

WG 4: Waste Sector

Theme 1: Improvement of data collection scheme for the Waste Sector

How to accumulate the waste data in each Asian country

The 7th Workshop on GHG Inventories in Asia (WGIA7)

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Necessities for estimating GHG inventories from waste sector

Activity data

Waste streams (the amount of generation, treatment and disposal)
Waste compositions (physical composition)

National governments,
Municipalities

Parameters

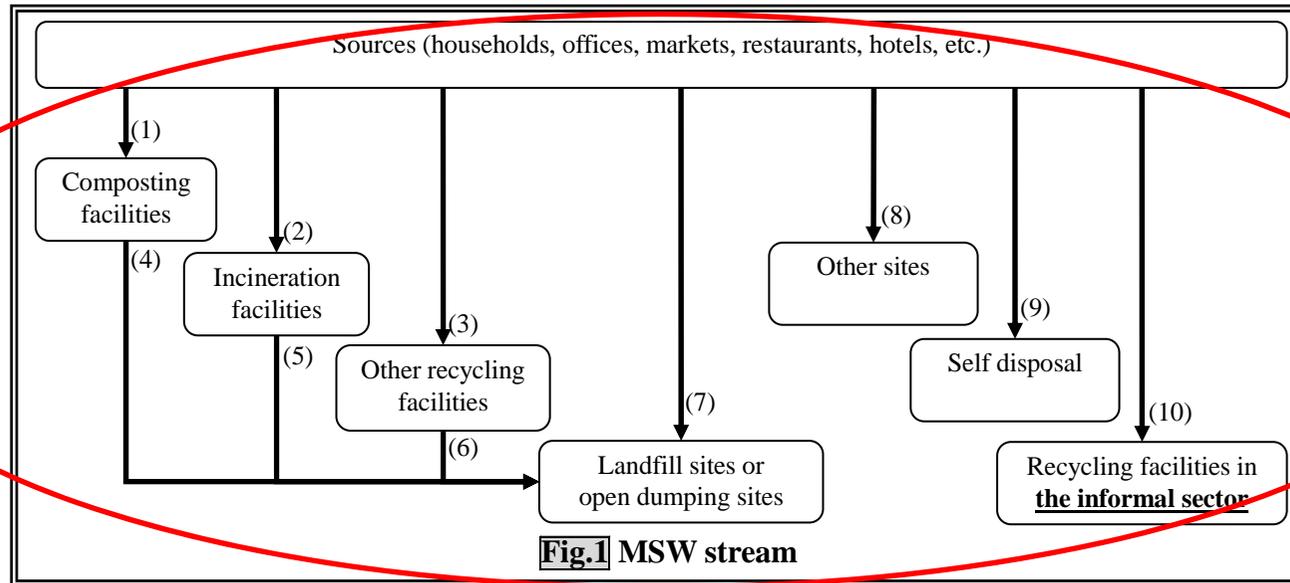
Emission factor for incinerating (CO_2)
Emission factor for composting (CH_4 , N_2O)
Emission factor for anaerobic digestion (CH_4 , N_2O)

Methane correction factor (MCF)
Degradable organic carbon (DOC)
Fraction of degradable organic carbon which decomposes (DOC_f)
Fraction of CH_4 in landfill gas (F)
Methane recovery (R)
Oxidation factor (OX)
The half-life

Research Institutes,
Universities



Questionnaires on activity data



Inventory of municipal solid waste

QUANTITATIVE DATA

| Item | Ratio (%) |
|---------------------|-----------|
| Food | |
| Paper and cardboard | |
| Plastic | |
| Metal | |
| Glass | |
| Garden | |
| Wood | |
| Rubber | |
| Leather | |
| Textiles | |
| Others (if any) | |
| Total | 100 |

QUALITATIVE DATA

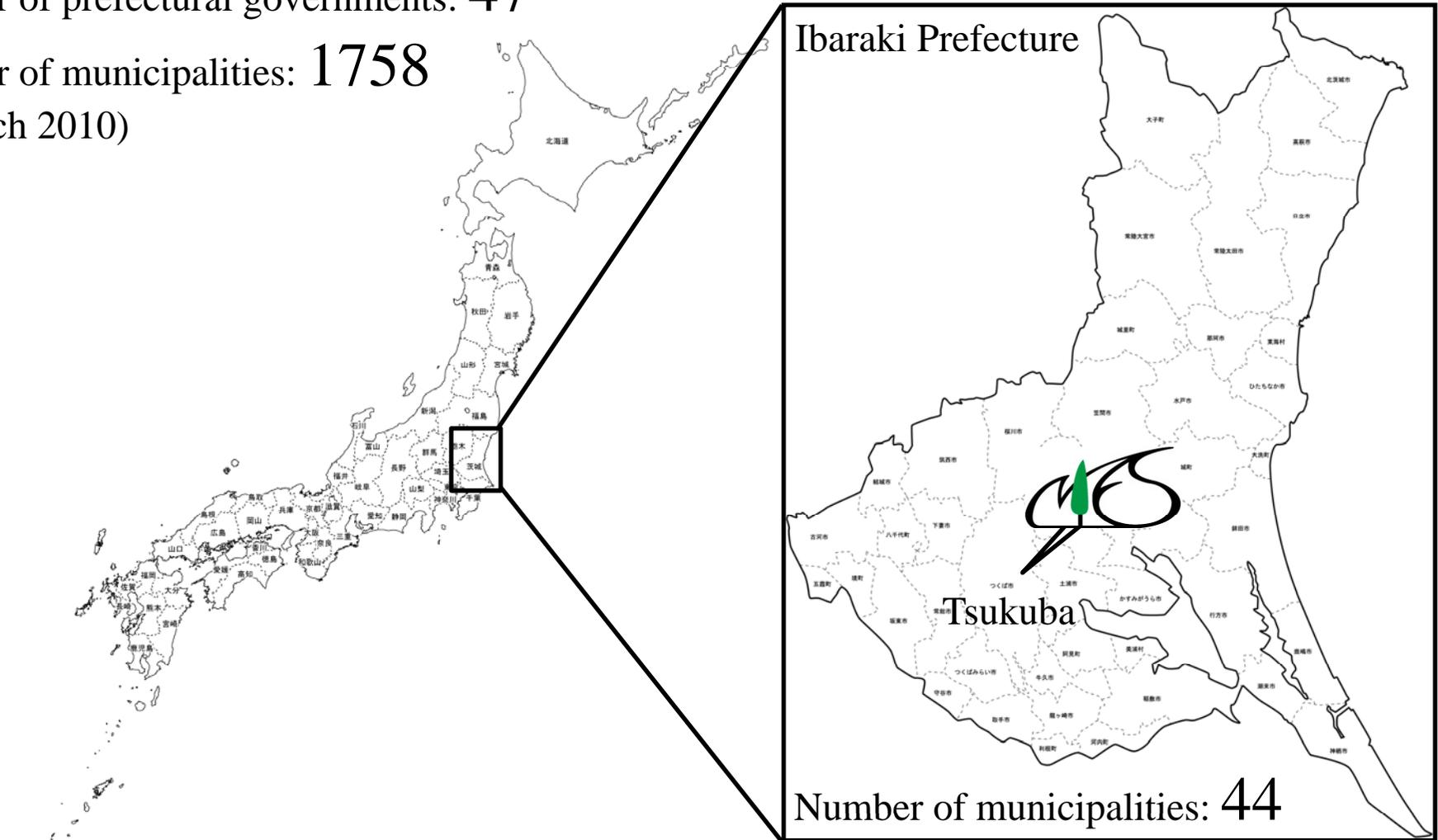
physical composition of municipal solid waste



Number of prefectural governments and municipalities in Japan

Number of prefectural governments: 47

Number of municipalities: 1758
(~March 2010)





Roles of prefectural governments

Businesses specified by the Cabinet Order as those who have places of business generating industrial waste abundantly as a result of their business activities shall **make the plan on reduction and other management of industrial waste** from the said places in accordance with the standards specified by the Ordinance of the Ministry of the Environment and **submit it to the prefectural governors**.

(Waste Management and Public Cleansing Law)

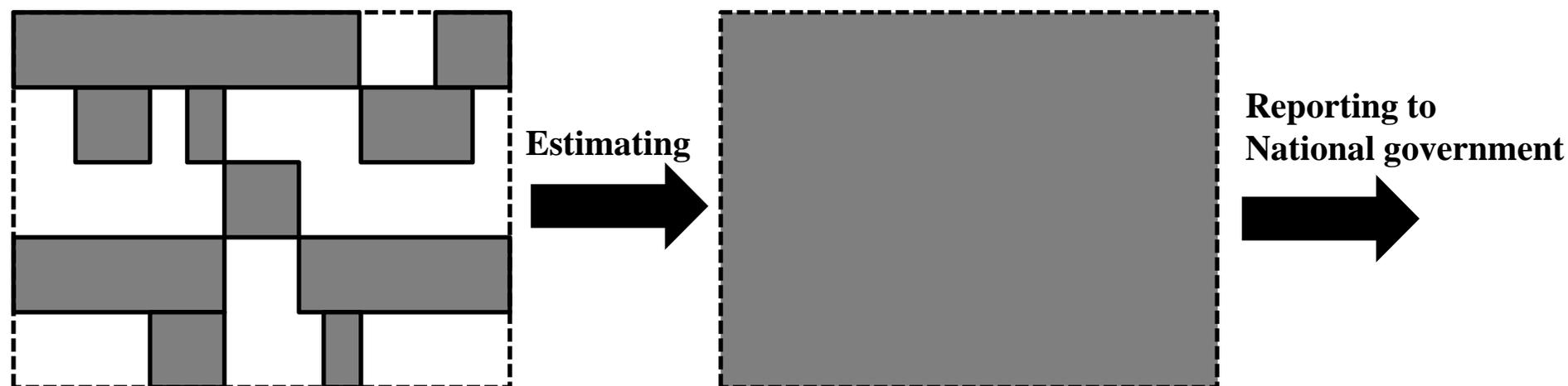


Prefectural governments are in charge of accumulating and estimating
INDUSTRIAL WASTE DATA.

Industrial waste data

Prefectural governments grasp the status of waste generation and disposal from reports from related businesses. High-volume generating businesses which have generated more than **1 kilo metric tons** in the previous year are obligated to **report** on the annual disposal plan and actual results to the prefectural governments.

Other businesses status is **estimated** from sampling survey of questionnaires and the actual results of industrial waste disposal contractors.



How to estimate industrial waste data in a prefecture



Roles of municipalities

The municipalities shall **collect, transport and dispose of** municipal solid waste in their municipal areas before they interfere with the conservation of the living environment, according to the municipal solid waste management plan.

The municipalities shall specified forth a definite plan for management of municipal solid waste in their respective administrative areas.

The municipal solid waste management plan shall include the following matters in regard to the management of municipal solid waste in their administrative areas according to the Ordinance of the Ministry of the Environment.

- 1) **Estimate of the volume of municipal solid waste to be generated and that to be managed.**
- 2) Matters related to measures for suppressing discharge of municipal solid waste.
- 3) Kinds of municipal solid waste to be presorted for collectors and descriptions of those kinds.
- 4) Fundamentals of proper municipal solid waste management and also the fundamentals relating to the authorities/persons carrying out such management.
- 5) Matters pertaining to the improvement or expansion of municipal solid waste disposal facilities.
- 6) Other matters necessary for the management of municipal solid waste.

(Waste Management and Public Cleansing Law)



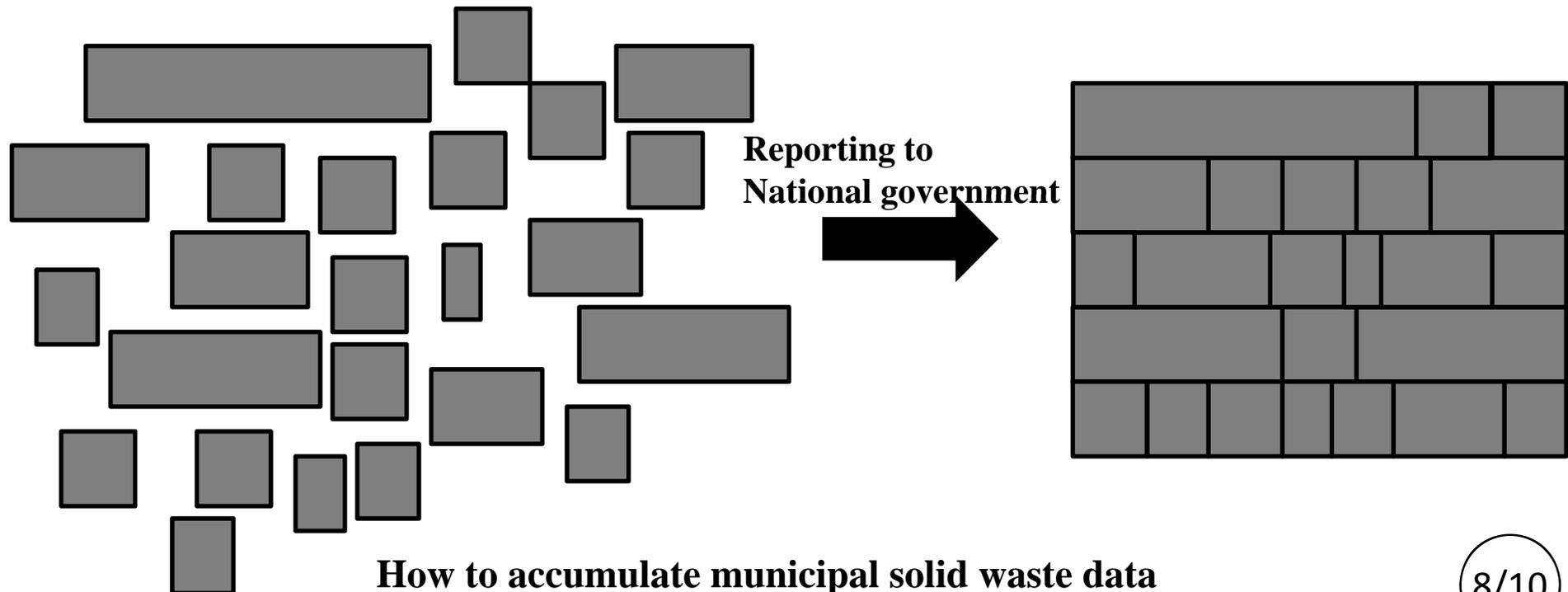
Municipalities are in charge of accumulating
MUNICIPAL SOLID WASTE DATA.



Municipal solid waste QUANTITATIVE data

Municipal governments and business relations associations investigate the amount of waste generation transported to the disposal facility from inside the designated disposal area, disposal and resource recovery.

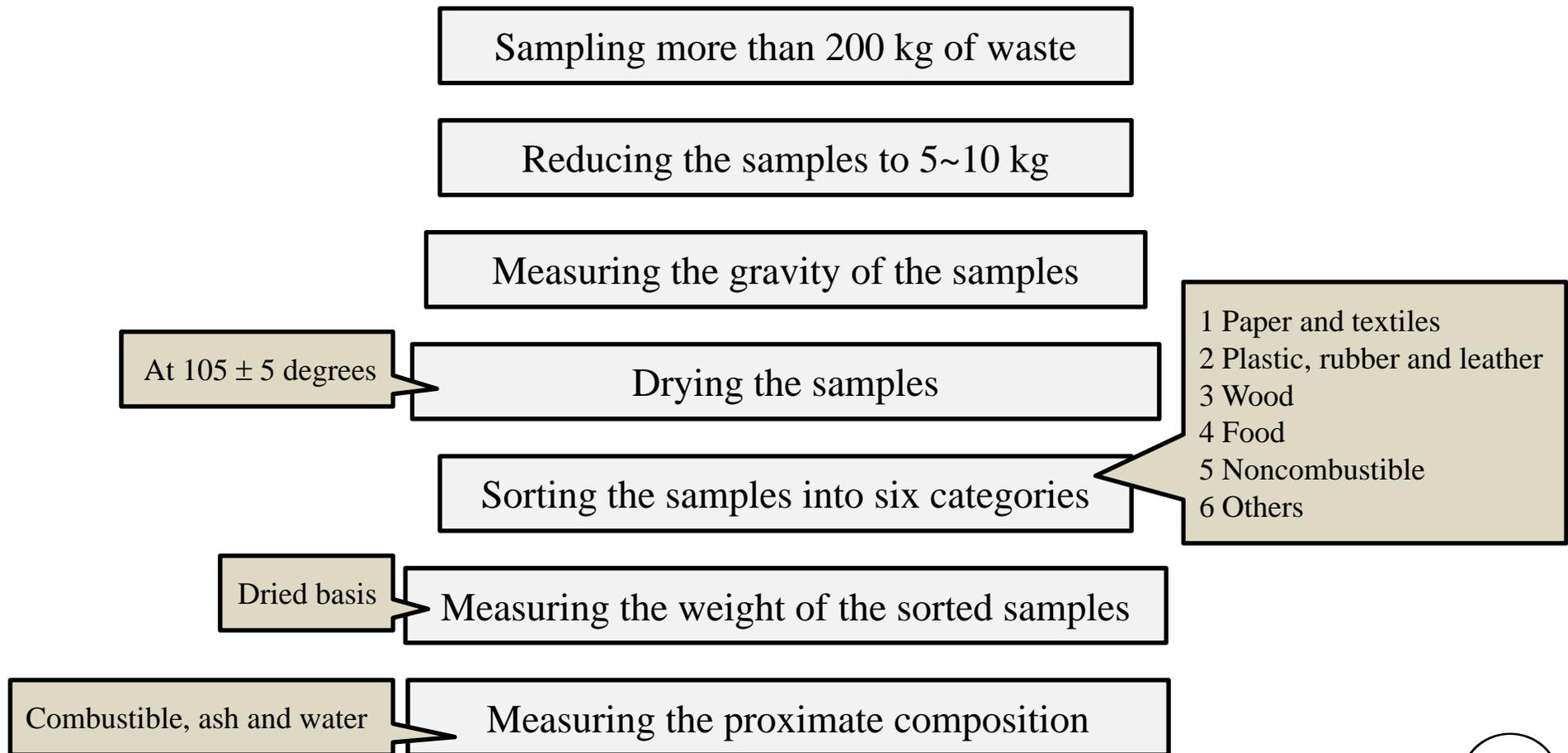
The national government integrates the amount of waste generation, disposal and resource recovery reported by municipal governments. By using such figures, the national government reports the national statistics of 'Waste treatment in Japan.'





Municipal solid waste QUALITATIVE data

Municipal governments shall analyze municipal solid waste QUALITATIVE data at incineration plants at least four times a year with **KANSEI Vol.95**.





How to accumulate the waste data in each Asian country

At this time, it is impossible to collect the **ALL** national waste data because of financial and technical problems.

For accumulating QUANTITATIVE data,
It is important to **estimate** the waste data **properly** for the time being.

For accumulating QUALITATIVE data,
It is important to adopt **reliable methods** for analyzing the waste data.

Essential consideration

- Cooperation of municipalities is vital for national governments to accumulate the waste data in each Asian country.
- Research Institutes should encourage municipalities to accumulate the waste data.

TOPICS in this session

- How do your country currently accumulate the waste data?**
- How should your country accumulate the waste data in the near future?**