

# Overview of JICA's initiatives in solid waste management sector in Bangladesh



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# JICA's support of Solid Waste Management

## Severe deterioration of the urban environment



- ✓ Scattering waste around the city
- ✓ Social issues such as odor, pests, dirty water, clogged drainage, Cholera

## Waste management aiming at the most clean city in the country

Development of Clean Dhaka Mater Plan 2005-2015

## Waste management aiming at a model city in Asia

Development of Clean Dhaka Mater Plan 2018-2032

Activities with various support schemes to realize Clean Dhaka



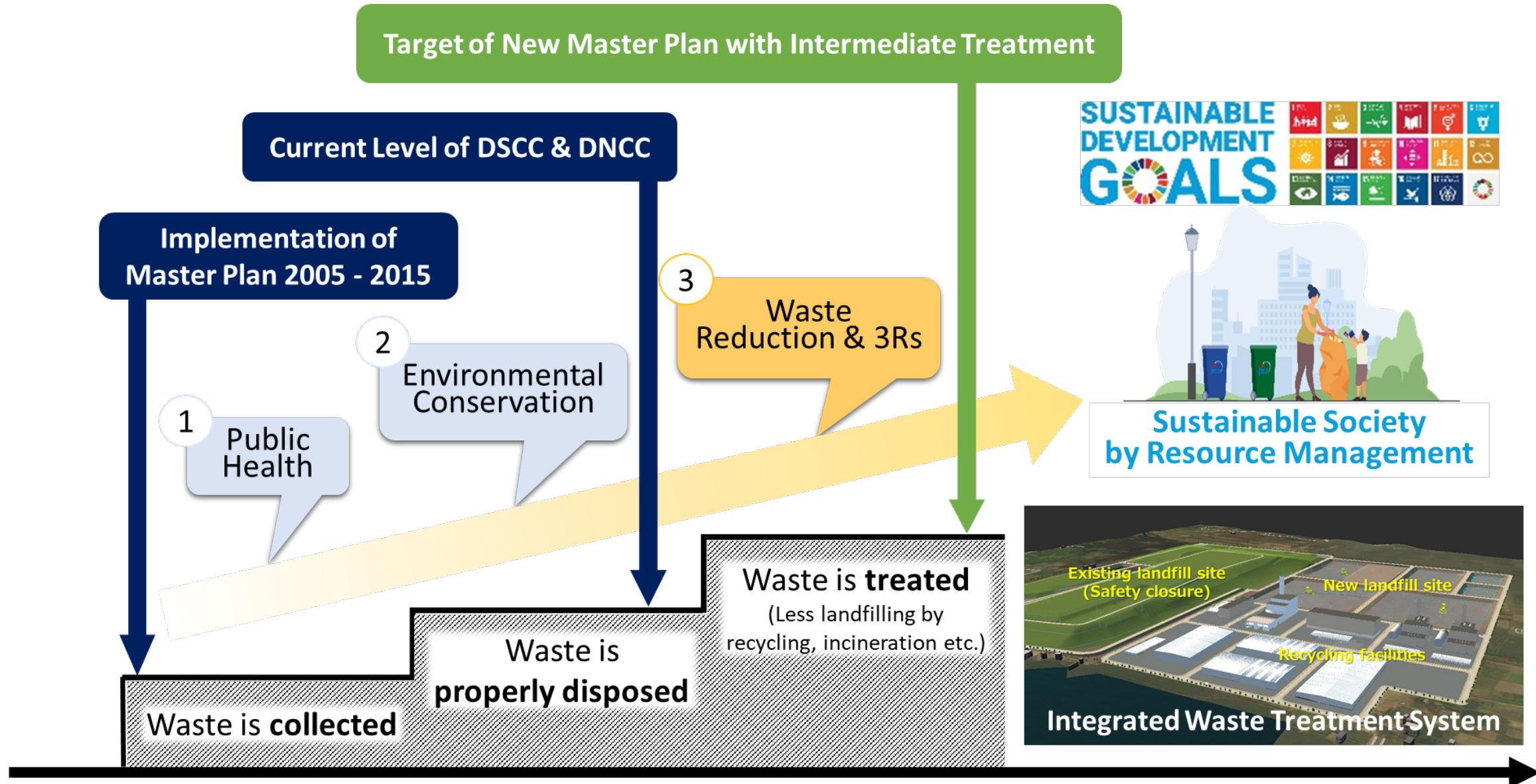
## JICA's assistance

Before 2000

2000-2016

2017-2022

# Stage of Solid Waste Management



# Clean Dhaka Mater Plan 2005-2015

**Concept of the Master Plan :  
Establishment of proper waste collection & disposal**

## JICA's support to realize the Master Plan

### Technical Cooperation Project (2007-2013)

- ✓ Establishment of Waste Management Department
- ✓ Improvement of waste collection system
- ✓ Improvement of disposal sites
- ✓ Public awareness and public involvement

### Japan Overseas Cooperation Volunteers (2006-2016)

- ✓ Environmental education

### Grant Aid Project (2009-2010)

- ✓ Provision of 100 waste collection vehicles

### Debt Cancellation Fund (2005-2010)

- ✓ Improvement of 2 dumping sites

### Grassroots Grant Aid Project (2006)

- ✓ Provision of a medical waste incinerator

Unsanitary



Sanitary

Manual system



Mechanized system

# Achievement of the Mater Plan 2005-2015

## 1. Establishment of Waste Management Department

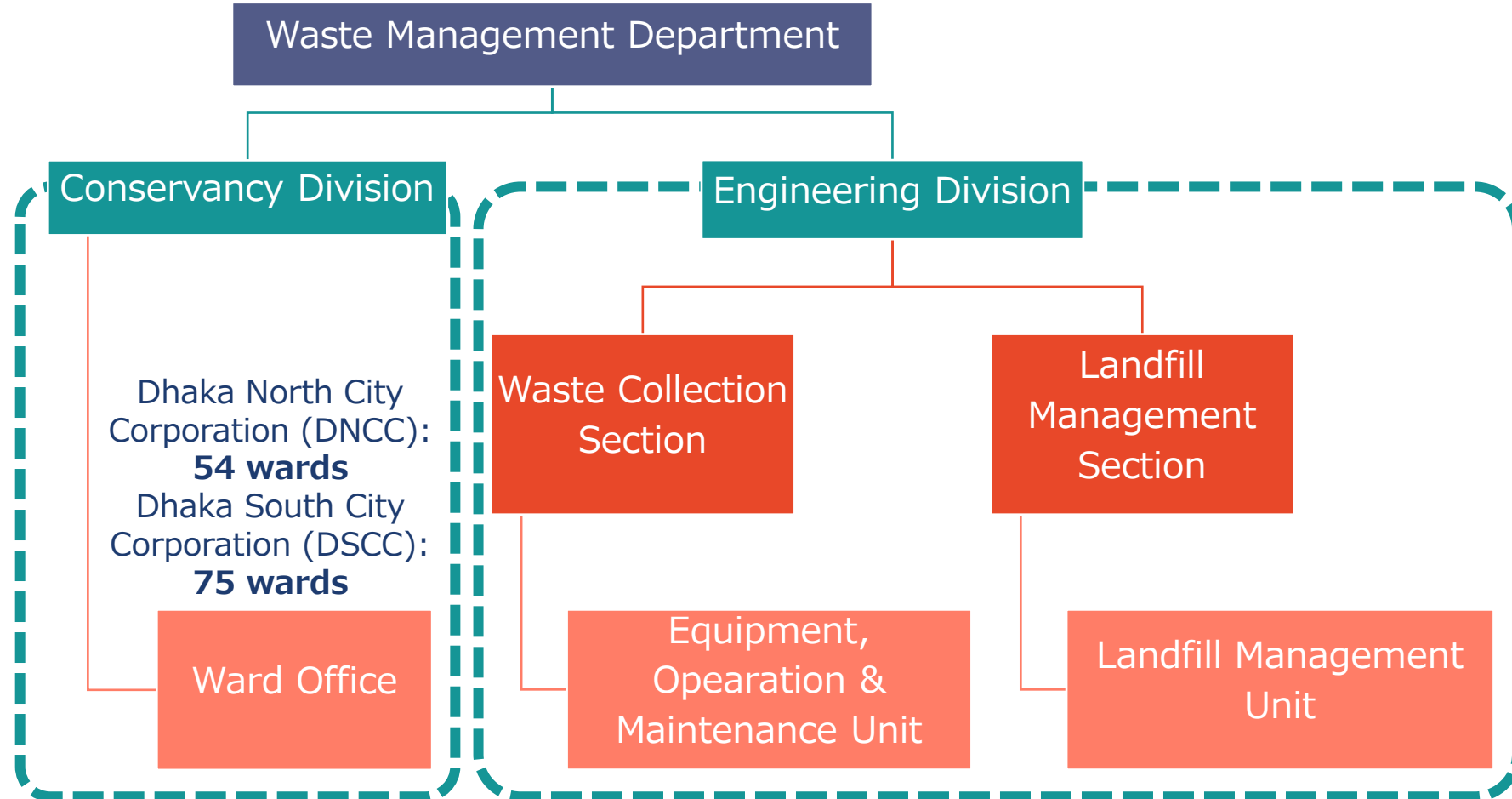
Before...

Conservancy Wing

- ✓ Road sweeping
- ✓ Waste collection

**Minimum  
coordination**

After...



**Harmonization of waste management activity**



# Achievement of the Mater Plan 2005-2015

## 2. Improvement of waste collection

Before...



After...



# Achievement of the Mater Plan 2005-2015

## 3. Improvement of landfill sites

### Before...

- Open dumping sites
- ✓ No soil cover
- ✓ Leachate to the access road



### After...

- Sanitary landfill sites
- ✓ Soil cover and gas ventilation
- ✓ Proper leachate collection & treatment



# Achievement of the Mater Plan 2005-2015

## 4. Participatory solid waste management: Ward-based Approach (WBA)



WBA1



WBA2



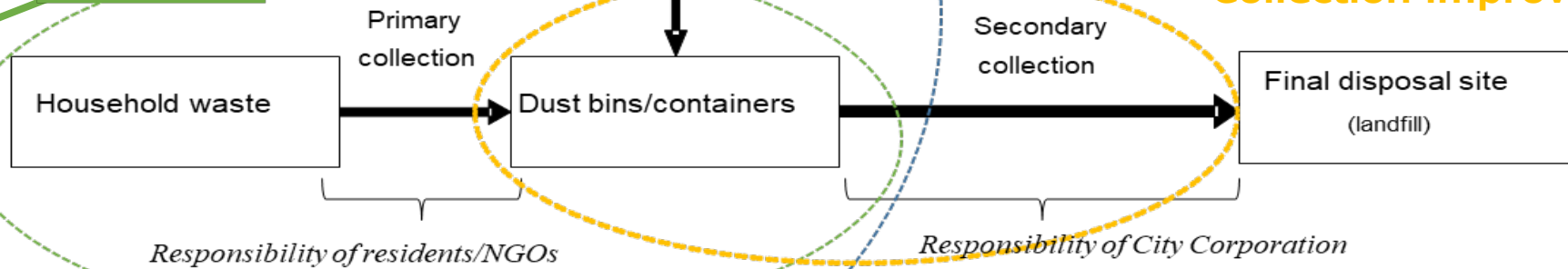
Cleaner's health & safety

Collection improvement



WBA3

WBA4

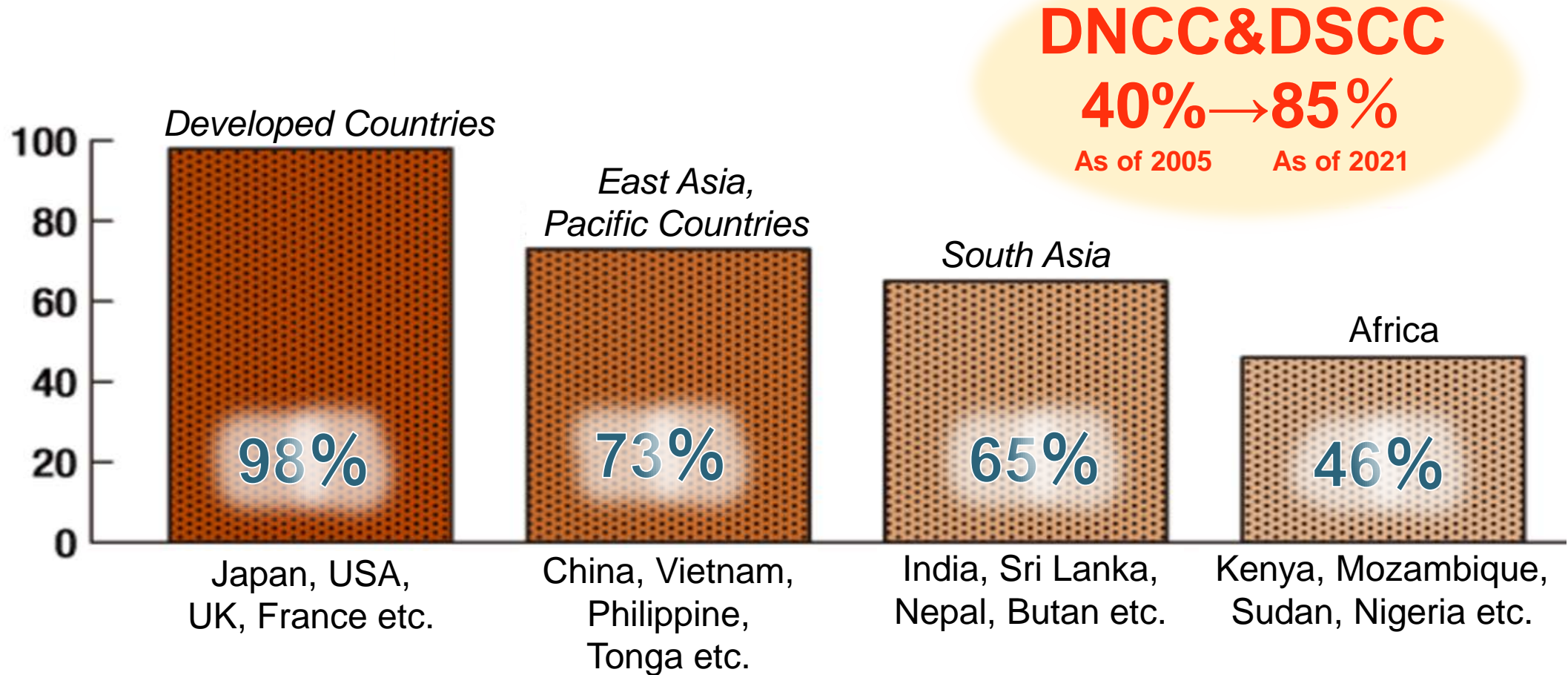


Community awareness



# Achievement of the Mater Plan 2005-2015

## Waste collection rate by region



# Clean Dhaka Mater Plan 2018-2032

**Concept of the Master Plan :  
Sustainable waste management introducing 3Rs & intermediate treatment**

## JICA's support to improve level of the waste management

### 2<sup>nd</sup> Technical Cooperation Project (2017-2022)

- ✓ Maser plan preparation in DNCC & DSCC
- ✓ Waste segregation pilot project
- ✓ Introduction of detachable rickshaw vans
- ✓ WBA implementation

### 2<sup>nd</sup> Grant Aid Project (2015-2018)

- ✓ Provision of 150 waste collection vehicles
- ✓ 12CC information sharing meeting
- ✓ Support to Chattogram City Corporation (CCC)

**In the pipeline: 3<sup>rd</sup> Technical Cooperation Project with waste reduction & 3Rs**



# Ongoing activities in the 2<sup>nd</sup> TC Project

## 1. Waste segregation pilot project in DNCC, DSCC & CCC

Target Households (approx.)		
CCC	Area #1	3,600
	Area #2	1,100
DSCC		440
DNCC		300



Inauguration ceremony in CCC



Social mobilizers



Segregated household waste

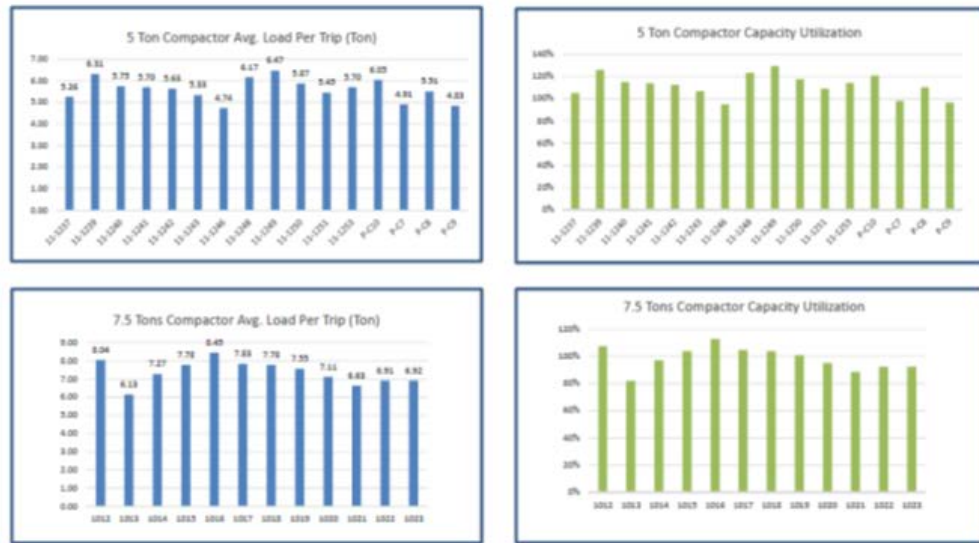


Community meeting

# Ongoing activities in the 2<sup>nd</sup> TC Project

## 2. Data management and ICT

### □ Weighbridge data analysis



### □ Environmental Monitoring

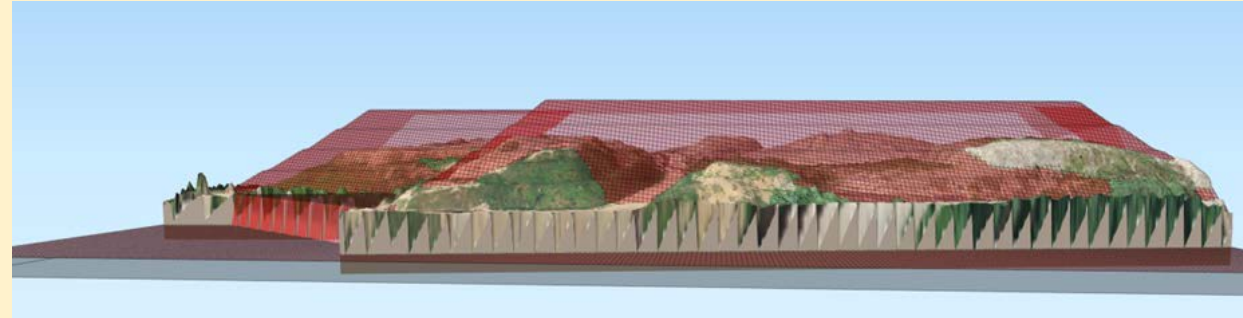


Landfill gas monitoring



Leachate monitoring

### □ Landfill Volume analysis by drone



# Ongoing activities in the 2<sup>nd</sup> TC Project

## 2. Medical waste management in CCC

### Installation of the incinerator



### Chattogram Medical Waste Incinerator

(from the people of Japan)

**Outline of Incinerator**

Item	Description
Incinerator type	Water cooled furnace and Smokeless
Incinerator capacity	200 kg/hour (4.8 t/day)
Operation time	24 hour (3 shifts x 8 hour)
Receiving waste type	Medical waste (Infectious and Sharp)
Waste receiving source	Hospital and Clinic of Chattogram
Gas emission standard	Meet Japanese standard

**Project for Strengthening of Solid Waste Management in Dhaka North City, Dhaka South City, and Chittagong City**

### Proper Sorting & Disposal of medical waste



মেডিকেল বর্জ্য ব্যবস্থাপনা নিয়ম অনুযায়ী মেডিকেল বর্জ্য পৃথকীকরণ

**সবধরনের বর্জ্য**

সবধরনের মেডিকেল বর্জ্য (কাগজ/প্লাস্টিক, ইলেক্ট্রনিক্স, মেডিকেল বর্জ্য) সঠিকভাবে পৃথক করে রাখতে হবে।

**স্বাভিকভাবে ক্ষয়প্রাপ্ত বর্জ্য**

স্বাভিকভাবে ক্ষয়প্রাপ্ত মেডিকেল বর্জ্য (কাগজ, প্লাস্টিক, কাঁচ, ধাতু) সঠিকভাবে পৃথক করে রাখতে হবে।

**কোমর বর্জ্য**

কোমর বর্জ্য (কাঁচ, ধাতু, প্লাস্টিক, কাগজ) সঠিকভাবে পৃথক করে রাখতে হবে।

**পুনর্ব্যবহারযোগ্য সবধরনের বর্জ্য**

পুনর্ব্যবহারযোগ্য সবধরনের বর্জ্য (কাঁচ, ধাতু, প্লাস্টিক, কাগজ) সঠিকভাবে পৃথক করে রাখতে হবে।

**১. সঠিক পথে পৃথকীকরণ**

সবধরনের মেডিকেল বর্জ্য সঠিকভাবে পৃথক করে রাখতে হবে।

**২. সঠিক পথে সংগ্রহ**

মেডিকেল বর্জ্য সঠিকভাবে পৃথক করে রাখতে হবে।

**৩. পৌনঃপুন্য করা পর্দা**

পুনর্ব্যবহারযোগ্য সবধরনের বর্জ্য সঠিকভাবে পৃথক করে রাখতে হবে।

The Project for Strengthening of Solid Waste Management in Dhaka North City, Dhaka South City and Chittagong City

### Organizational capacity

- ✓ Activate the Medical Waste Management Committee
- ✓ Establish Medical Waste Management Unit in CCC
- ✓ Medical waste collection



*Project for Strengthening of Solid Waste Management  
in Dhaka North City, Dhaka South City, and Chittagong City*



**Thank you for your attention**

