

Zero Carbon City International Forum 2023
Session 2: Strengthening multi-level cooperation
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JICA Climate Change Initiatives and Sustainable, Climate Resilient Development

Akihiro MIYAZAKI
Deputy Director General,
Global Environment Department
Japan International Cooperation Agency (JICA)

1.5°C target

Even if countries achieve their current voluntary commitments, the temperature increase from pre-industrial times will exceed 1.5°C

Climate migration in North Africa is estimated to reach 13.0 million, or 6.0 percent of the total population of the sub-region by 2050

To achieve the 1.5°C target of the Paris Agreement, CO₂ emissions must fall by 45% by 2030





JICA Global Agenda: JICA's cooperation strategies for global issues

Contributing to the goals of UNFCCC and building sustainable and resilient societies through

- strengthening capacity development to respond to climate change
- promoting co-benefit that pursue both development issues and climate change measures.

Approach 1: Promote implementation of the Paris Agreement

Approach 2: Co-benefits of climate change

Main Targets:

- Finance climate change projects worth 1 trillion yen/year in total by 2025
- Double the contribution to climate change adaptation by 2030
- GHG emission reductions by 2030 (2 million CO₂eq tons/year)

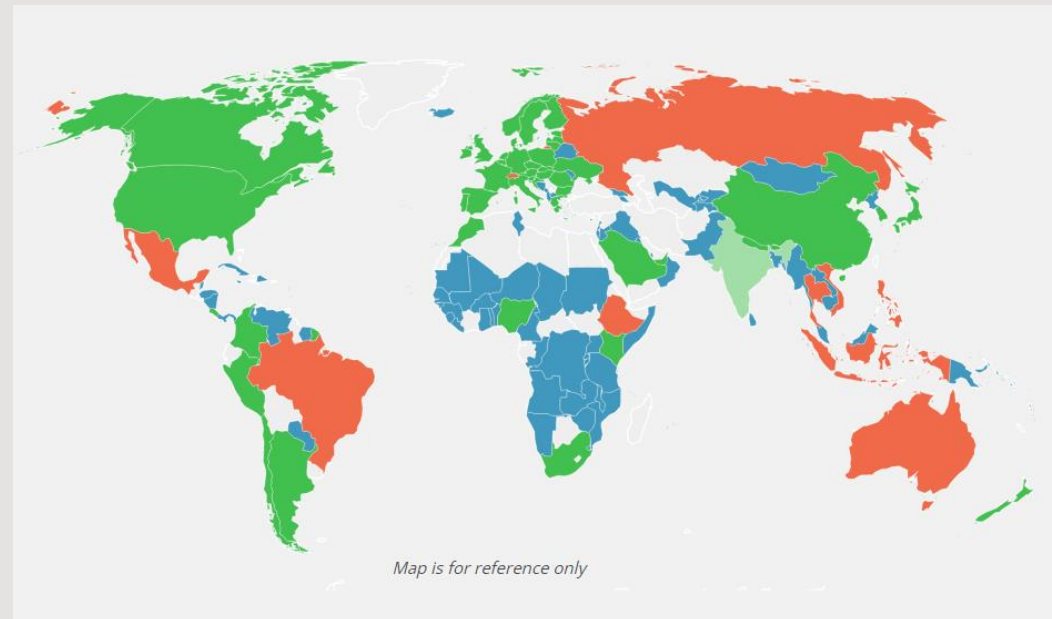
Provide support to implement Nationally Determined Contributions (NDCs) and obligations under the Paris Agreement

Specific Efforts

- Support national and local level climate change action plans
- Strengthening institutional and implementation capacity
- Capacity building for process of NDCs
- Policy and institutional improvements to promote private sector activity and investment
- Support access to climate funds

Status of NDC updates and increasing ambition

(As of Dec 2021)



Source: <https://climateactiontracker.org/climate-target-update-tracker/>

Analysis by Climate Action Tracker (European research organization): **128** countries have submitted their NDCs

•**Green**: Countries with stronger NDC targets: **23**

•**Red**: Countries that did not increase ambition: **12**

•**Blue**: Not analyzed submitted: **93**

Policy framework

Bangkok Master Plan on Climate Change 2013-2023

Bangkok Master Plan on Climate Change(2015)

- The MP aims to reduce the amount of GHG emissions by 13.57% by 2020, compared to the BAU scenario in the 4 sectors (Transportation, Energy, Waste and Wastewater, and Green Urban Planning) .
- Established the strategy office for climate change.

Strengthening the organization to implement the MP

Promoting to implement the mitigation plan defined in the MP

Supporting to monitor and evaluate the progress of the MP

Supporting to formulate the new MP of BMA

Scientific Data

ADAP-T: Collaborative research to identify appropriate technologies and measures for adaptation strategies, contributing to the National Adaptation Plan (NAP) process.

Infrastructure

Urban railways & Smart Transport Technology
(next slide)

Capacity building

Establishment of Climate Change International Technical and Training Center (CITC)

A one-stop technical training center and network hub, offering a variety of training courses on climate change



Southeast Asian countries

&

Thailand

Zero-Emission and Climate-Resilient City

Urban railways

Blue Line

- Opened in 2004
- Total Project Cost: 358 Billion JPY
- ODA Loan Amount: 222 Billion JPY
- Civil Work, Depot, Track by ODA Loan
- E&M, O&M by Private Investment

Purple Line

- Opened in Aug 2016
- Total Project Cost: 210 Billion JPY
- ODA Loan Amount: 79 Billion JPY
- Civil Work, Depot, Track by ODA Loan
- E&M, O&M by Private Investment

Red Line

- Under construction (to be opened in Nov 2021)
- Total Project Cost: 332 Billion JPY
- ODA Loan Amount: 268 Billion JPY
- Civil Work, Depot, Track, E&M by ODA Loan



Smart Transport Technology

The Project of Smart Transport Strategy for Thailand 4.0

Background

- **Traffic congestion, air pollution and GHG emission in Bangkok**
- Announcement of Thailand 4.0

Technologies

- Proposal of **Smart mobility strategic integration method**
- Implementation of **Smart Transport System (Sukhumvit Model)**

Expected outcome

- By implementing the Smart mobility strategic integration method,
- **traffic congestion will be resolved**
 - **Quality of Life will be enhanced** (with new travel behaviors and life styles)

Smart City where QOL is enhanced

Traffic congestion in Bangkok



Co-benefits of climate change

Mitigation

Greenhouse gas emissions reduction and enhancement of absorption

▶ **Energy**

Sustainable use of stable and affordable energy
(Transmission and distribution networks, renewable energy, energy conservation)

▶ **Urban development, transportation and traffic**

Low-carbon and environmentally friendly cities
(Public transportation systems, comprehensive services from planning to infrastructure development)

▶ **Conservation of forests and other natural environments**

Biodiversity conservation and prevention of desertification
(Conservation of the natural environment and forests)

Co-benefits of climate change

Adaptation

Building a climate change resilient society



Examples for this approach

▶ **Disaster risk management**

Flood risk assessment based on climate change impact projections

▶ **Water resource management**

Planning for comprehensive water resource management based on climate risk

- Groundwater conservation
- Drought-resilient water supply system

▶ **Agriculture**

- Participatory Irrigation Management
- Diversifying livelihood options through multi-crop cultivation and multiple management
- Introducing agricultural insurance

Mitigation

Clean energy, transportation and building low-emission, climate resilient infrastructures will have a significant effect on climate change

Specific Efforts

- Improving energy efficiency (power generation, power loss reduction, energy conservation)
- Development and use of renewable energy sources
- Expansion of public transportation
- Support for cities to develop and implement plans to achieve carbon neutrality



[Loans] Delhi Mass Rapid Transport System Project (India)



[Loans] Kampala Flyover Construction and Road Upgrading Project (Uganda)



[Loans] Olkaria V Geothermal Power Plant (Kenya)



[Loans] Tsogttsetsii wind farm project (Mongolia)

Adaptation

Assessment of climate risks and enhancement of adaptation measures

Specific Efforts

- Capacity building and facility development for
 - Climate risk assessment
 - Prediction and early warning
 - Rapid response preparedness
- Proactive investments in
 - Climate risk prevention and reduction
 - Infrastructure development
 - Resilience contributing to Build Back Better
- Develop risk financing



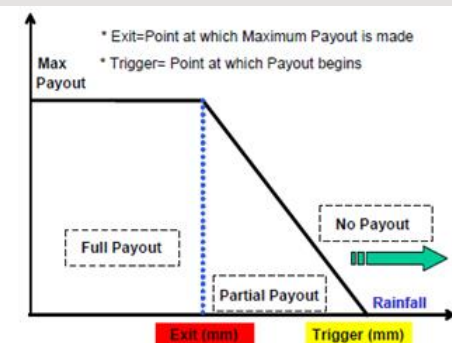
Improvement of meteorological radar system (Mauritius)



[Grant] The Project for the Improvement of Water Reservoir at Majuro Atoll (Marshall Islands)



Pilot project of weather index-based crop insurance promotion (Ethiopia)



Introduction of weather index insurance to reduce the risks on agriculture in areas with low-rainfall to strengthen small farmers' resilience to climate change

Mitigation + Adaptation

Strengthening conservation and management of forests and natural ecosystems (mitigation and adaptation measures)-

Reduce GHG emissions from deforestation and land use, and to protect and restore natural habitats such as forests as sinks.

Specific Efforts

- Mitigation measures
 - Strengthening sustainable forest management through REDD+,
 - Community based Sustainable forest management, etc.

- Adaptation measures
 - Eco-DRR (ecosystem-based disaster risk reduction)
 - Strengthening climate resilience (combating desertification), etc.



Early Warning to reduce illegal logging using satellites (JICA-JAXA collaboration) project (JJ-FAST) (Brazil)



Support forest conservation and livelihood improvement through certified forest coffee production and fair trade. Japanese company (UCC) also participates. (Ethiopia)



Assessment of carbon dynamics and biodiversity conservation in Amazonian forest (both in Brazil) (SATREPS, Kyoto University, Forestry and Forest Products Research Institute)



Community-based landscape management for reducing deforestation (the first JICA proposed-project approved by GCF (Timor-Leste)

Mobilize Various Types of Finance and Work in Partnership with Public and the Private Sector

Utilizing Japan's knowledge and technologies with private sector and local governments (e.g. Transport, Energy, Agriculture, Waste Management, Disaster Risk Reduction)



(Collaborating with private sector)
Energy-saving analyses project in Vietnam

Examples of financing schemes with partners

- Private Sector Investment and Finance (PSIF) Scheme
- Co-financing with Private Financial Institutions and MDBs



(PSIF) Climate Change Management Project in India (co-financing with private sector (Sumitomo Mitsui Banking Corporation (SMBC)))

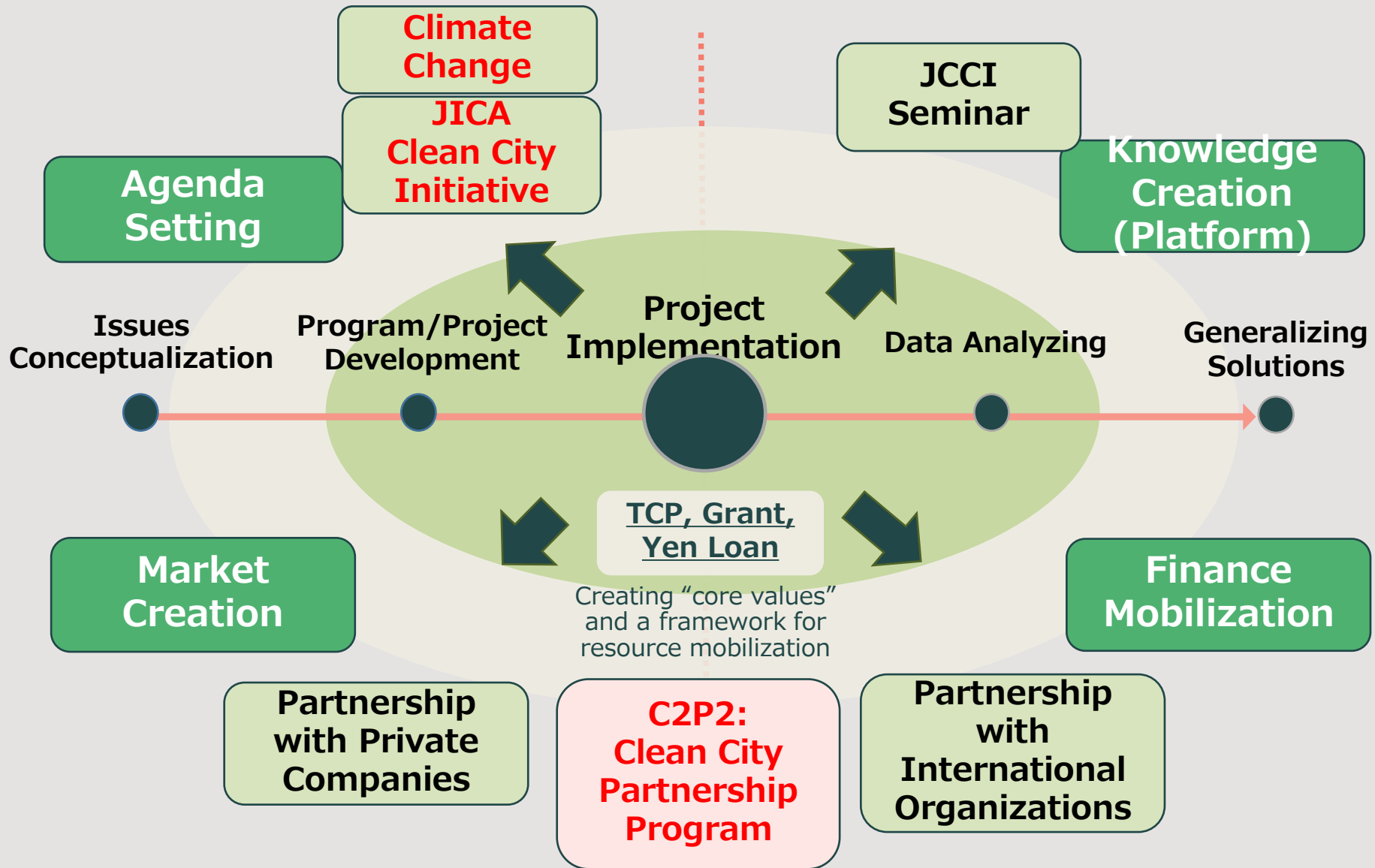
Others

- Mobilizing a variety of funds
 - Green Climate Fund
 - Private funds through the issuance of bonds

(Co-financing with private sector and MDBs) Cocoa Value Chain Enhancement Project in Ghana

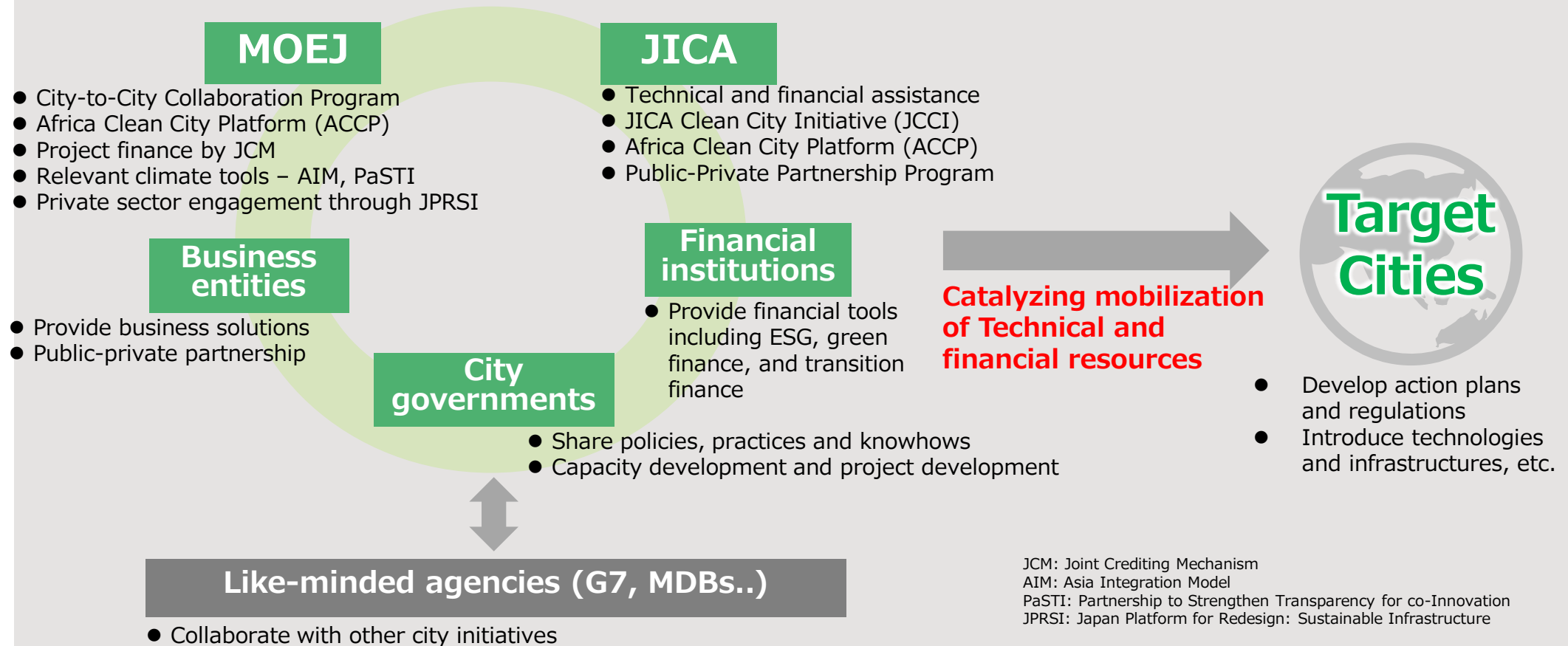


Non-finance/Intangible Resource Mobilization



Finance/Tangible Resource Mobilization

- MOEJ and JICA, in partnership with other key stakeholders, roll out a **Clean Cities Partnership Program (C2P2)**, which:
- Mobilize **engagement of multi-stakeholders** on target cities.
- Provide a **comprehensive and synergetic support to urban agenda** including climate change, environmental pollution and circular economy.
- Collaborate with ongoing and new city initiatives by G7 members and MDBs.



Promote dialogue with partner countries, International organizations

Maximize development impact through "PLATFORM"

Enhance accountability
Visualize impact / outcomes through annual monitoring and reporting



Medium-term Plan

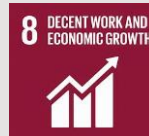


To benefit **500 million** citizens in **50** countries by **2030** !

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**

MIYAZAKI Akihiro

Deputy Director General,
Group Director for Environmental
Management

Director, Office for Climate Change
Global Environment Department, JICA



JCCI

JICA Clean City Initiative