

City-City Cooperation and Private Sector Partnership for Promoting 3Rs and Resource Efficiency

Seigo Tanaka,
Vice Mayor of Osaka City



Past Pollution and How It Was Remediated

Past

Present

Future

The skies over Osaka



The 1960s



Today

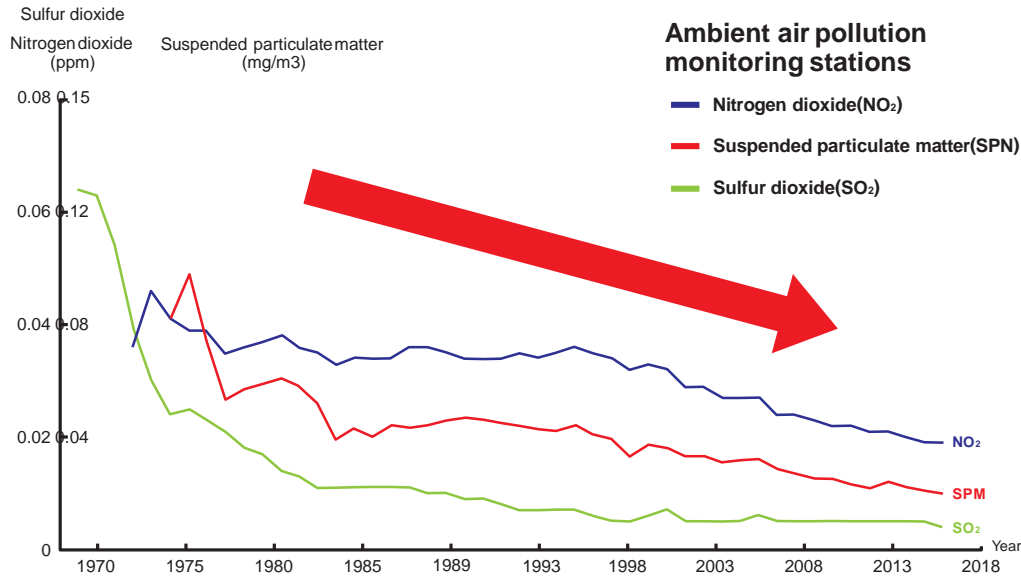
Citizens, businesses, and government overcame the problem of air and water pollution and waste through wide-ranging efforts.

Ensuring a Pleasant Living Environment

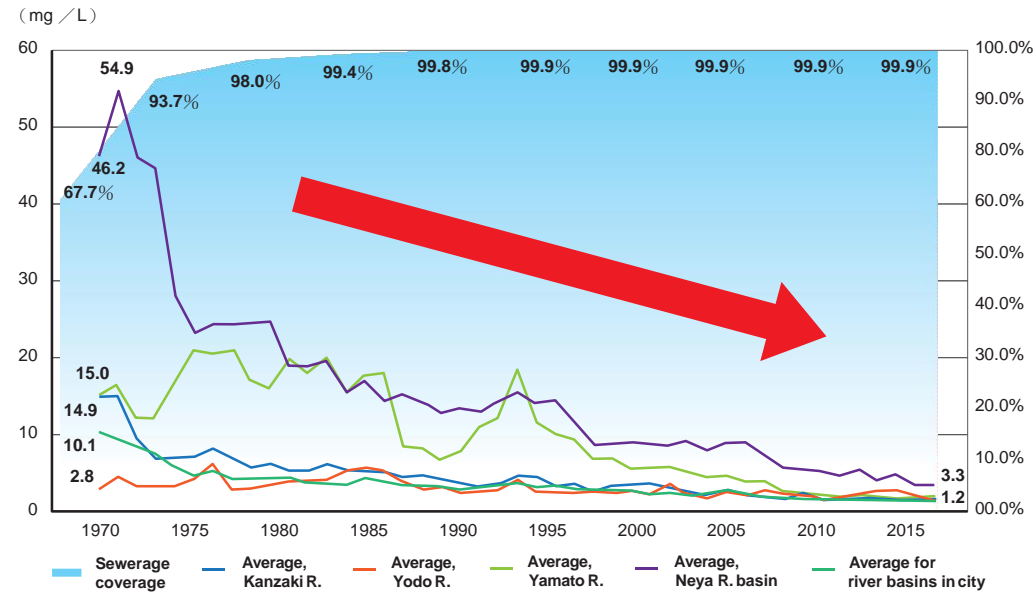
Past

Present

Future



Osaka City: Average annual BOD load in rivers and sewerage coverage, by year



Leading Japan's cities as a pioneer in eco policy

- Strengthening eco regulations on factories/offices
- Environmental monitoring
- Ensuring proper disposal of waste
- Promoting environmental education and awareness
- Developing water and sewerage facilities ahead of other cities
- Developing urban transport infrastructure



Spot Investigation
...Osaka city government...

Sewerage Development

Past

Present

Future

Installing sewers has improved the city's water environment

Advances in sewage treatment allow reclaimed water to be supplied for various uses



River seriously contaminated by factory wastewater



1940

Osaka's first sewage treatment plant (Tsumori Sewage Treatment Plant)



Tsumori Sewage Treatment Plant today

Waste Disposal as an Underpinning of Urban Functions

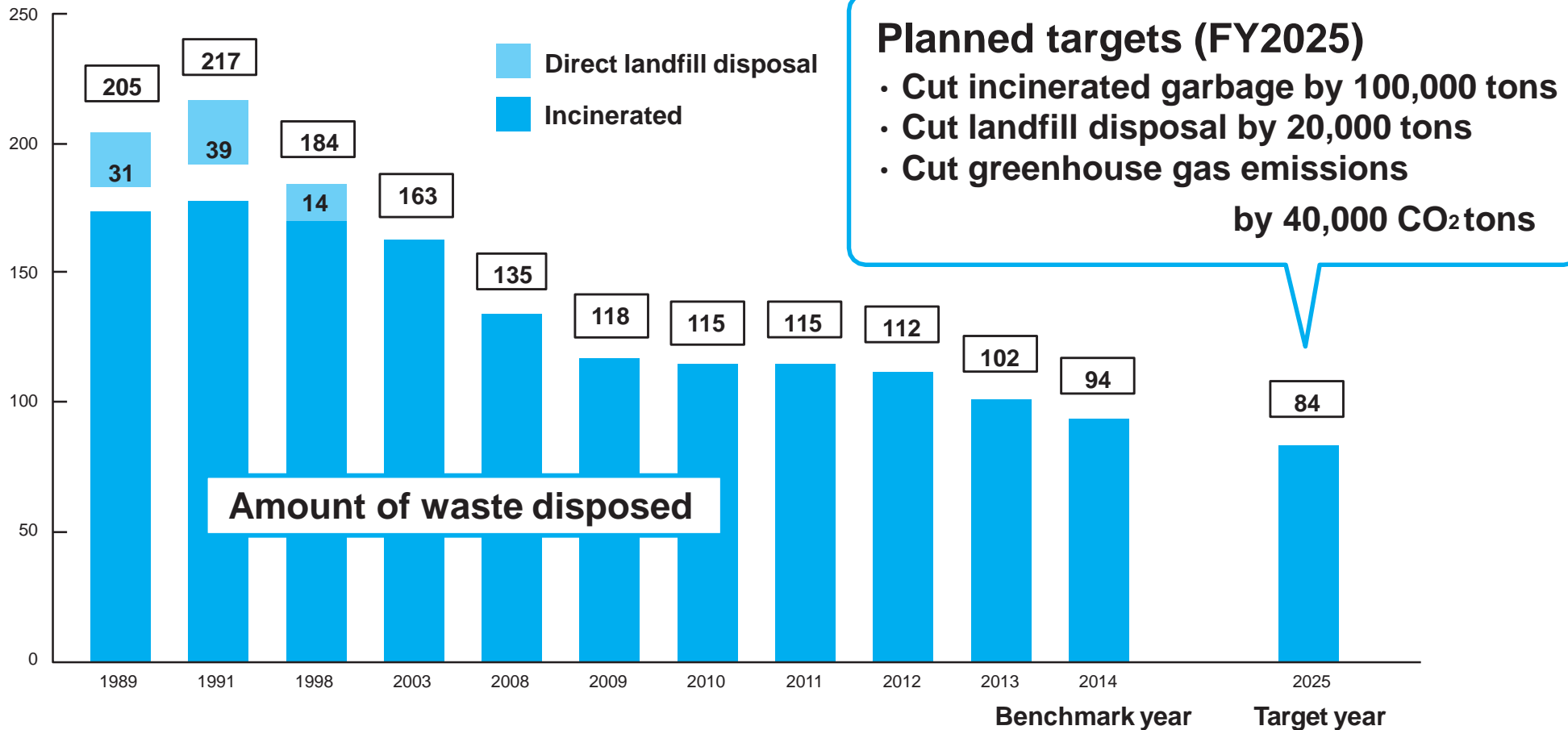
Past

Present

Future

Osaka's basic policy on waste disposal

- Give priority to the 2 Rs
- Sort garbage and recycle
- Take an eco-friendly approach to proper disposal and operate efficiently



Generating Power by Burning Waste

Past

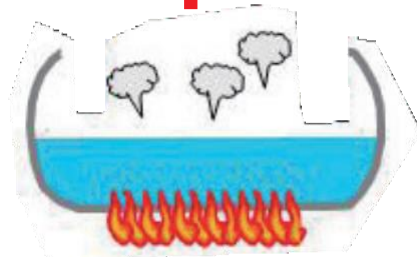
Present

Future

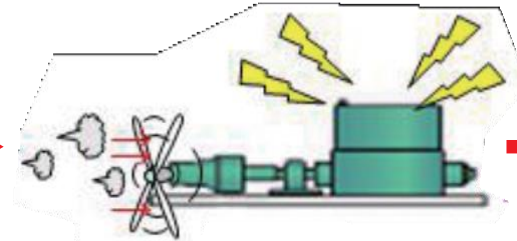
Power generation from solid waste and steam supply for heating systems



Power generation using the heat produced by waste incineration



Utilizing heat produced by waste incineration



Electricity generator

Equal to the annual power consumption of **125,000** ordinary households (FY2015)

(Calculated using consumption ratio of 300kWh/household · month)



Waste volume can be reduced to 1/20

Preventing smell and pests

Effectively saving the limited landfill site

Landfill Sites

Past

Present

Future

Disaster preparedness

- Ground elevation beyond tsunami range
- Earthquake-proof access routes (bridges and tunnels)
- Safe against liquefaction

Ground elevation (Yumeshima)

Higher than can be reached by a tsunami!!

Leeway: +4.3m

Planned elevation*: O.P +9.1m*

Maximum tsunami height*: O.P. +4.8m

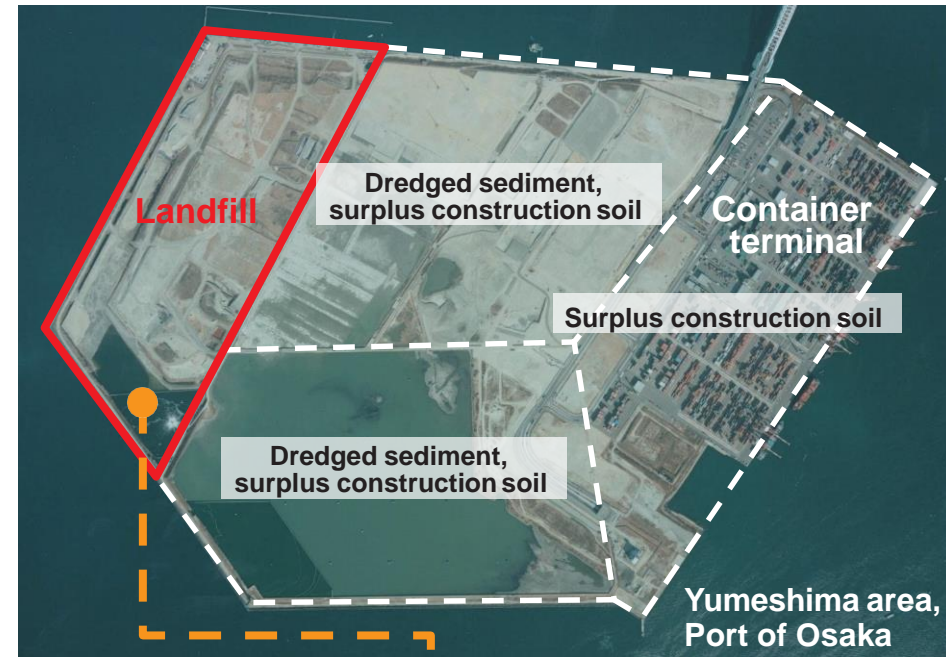
Tsunami height (assumed): 2.6m*

High tide level (typhoon season): O.P. +2.2m*

Yumeshima

(O.P.: Minimum tide level, Osaka Bay)

*Planned elevation = ground elevation after estimated subsidence



Environmental conservation measures

- Sewage treatment Floating aeration Wastewater treatment plant
- Water quality testing in surrounding waters
- Countermeasures to gases generated



Floating aeration

City of Osaka's Action Plan for Global Warming Countermeasures

Past

Present

Future



Background and Objectives

- COP 21 (Paris Agreement)
- Focus on utilization of the market mechanism including the Joint Crediting Mechanism (JCM)
- SDGs: Sustainable Development Goals
- The state's draft commitment: reducing CO₂ emissions by 26% for fiscal 2030 from the fiscal 2013 level



City of Osaka's Mitigation Measures

setting a target exceeding the national target, reducing by 30% for fiscal 2030 from the fiscal 2013 level

Main countermeasures

- Energy saving activities by citizens and businesses: promoting CO₂ savings
- Introducing new energy systems (geothermal heat utilization, extended energy use)
- Support for establishing a low carbon cities in Asian cities through intercity cooperation

City of Osaka's Adaptation Measures

Main activities

- Avoiding or reducing damage by floods or heat deriving from climate change

International Contribution through Transferring Environmental and Low Carbon Technology

Past

Present

Future



UNEP-IETC



City of Osaka	Support to establish a low carbon city through intercity cooperation
Global Environment Center (GEC)	Support to development low carbon projects utilizing Joint Crediting Mechanism (JCM)
Businesses in Osaka and Kansai	Proposing solutions based on advanced environment and low carbon technologies

City-City Cooperation Project with Ho Chi Minh City

Past

Present

Future

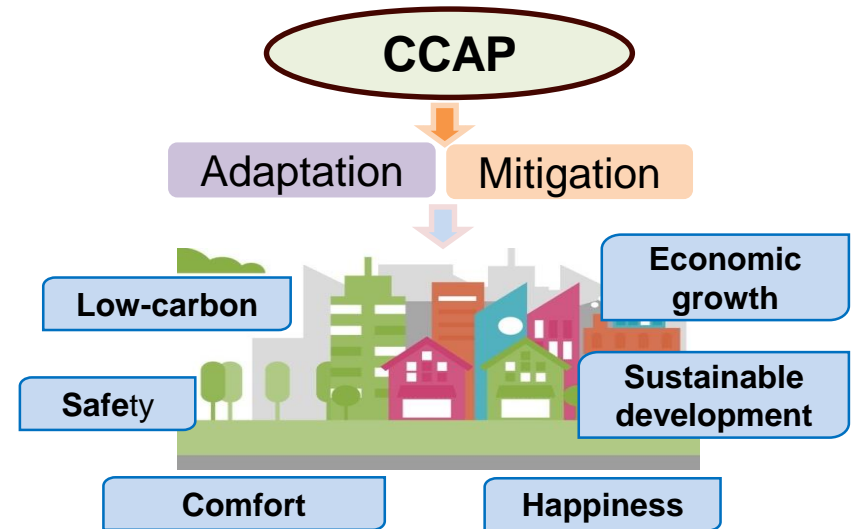
MOU on Development of a Low Carbon City Between Ho Chi Minh and Osaka City

Support Formulation of The Ho Chi Minh City Climate Change Action Plan for 2017-2020, with a Vision to 2030 (CCAP)

6 September 2016, Ho Chi Minh City



1. Development of human resources
2. Sharing professional skills and knowledge on low-carbon and Environmental conservation measures
3. Creating new projects toward the realization of a low-carbon city
4. Promoting public awareness and dissemination of information on the prevention of global warming



Climate change measures in 10 sectors including waste management

PDCA cycle of CCAP

- Public-private partnership projects
- Assessment of GHG emissions
- Support for action plans

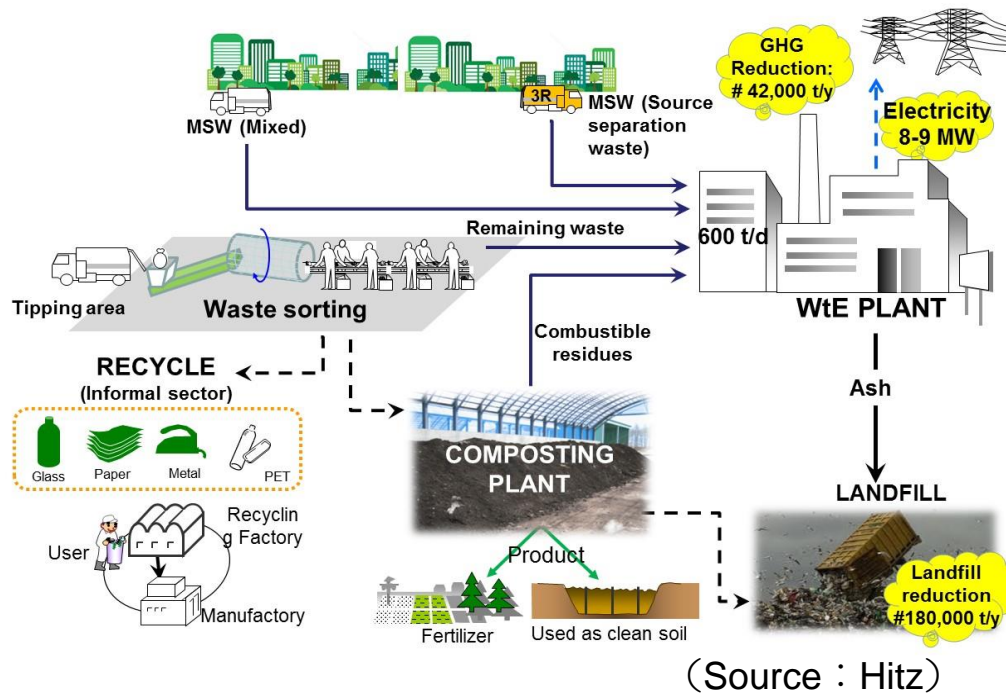
Past

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Waste to Energy Project

Feasibility study with public and private partnership



Capacity building for integrated solid waste management

Discussion of proper incineration factory construction

- Separate roles of administration and business
- Construction plan
- Maintenance and monitoring
- Countermeasures for dioxins
- Consensus with residents



Workshop

Household Waste Separation Project

Past

Present

Future

Implementation of the pilot project with public-private partnership

- Support for waste separation guidelines
- Distribution of separation stickers for food waste and mixed waste
- Improvement of waste collection
- University student public relations team

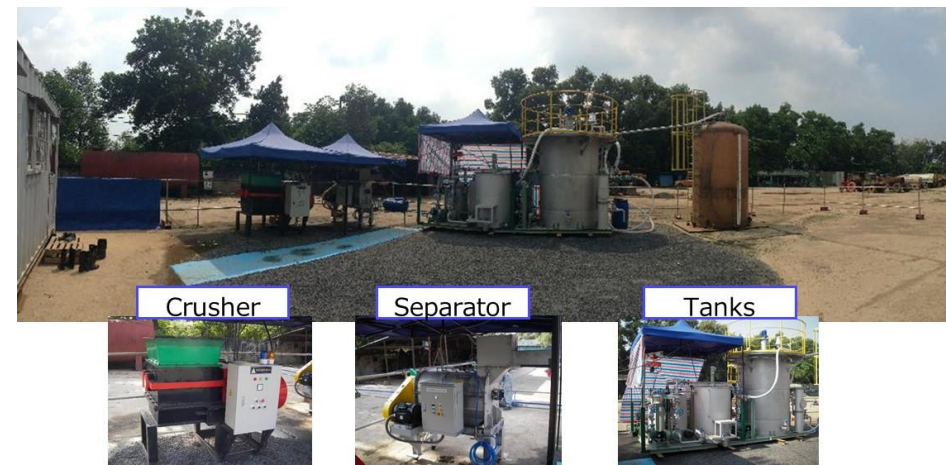


Gathering news for public relations by university students



Waste separation guidelines

Formulation of the Ho Chi Minh City household waste separation expansion plan for 2017-2020



Demonstration of methane gas fermentation

(Source : Hitz)

City-City Cooperation Project with Quezon City

Past

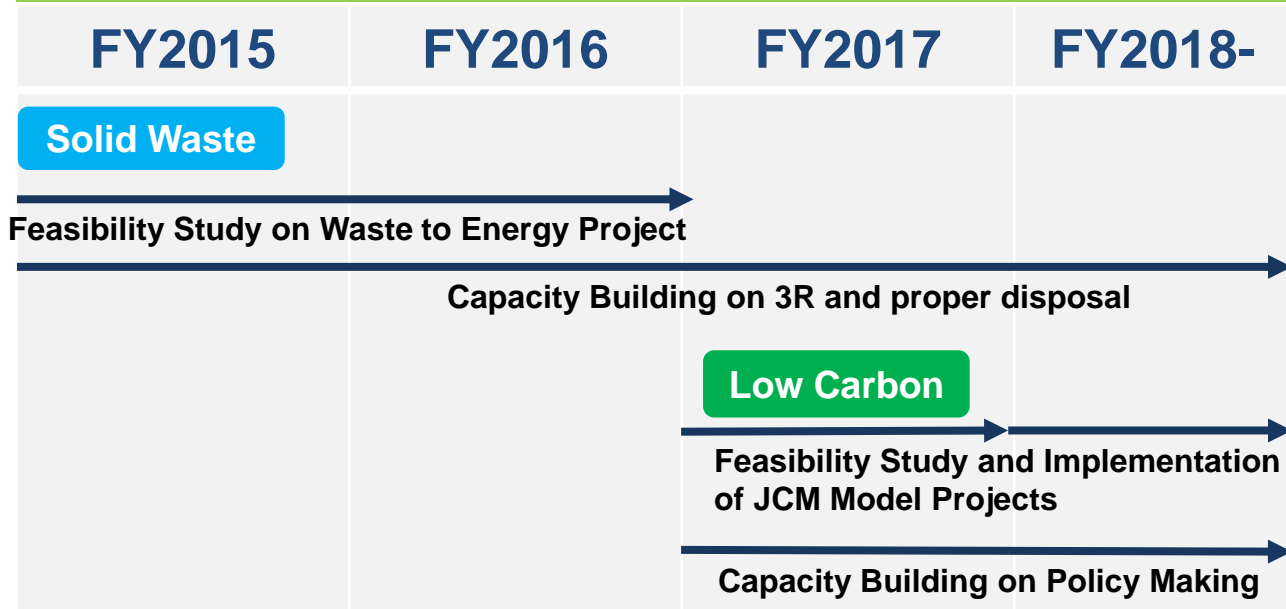
Present

Future

Major Field

- ◆ Management of solid waste
- ◆ Diffusion of low carbon technology

Cooperation process



Efforts for Solid Waste Management

Osaka City Government provides knowledge, experience and technology through the following:

- ◆ Study visit at WtE factory
- ◆ Lecture for waste collection
- ◆ Lecture for environment monitoring



Waste collection

Efforts for Developing Low Carbon City

Osaka City Government supports Quezon City's low carbon activities with the following:

- ◆ Feasibility studies on JCM energy projects
- ◆ Capacity building on policy making



Workshop

Osaka-Kansai JAPAN Expo 2025



OSAKA-KANSAI/JAPAN
EXPO2025



Past

Present

Future

Event Overview

Main Theme

Designing Future Society for Our Lives

Other Themes

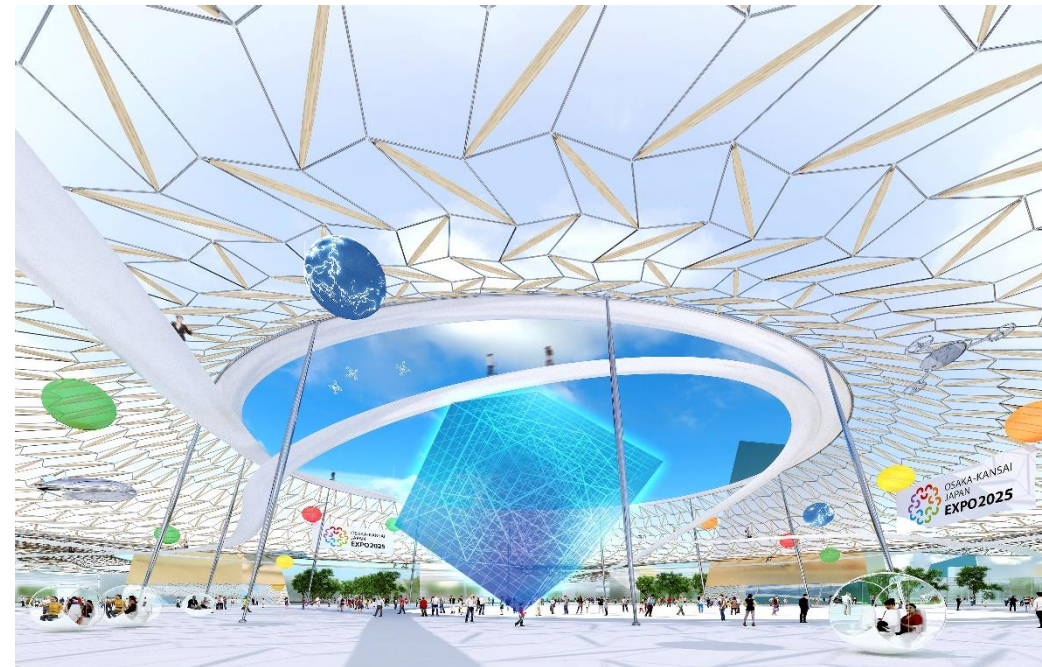
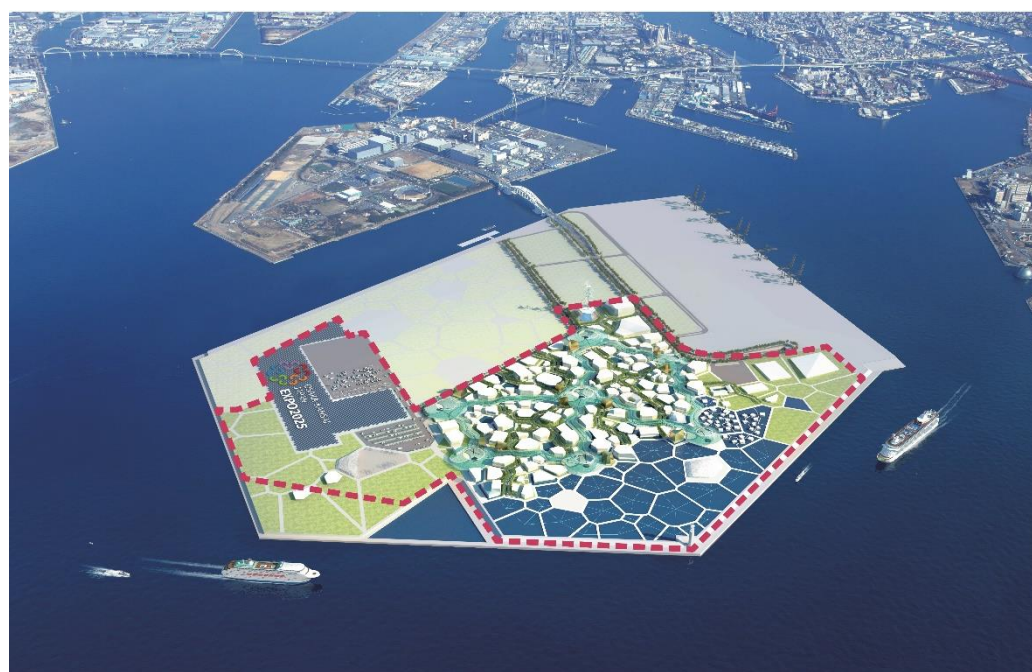
- **Diverse Ways of Life with a Healthy Body and Mind**
- **Sustainable Social and Economic Systems**

Period

From 3 May (Saturday) to 3 November (Monday), 2025

Venue

Yumeshima



(Source : METI)



See You Again in Osaka

