

## JCCI ~JICA Clean City Initiative~

## To benefit **500 million** citizens in **50** countries by **2030**

JICA addresses waste, water and air pollution, and other environmental problems that cause health problems to create clean cities.



Japan International Cooperation Agency (JICA) supports Sustainable Development Goals (SDGs).

Cover Photo — Waste segregation in Kataragama, Sri Lanka. Sorting out fruit and other food waste that can be turned into compost quickly. Photo: Yusuke Abe Promote dialogue with partner countries, International organizations

ISSUES

Maximize development impact through "PLATFORM"

Enhance accountability Visualize impact / outcomes through annual monitoring and reporting





**Medium-term Plan** 

Impact to global issues

Outcome with other development partners

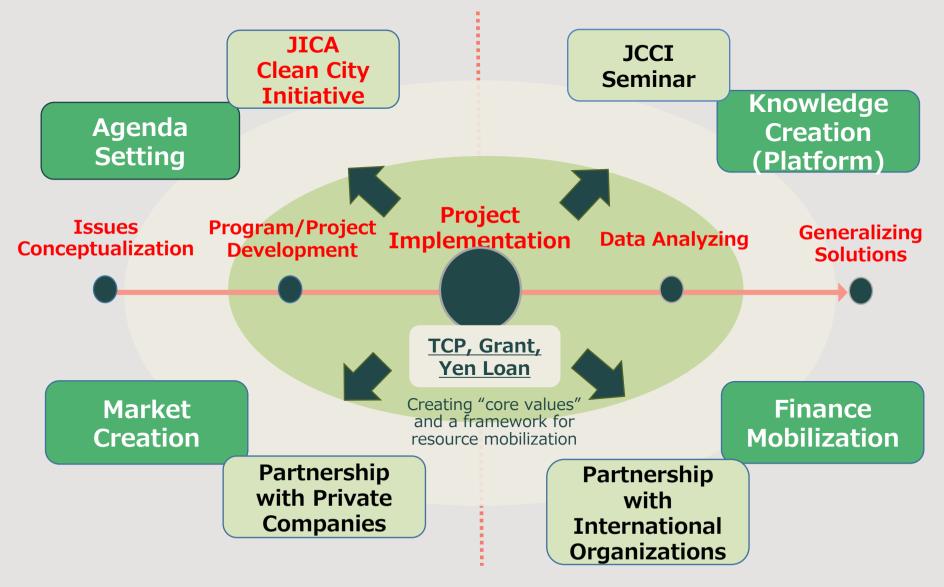
Outcome and Output through ICA's finance and Investment Cooperation, and Grants

> JICA's Technical Cooperation

Set as targets of JICA Global Agenda. Partners include donors, NGO, private sector, academic institutes, local gov. etc.

#### ISSUES $\rangle$ JICA Global Agenda: Four Segments to achieve the Global Target

#### **Non-finance/Intangible Resource Mobilization**



#### **Finance/Tangible Resource Mobilization**

Piles of waste that keep increasing and plastic waste in the ocean

In Sub-Sharan Africa, **70%** of waste is **left** in uncontrolled disposal sites





Residential and industrial wastewater released to the environment is causing serious health problems

# **3.6 billion people** live without adequate hygiene services such as toilets

Fourth biggest cause of death in the world is air pollution caused by industrial activities and cars

According to data released in 2019, 6.67 million people died from Air pollution



#### Cluster 1

Improve waste disposal structures to create a recycleoriented society

#### Cluster 2

Create a healthy water, air, and soil environment through environmental regulations and pollution prevention measures

Create and implement a system to collect, transport, and dispose of waste 1

2

3

Enhance the ability to analyze pollutants to understand the current problems

Reduce waste by introducing segregation and recycling

Develop and implement counter-pollution measures based on scientific evidence

3

2

Support policies that reduce waste generation and promote effective use of resources

Strengthen controls over pollutant generation while promoting investments in environmental measures

#### Steps toward waste improvement

1<sup>st</sup> stage

Improvement of public hygiene

#### ✓ M/P, Action Plan

- Collection Improvement
  ex. Participatory approach
- Dumping Control Improvement (Open dumping to controlled dumping)

### 2<sup>nd</sup> stage

Reduction of environmental burden and prevention of pollution

- **Leachate treatment**
- Sanitary landfill
- Segregation/3R
  Promotion

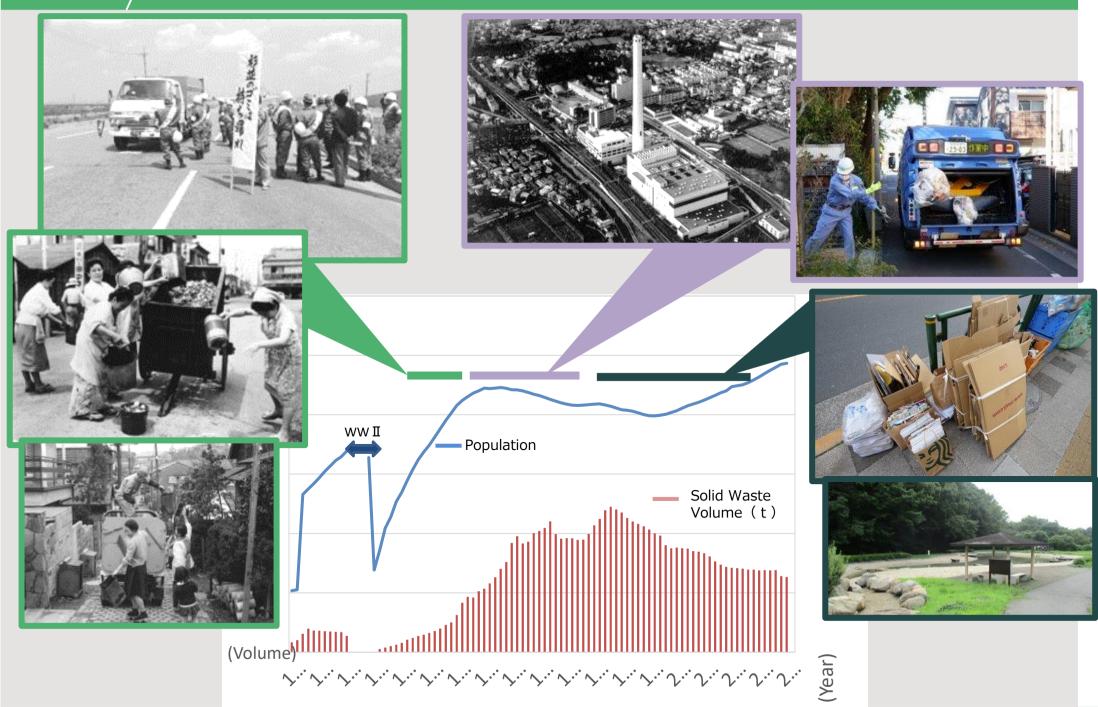
## 3<sup>rd</sup> stage

Establishment of material-cycle society with 3Rs initiative

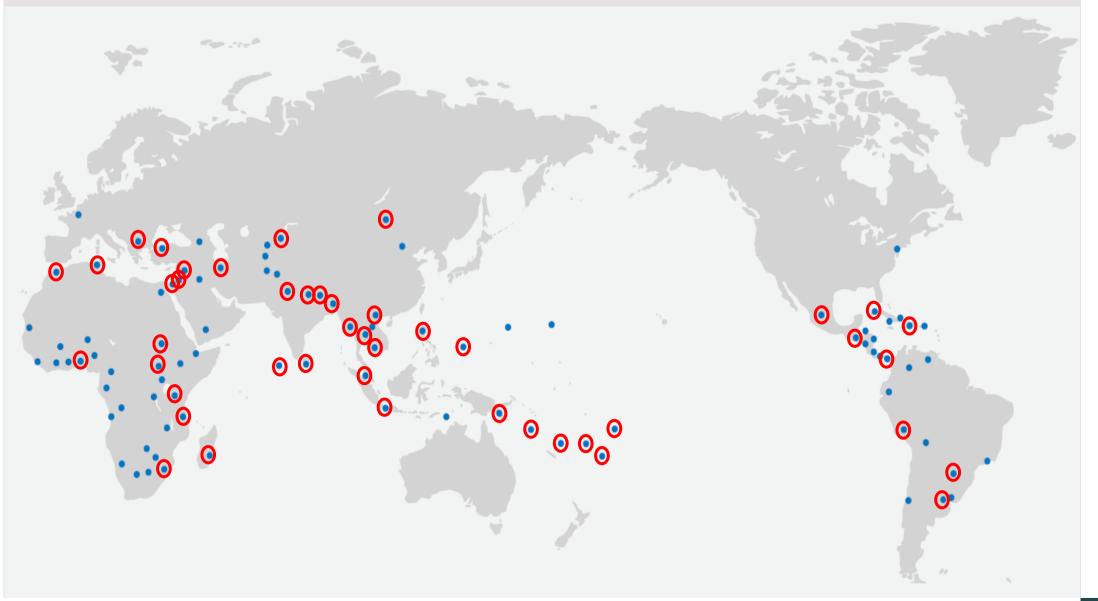
 Public awareness dev.
 Legal framework dev.
 Recycling industry promotion

#### Solid Waste Volume & Population in Tokyo, Japan History Road to material-cycle society from 1<sup>st</sup> stage 12,000,000 10,000,000 Solid Waste Population 9,000,000 Volume (t) 10,000,000 8,000,000 7,000,000 8,000,000 WW II 6,000,000 6,000,000 5,000,000 4,000,000 4,000,000 3,000,000 2,000,000 2,000,000 1,000,000 (Volume) (Population) 0 (Year) 1930 1936 1945 1948 1954 1960 1963 1966 1969 1972 1975 1978 1981 1984 1987 1990 1993 1996 1999 2002 2005 2008 2011 2014 2020 1933 1939 1951 1957 1942 2017

#### History Solid Waste Volume & Population in Tokyo, Japan



JICA Technical Cooperation Projects for Capacity Development in Municipal Solid Waste Management JICA Office
 MSWM Project



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## Road to material-cycle society in Malaysia ~M/P, Sanitary Landfills, 3R, WtE, etc., ~



Cluster1 > Three Stages: To realize sound- material- cycle society

#### **Steps toward waste improvement**



Improvement of public hygiene

/ M/P

 Dumping Control Improvement (Open dumping to controlled dumping)

## 2<sup>nd</sup> stage

Reduction of environmental burden and prevention of pollution

Leachate treatmentSanitary landfill

Vaste Minimize Plan

## 3<sup>rd</sup> stage

Establishment of material-cycle society with 3Rs initiative

- Legal framework dev.
- Recycling industry promotion
- ✓ E-Waste
- Waste to Energy

Achieve !

#### Achieve !

#### $\rangle$ JICA projects in Dhaka, Bangladesh (2000~)



CASES

## Waste collection rate improved significantly from 44% in 2004 to 85% in 2021 in Dhaka, Bangladesh

#### Landfill Site





Before…

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



Clean Campaign





After...

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



**Cleaners Training** 

#### Waste Collection

Before



After



#### Before



After



photo: © Yachiyo Engineering Co., Ltd.

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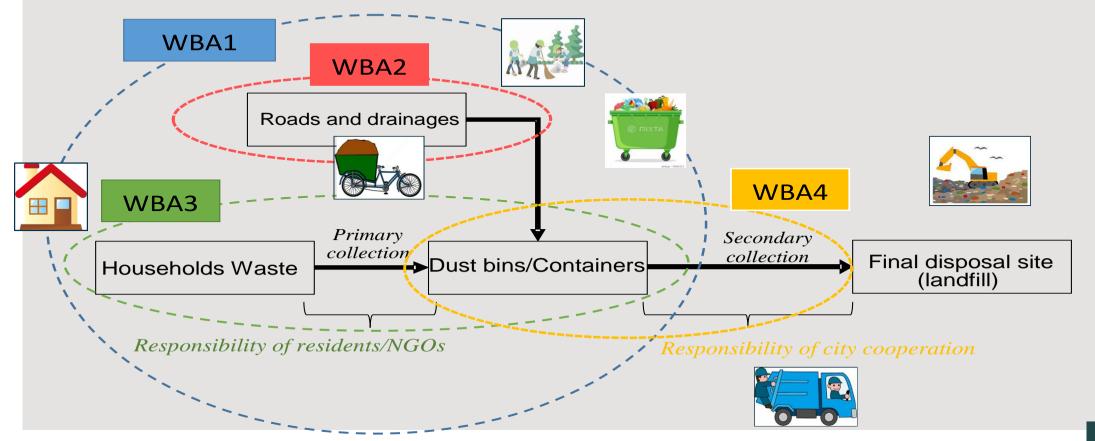
#### WARD BASED APPROACH (WBA)

WBA 1: Construction and management of ward SWM office < < : >

WBA 2: Safety education for cleaners and establishment of safety and sanitation committee <...>

WBA 3: Public awareness raising

WBA 4: Improvement of waste collection service in each ward



#### Steps toward waste improvement

1<sup>st</sup> stage

Improvement of public hygiene

Achieve !

#### ✓ M/P

- Segregation/Collection
  Improvement (WBA)
- ✓ Dumping Control
- ✓ Public Awareness

## 2<sup>nd</sup> stage

Reduction of environmental burden and prevention of pollution

- Leachate treatment
- ✓ Sanitary landfill
- ✓ Data Management
- ✓ Medical Waste

## 3<sup>rd</sup> stage

Establishment of material-cycle society with 3Rs initiative



Basis for common initiatives

Develop human resources who will be in charge of actions ranging from organizing facilities and legal systems to raising social awareness

#### **Challenges in developing countries**

Technology/ facilities	Facilities are not organized Lack of technology and budget for maintenance	Reso
Finance	Inadequate operational and fiscal management abilities Insufficient financial plan and securing of funds Lack of budget for counter-pollution measures	luman sources
Organizational structure	Inadequate policy development and coordination abilities No structure to execute legal systems and carry out administrative tasks	knov (Gov, Citiz
Legal system	Insufficient abilities to develop legal systems and rules, guidelines, and standards for operating them	sufficier vledge a perience Industi ens, etc
Social awareness	Insufficient cooperation and participation of citizens Inadequate compliance (e.g., illegal operations by businesses)	nt and ries, c.,)

## To benefit **500 million** citizens in **50** countries by **2030**!

### **To Developing Countries;**

- Human Security: Ensure safe and healthy living environment
- Quality growth: Realize economic growth which is inclusive, sustainable and resilient
- With/Post COVID-19: Reduce infection risk through maintenance & improvement of sanitary urban environment

To SDGs



## To Global Environment;

- Marine Plastic Pollution: Prevent the discharge of plastic waste into rivers / oceans, toward realization of "Osaka Blue Ocean Vision" (aims to reduce additional pollution by marine plastic litter to zero by 2050)
- Climate Change: Prevent the generation of greenhouse gas (e.g. methane) through proper waste treatment
- Biodiversity: Prevent further environmental pollution thereby conserving ecosystems



## Thank you for your kind attention

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