 5 parameters.
- To develop Hazardous waste and Medical Waste Incineration Plant about (10 ton/day)
- To implement designated landfill site for hazardous waste.

2040 ..Selected FDS





Thank you for your attention