

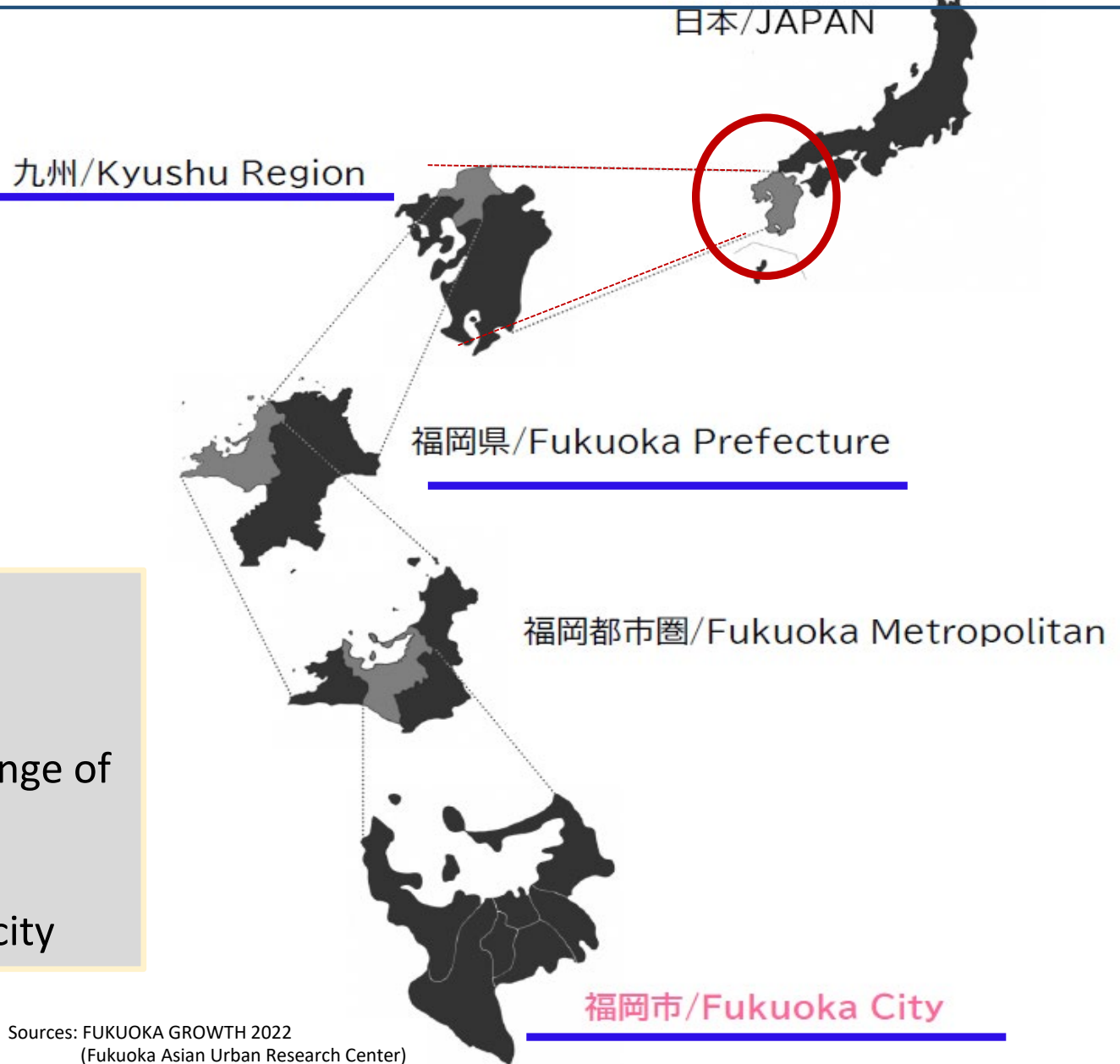


SWM in Fukuoka City

for Sustainable Urban Development

Fukuoka City

Introduction of Fukuoka City



Population 1.6M
Area 340km²

Long history of exchange of
Asian Countries

Commerce-oriented city

Solid Waste Management in Fukuoka City



Garbage collection



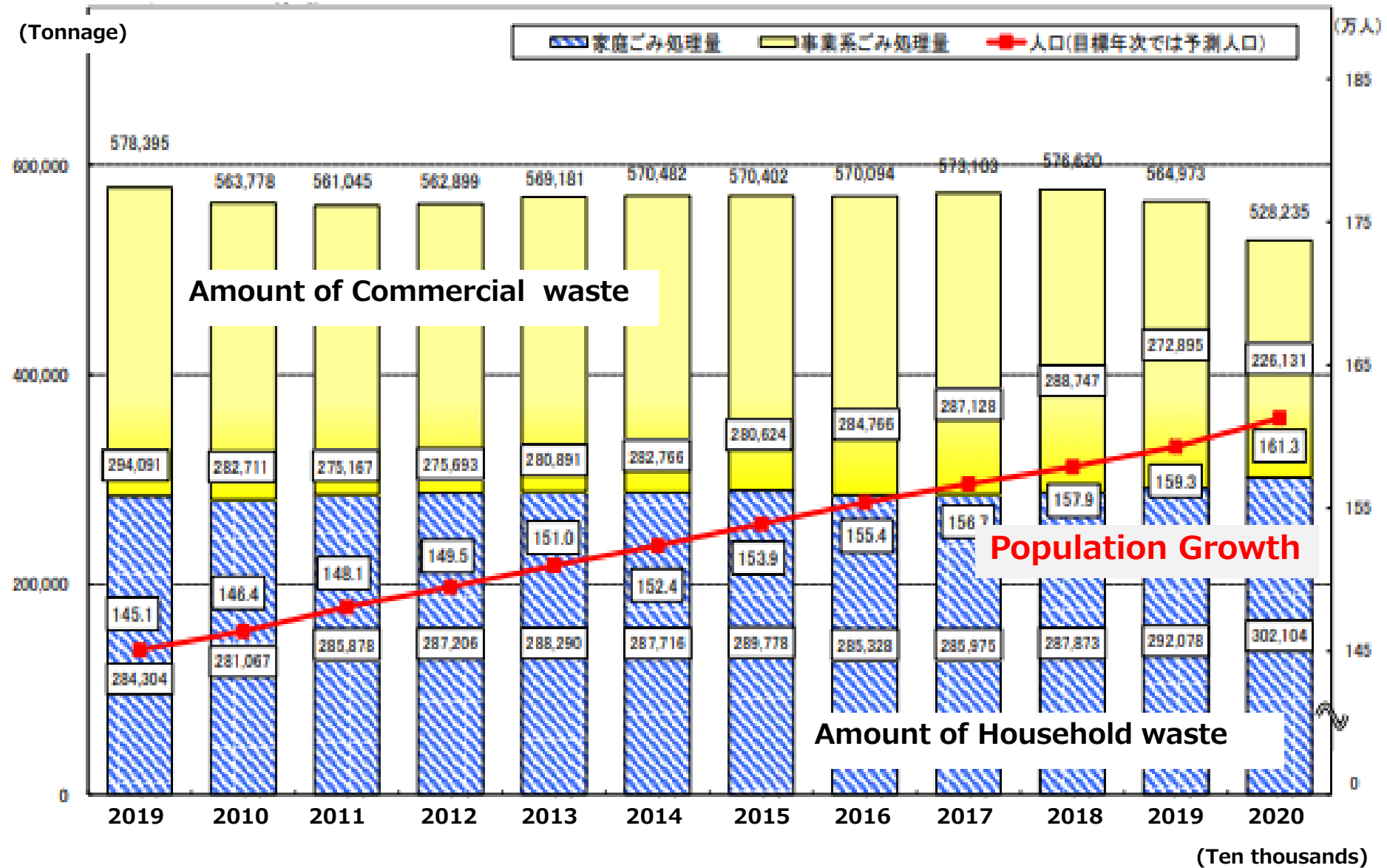
Waste to Energy



Fukuoka Method

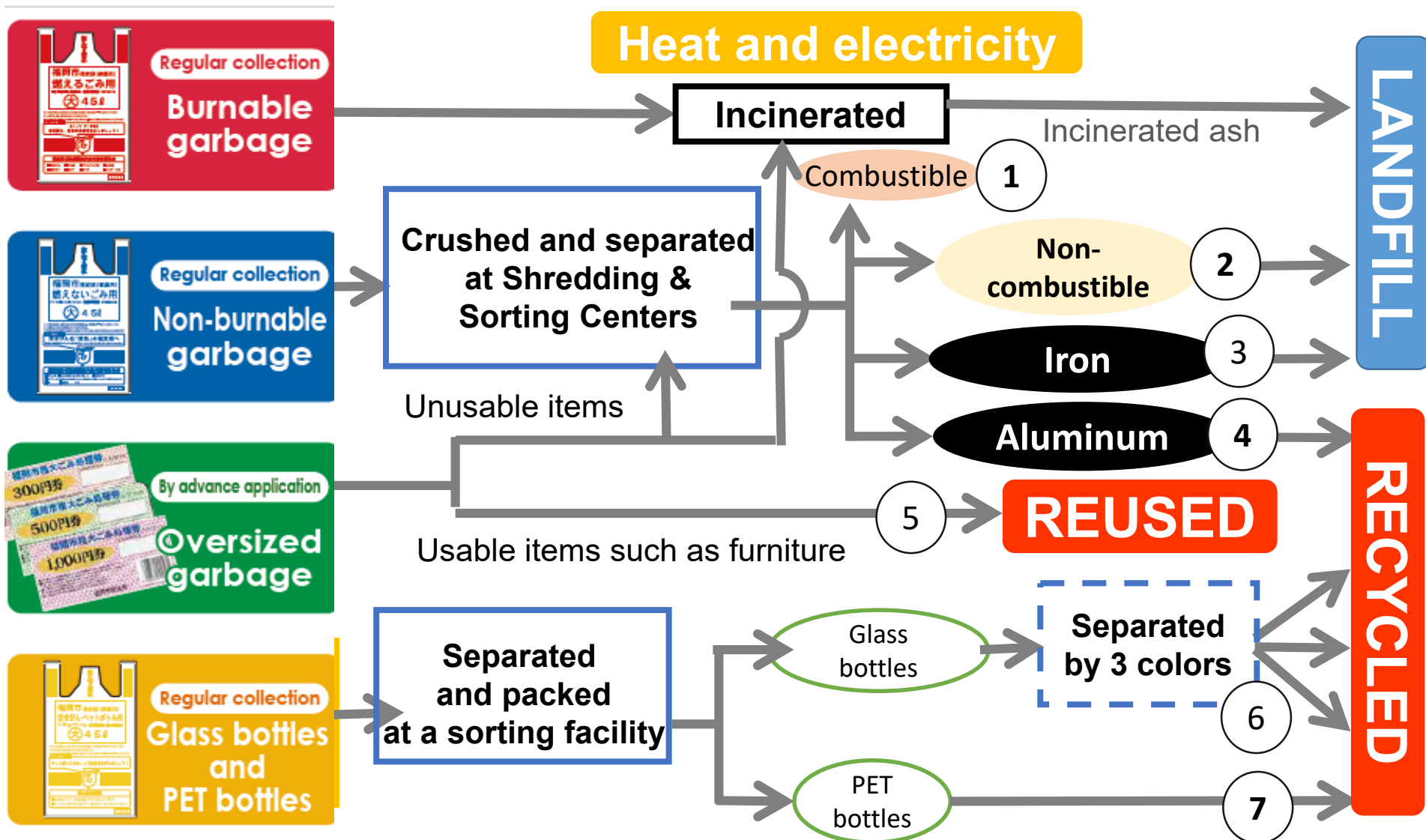
1. Garbage Collection

Successful Waste Reduction




Waste Disposal Flowchart

- Household garbage is ultimately separated into 7 categories.



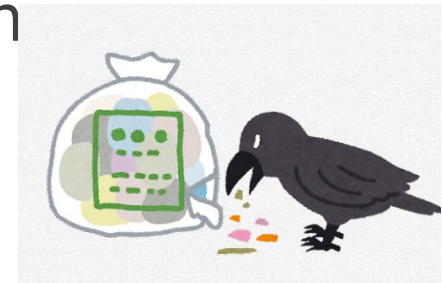
Garbage Disposal Rules

Garbage type	Collection days *	When to put out garbage	Where to put out garbage
Burnable garbage	Twice a week	<p><u>Put out garbage between sunset and midnight.</u></p>	<ul style="list-style-type: none"> ● Detached houses: in front of the property ● Apartment complexes: in the building's designated spot <p>If the road in front of your residence is too narrow for garbage trucks, use the spot specified by your Residents Association.</p>
Non-burnable garbage	Once a month		
Glass bottles and PET bottles	Once a month		
Oversized garbage	Apply in advance	Until 8:30 a.m. on the day you have you booked your collection.	You must specify the disposal location at the time of application if the items are too large for the garbage collection area.

Night-time collection

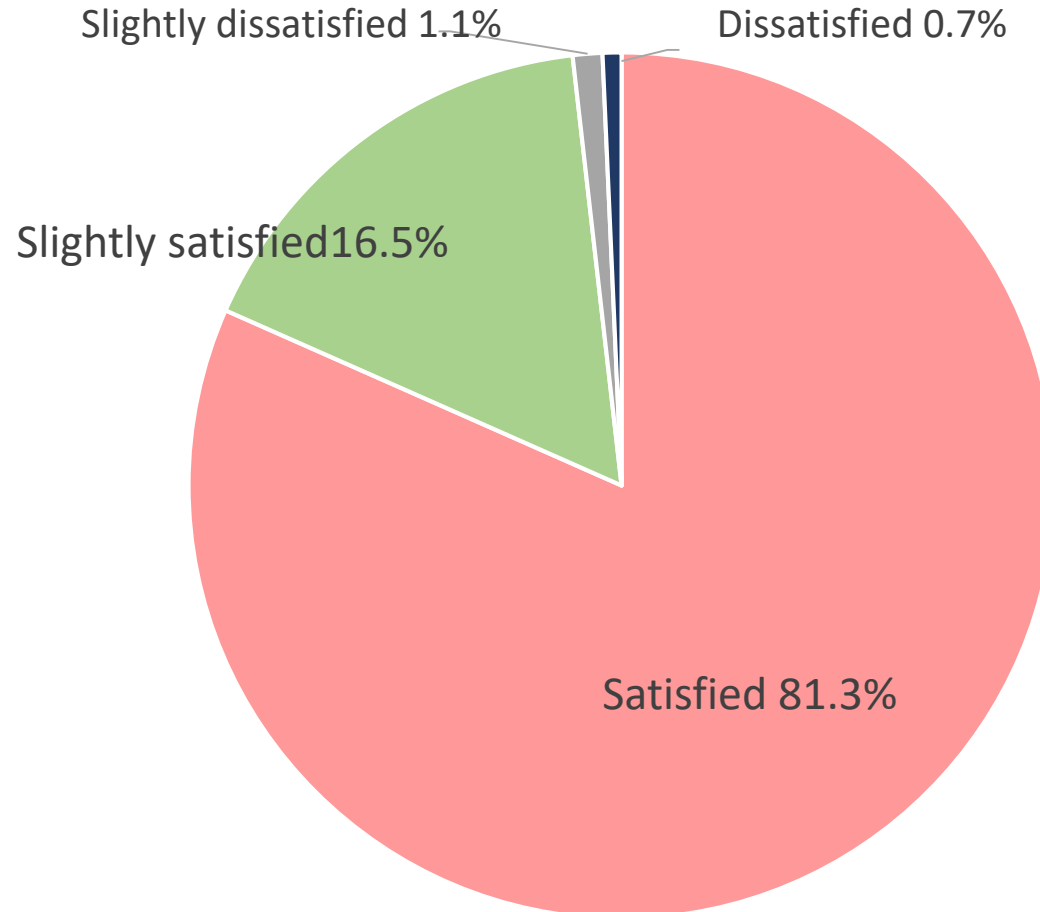


- Improved collection work efficiency
- Crime prevention and disaster Prevention
- Reduction of crow damage



Evaluation from citizens

What do you think of the way garbage is collected at night?



Source: Fukuoka City.
Community Attitude Survey on Municipal
Government (2021)

2. Fukuoka Method

~Overview of Fukuoka Method~

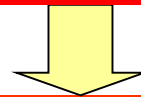
Development of the Fukuoka Method (Semi-aerobic Landfill Structure)



Landfill sites around 1970 in **Fukuoka City**

Japan, like many developing countries such as African countries today, used anaerobic landfills and open dumping until the 1960-70s.

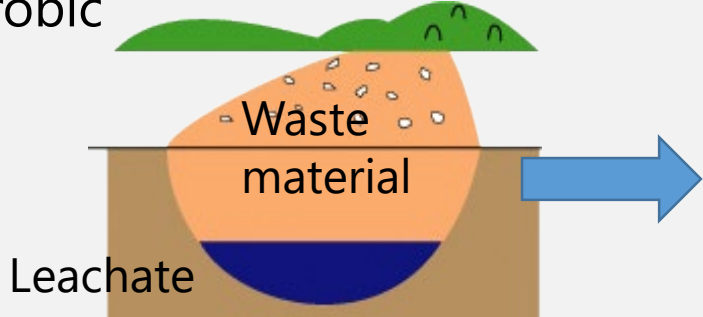
Environmental problems such as toxic leachate and foul odor



Joint experiments with Fukuoka University to improve landfills, aiming to purify leachate

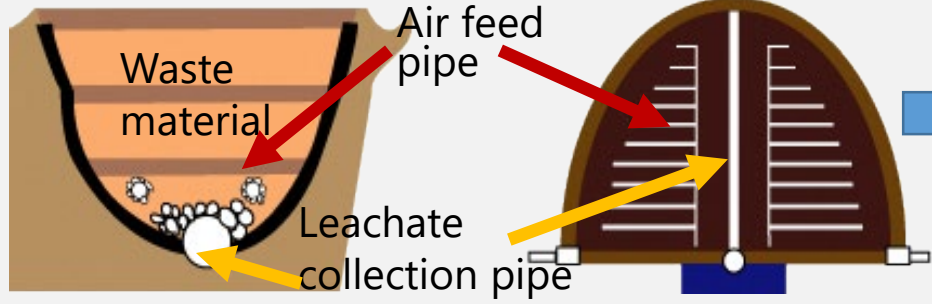
Three major landfill structures

① Anaerobic



- High emissions of harmful substances such as CO₂, methane, etc.
- Waste is moistened in anaerobic conditions

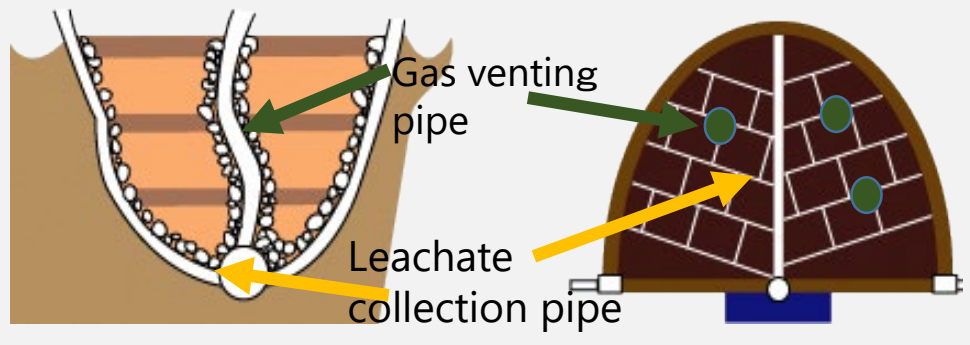
② Aerobic



- Relatively low emissions of harmful substances such as CO₂, methane, etc.
- Easy treatment of leachate

• **High construction and maintenance costs. (Air-pipes are constructed to pump in air into the waste layers.)**

③ Semi-aerobic



Fukuoka Method

- Relatively low emissions of harmful substances such as CO₂, methane, etc.
- Easy treatment of leachate
- **Low construction and maintenance costs**

International Contribution and Cooperation through Fukuoka Method

Rapid
stabilisation

Low
cost



Decarbonisation

Suppress
methane
generation

Simple

25x the
greenhouse effect
of CO₂

A waste landfill structure that leads to
the **reduction of methane** generation



Fukuoka Method Project

① Design and Construction



Design work



Improvement Work

② Operation and Maintenance (O & M)



Technical instruction on receiving waste and landfill work



Monitoring

③ Closure/reuse of landfill site

Progress in Nakata landfill, Fukuoka city



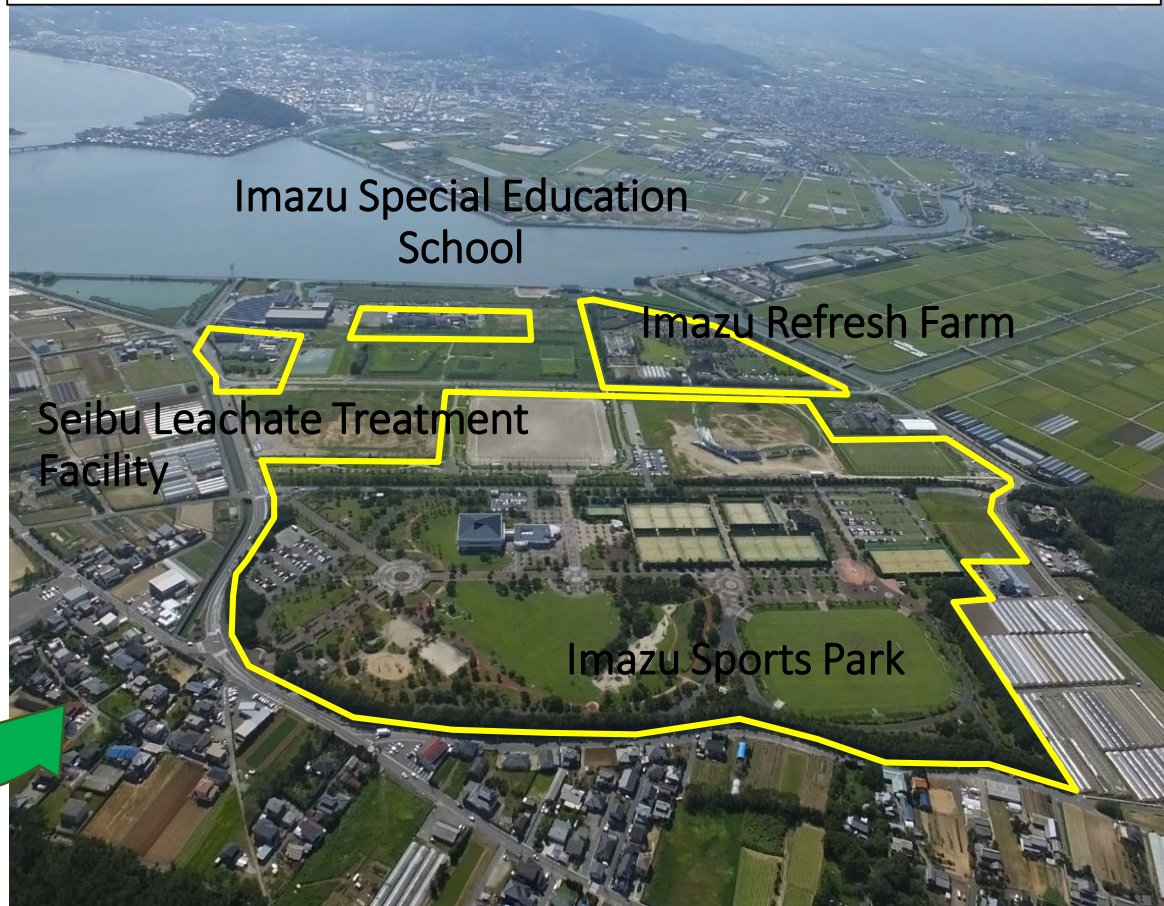
The Completed Landfill Site by Using Fukuoka Method in 1999

It has been used as many purposes. (Photo was taken in 2015)

Early Period (1975)



After Adopting the Fukuoka Method (1999)



International Contribution and Cooperation through Fukuoka Method

Promoting international contribution through cooperating with UN-Habitat, Ministry of the Environment, JICA, Fukuoka University.



Project with UN-Habitat in Myanmar

Fukuoka method was introduced in Myanmar to improve landfill

It was funded by Japanese government in collaboration with UN-HABITAT

Fire conditions, April 2018



August 2019



September 2020



March 2021



January 2022



2. Fukuoka Method

~Fukuoka Method Global Network~

Challenges and Supports to Expand Fukuoka Method

Cases of
improper
design
and
construction

Cases of
lack of
continual
maintenance

There caused various issues after introducing
and implementing Fukuoka Method.



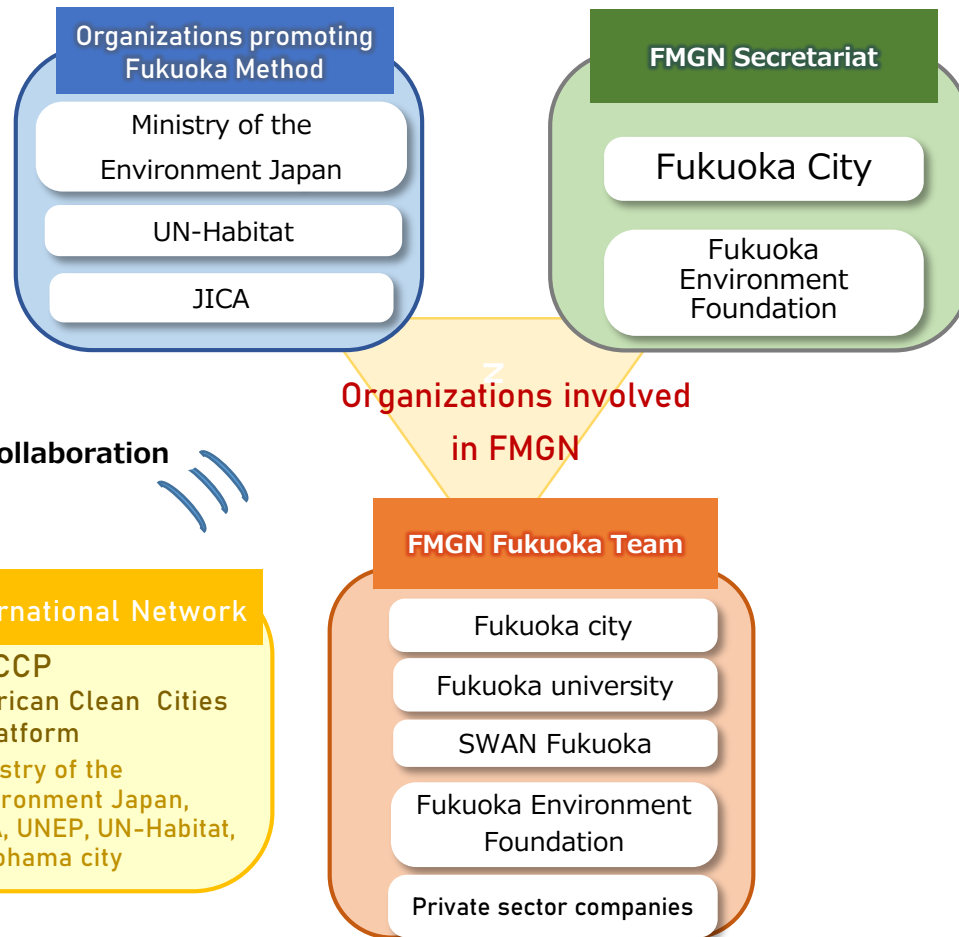
In order to promote proper Fukuoka Method

**Proper understanding of the basic principles of "Fukuoka Method"
and human resource development are important.**



Fukuoka Method Global Network(FMGN)

The Fukuoka Method Global Network (FMGN) was established as it is important to properly understand the basic principles of the Fukuoka Method and to develop the human resources to use it.



Sharing information

on Fukuoka Method through seminars and SNS

Training

to ensure the correct understanding of Fukuoka Method


Online consulting

for engineers in Japan and abroad

Utilizing manuals and databases

of the Fukuoka Method and past cases

Sharing the information of FMGN

学ぼう! つなごう! ふくおかの環境
福岡市の環境 

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Refuse, Recycling	Global warming measure and energy policy	Environment conservation and natural environment	Environmental study and activity support	Environment Plans and Policies
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facebook

The innovative landfill technology of
the solid waste management

**Fukuoka Method
Global Network**

F Fukuoka Method Global Network
@ユーザーネームを作成 公共・行政サービス

ホーム イベント レビュー 動画 その他

 Email: fmgn2022@city.fukuoka.lg.jp