



Solid Waste Data Generation through Digital Transformation from Local to National Level:

Country Case of South Korea

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Contents

I. South Korea's Waste Management Data

II. Waste Data Generation and Collection Framework

III. National Waste Statistics Surveys

IV. Implications for Policy-making and Ongoing Actions



I. South Korea's Waste Management Data



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South Korea's Waste Management Data Republic of Korea



- **Population:** 51.4 million (2023)
- **Area:** 99,720 km²
- **Population Density:** 515 cap/km² (2021),
- Most densely populated country among OECD countries
- **4th highest amount of waste generated per unit area** among OECD countries
- **Economic structure:** Imports of energy and mineral sources, heavily relying on exports by Korean industries such as ICT & electronics

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South Korea's Waste Management Data

Towards a Leading Country in Waste Management

Poor waste management before 1990s



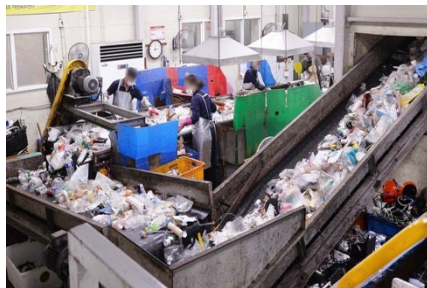
1970s



1980s



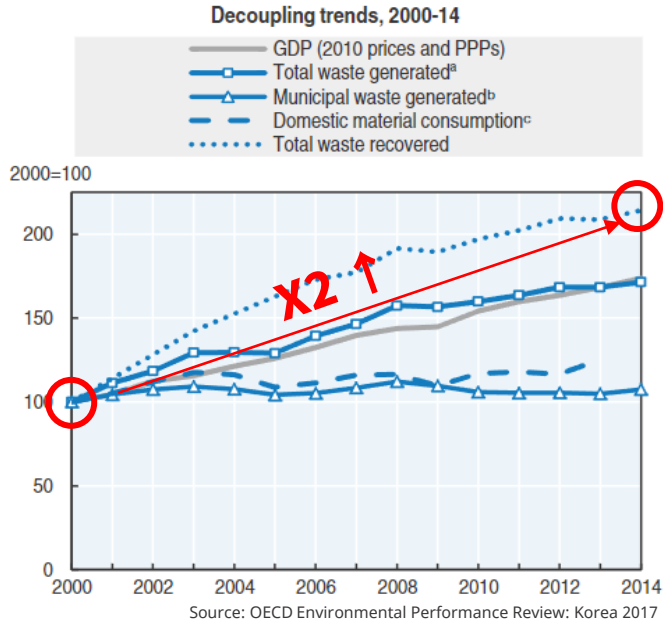
Advanced waste management system



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South Korea's Waste Management Data

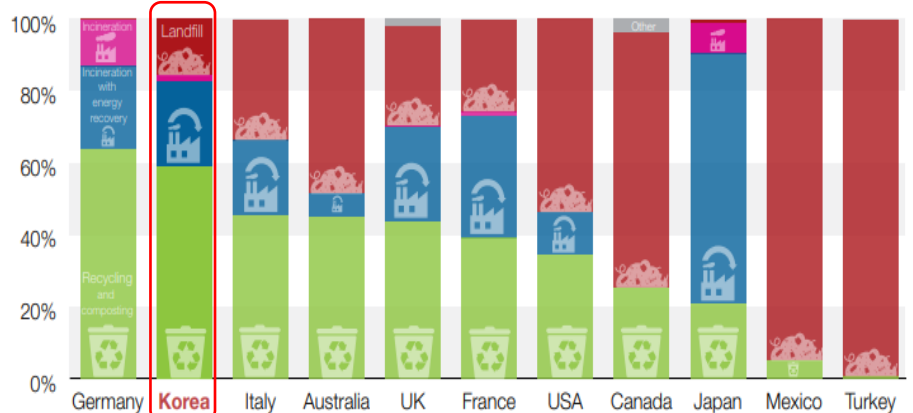
Towards a Leading Country in Waste Management



Progress in **Materials and Energy Recovery**

Figure 8. **Korea's recycling rates are higher than many OECD countries**

Municipal waste management by type of treatment, 2014 or latest available year.

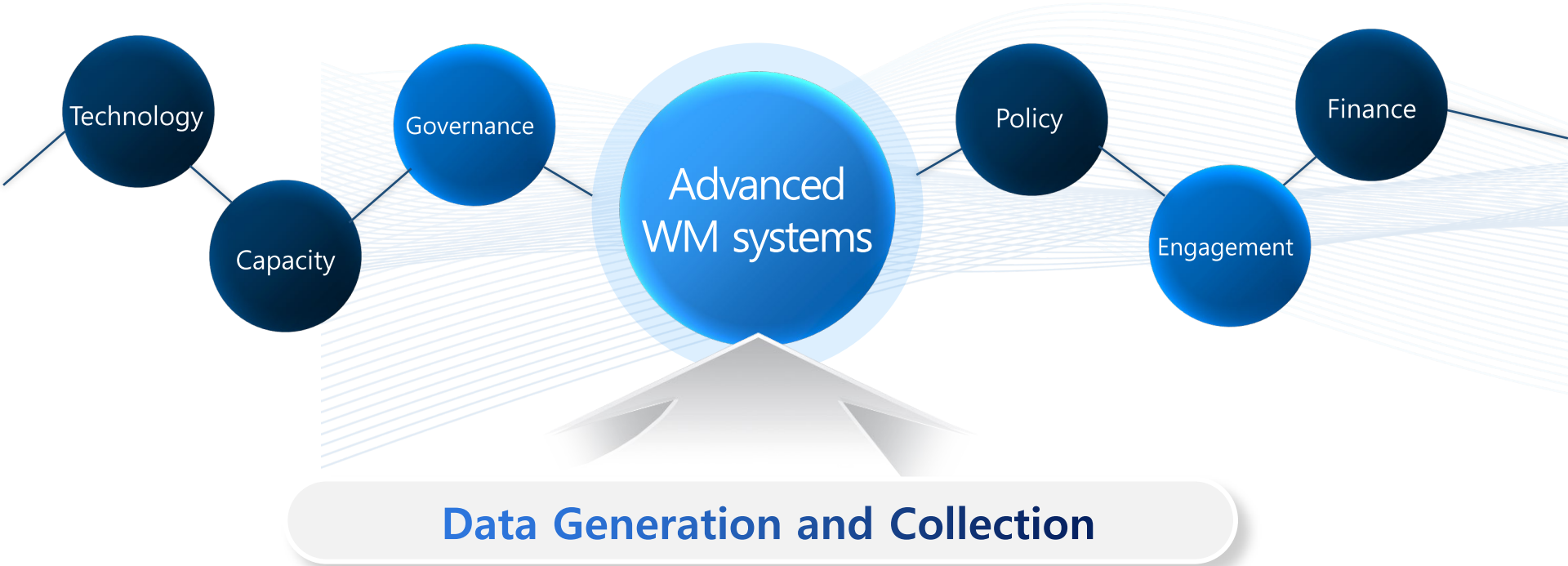


Higher recycling rate than many other OECD countries

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South Korea's Waste Management Data

Data Generation as Key Driver of WM Advancement



1

South Korea's Waste Management Data

OECD: "Environment at a Glance" of Korea

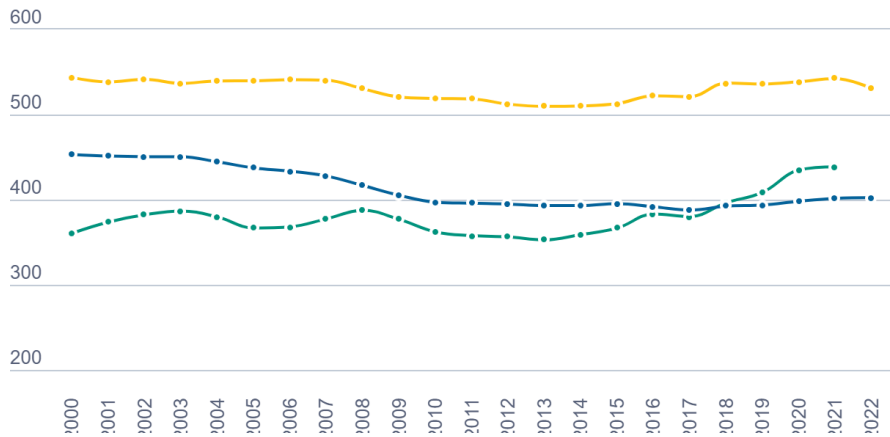
Waste, materials and circular economy

Municipal waste

Municipal waste generation intensity

Kilogramme per person

— Korea — OECD Asia Oceania — OECD

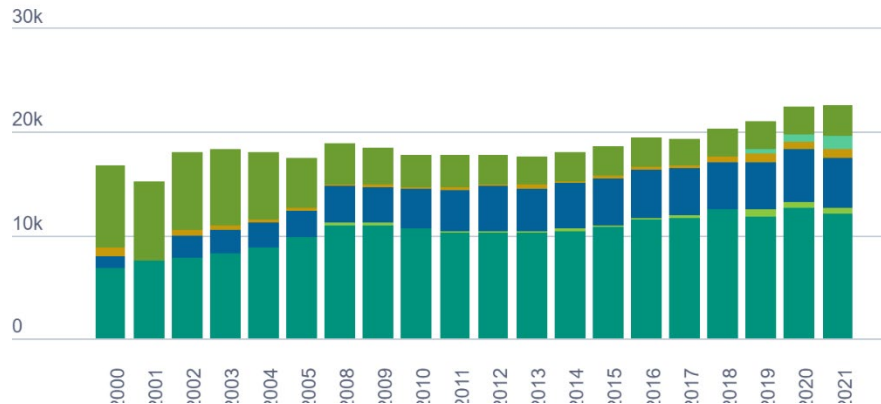


Municipal waste treatment operations

Thousand tonnes, Korea

■ Recycling
 ■ Composting
 ■ Incineration with ER

■ Incineration without ER
 ■ Other disposal
 ■ Landfill



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South Korea's Waste Management Data

OECD: "Environment at a Glance" of Korea

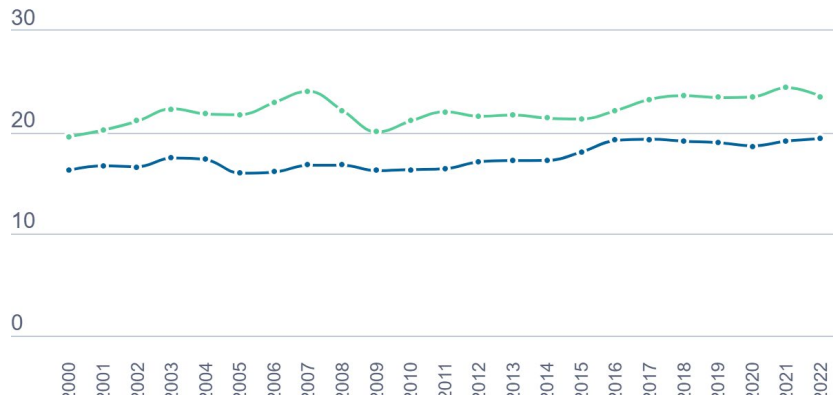
Waste, materials and circular economy

Material consumption

Material consumption intensities

Tonnes per person, Korea

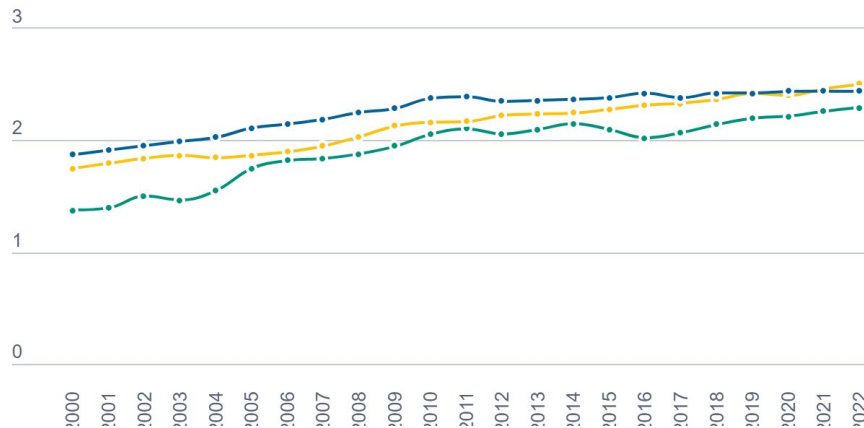
Domestic Material Consumption Material footprint



Material productivity

USD per kilogramme

OECD OECD Asia Oceania Korea



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South Korea's Waste Management Data

UN: Waste-related SDG Indicators of Korea

SDG 12: Responsible Consumption and Production

12.3.1 Food loss and food waste index

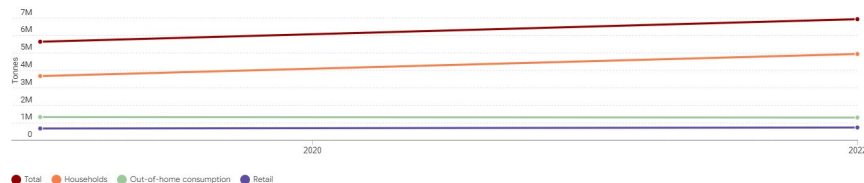
12.4.1 Number of parties to international agreements on hazardous waste, and other chemicals that meet their commitments and obligations in transmitting information as required by each relevant agreement

12.4.2 Hazardous waste generated per capita and proportion of hazardous waste treated, by type of treatment

12.5.1 National recycling rate, tons of material recycled

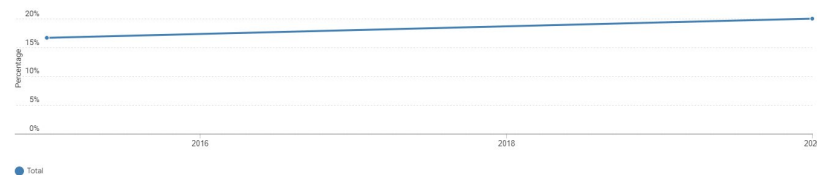
Food Waste (Tonnes) in Republic of Korea

Source: Global SDG Database



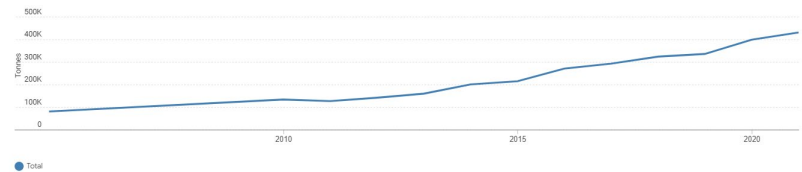
Parties Meeting Their Commitments and Obligations in Transmitting Information as Required by Basel Convention on Hazardous Waste, and Other Chemicals in Republic of Korea

Source: Global SDG Database



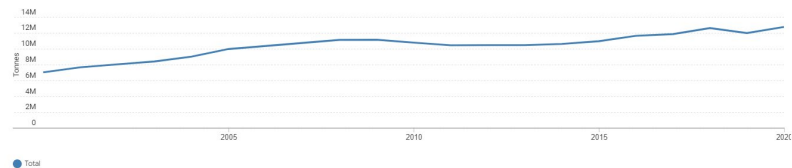
Electronic Waste Collected in Republic of Korea

Source: Global SDG Database



Municipal Waste Recycled in Republic of Korea

Source: Global SDG Database

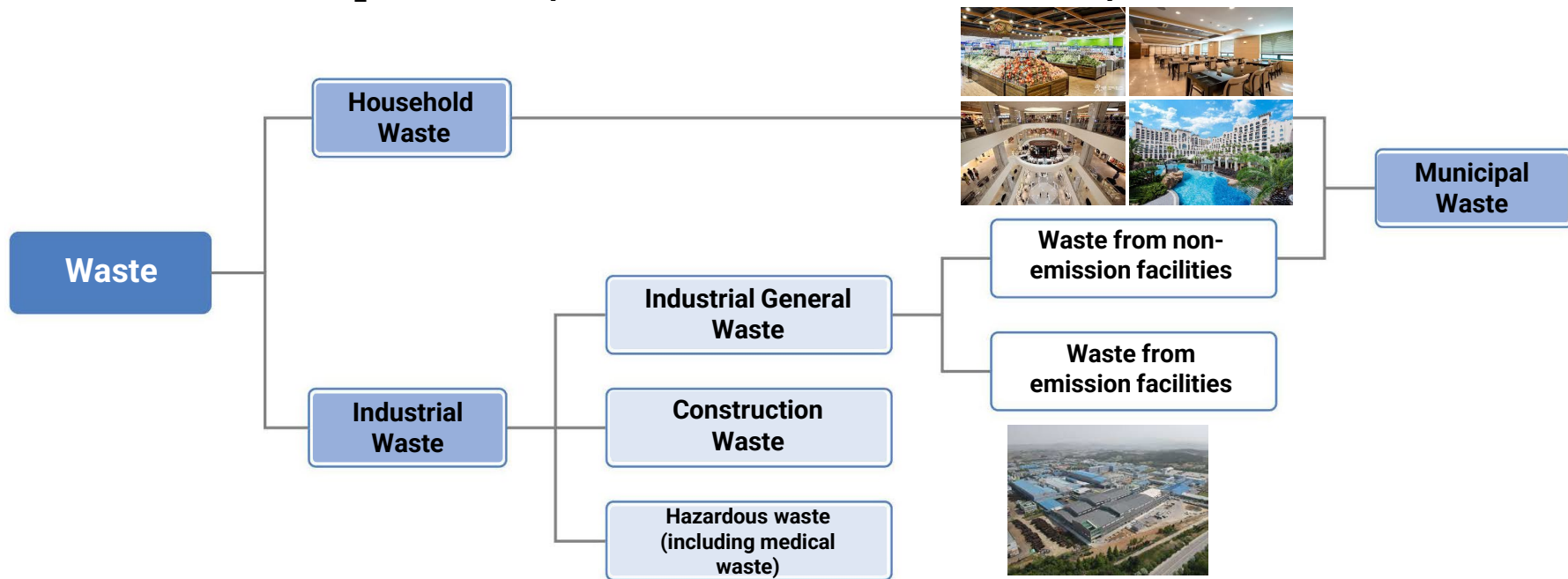


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South Korea's Waste Management Data

Waste Classification System in Korea

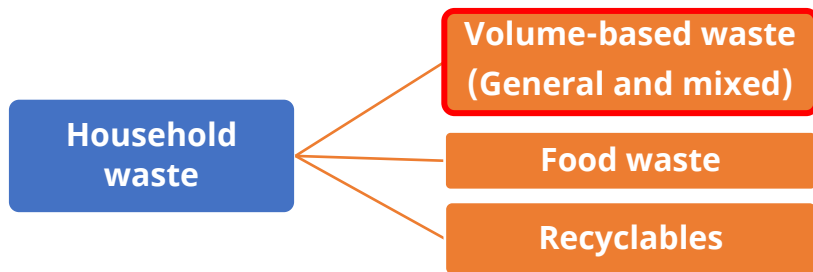
「Waste Control Act」 Article 2 (Definitions and Classification)



1

South Korea's Waste Management Data

Waste Classification System in Korea



Volume-based Waste Collection Fee System

- Charge to the citizen by applying the Producer Pays Principle - **Pay as you throw!**



Mandatory to buy the designated waste bags

Separate Discharge System

- Stationary system for residential area - **Drop off**
- Autonomous operation system for apartments (e.g. every Monday and Wednesday by residents themselves)



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South Korea's Waste Management Data

At a Glance: South Korea's Waste Statistics in 2022

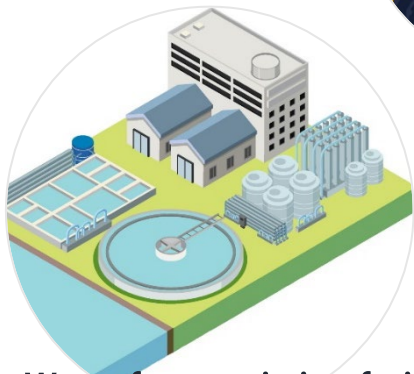
Generation of Waste by Source



Municipal Waste
(23 Mt/yr, 12.4%)



Construction & Demolition Waste
(76 Mt/yr, 40.9%)



Waste from emission facilities
(81 Mt /yr, 43.5%)



Hazardous Waste
(6 Mt/yr, 3.3%)

Waste Treatment/Disposal Methods



Recycling, Recovery
(162 Mt/yr, 86.8%)



Landfill
(9.8 Mt/yr, 5.2%)



Incineration
(9.4 Mt/yr, 5.1%)



Others
(5.4 Mt/yr, 2.9%)

II. Waste Data Generation and Collection Framework (**Raw Data**)



2 Waste Data Generation and Collection Framework

Industrial Waste vs. Municipal Waste Management

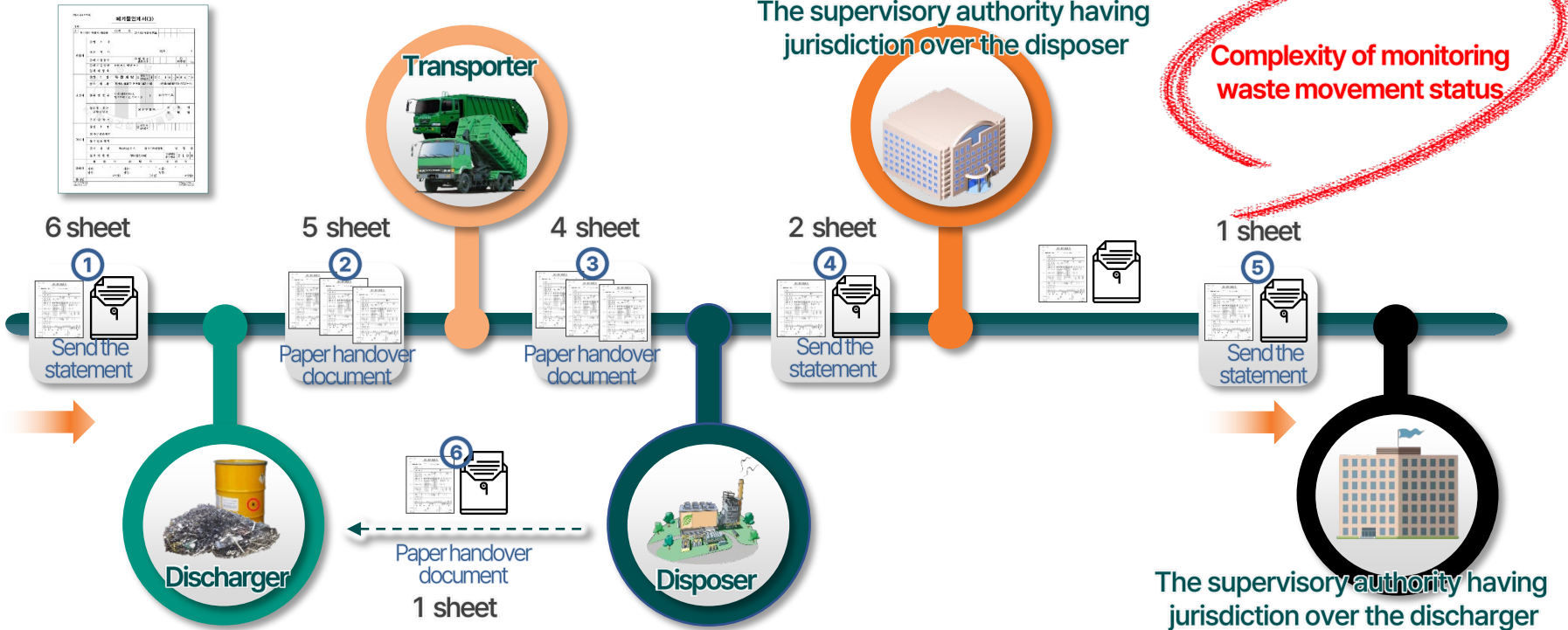
Type	Industrial Waste	Municipal Waste (Household)
Management Responsibility	Waste discharger (Private, Severe control)	Local government (Autonomous)
Management Flow	<ul style="list-style-type: none"> Direct contract among discharger, transporter, and disposer (Relatively transparent) 	<ul style="list-style-type: none"> Contract between local government and private collection and transportation enterprises Depending on the local circumstances Diverse stakeholders and sources (High level of complexity)
Data Management	Online tracking platform from generation to final disposal	Scattered data gathering (Uncertainty level has been the challenge)

2

Waste Data Generation and Collection Framework

Past IW(Industrial Waste) Data Gathering: Paper Documentation

Paper handover document



2

Waste Data Generation and Collection Framework

“All-Baro System”: Online Industrial Waste Monitoring System

Paper handover document

Electronic handover document

The supervisory authority having jurisdiction over the discharger



③ paper handover document (1 sheet)



The supervisory authority having jurisdiction over the disposer



⑤ paper handover document (2 sheet)

① paper handover document (6 sheet)



② Send the statement (5 sheet)



④ Send the statement (1 sheet)



③ Send the statement (4 sheet)



Discharger



Transporter



Disposer

Fill out the discharger handover document (As soon as the waste is handover)



Fill out the porter handover document (within 2 days after handover/takeover)



Fill out the disposer handover document (within 2 days after takeover)



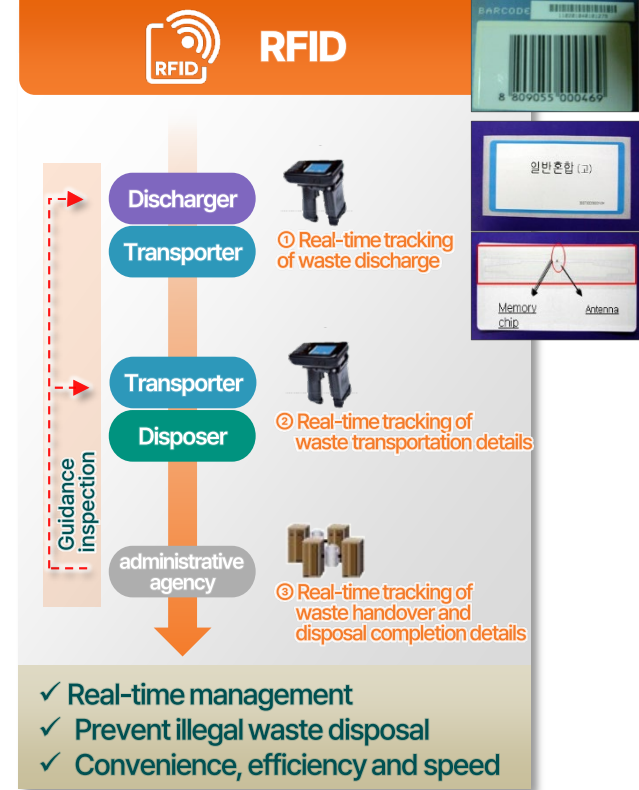
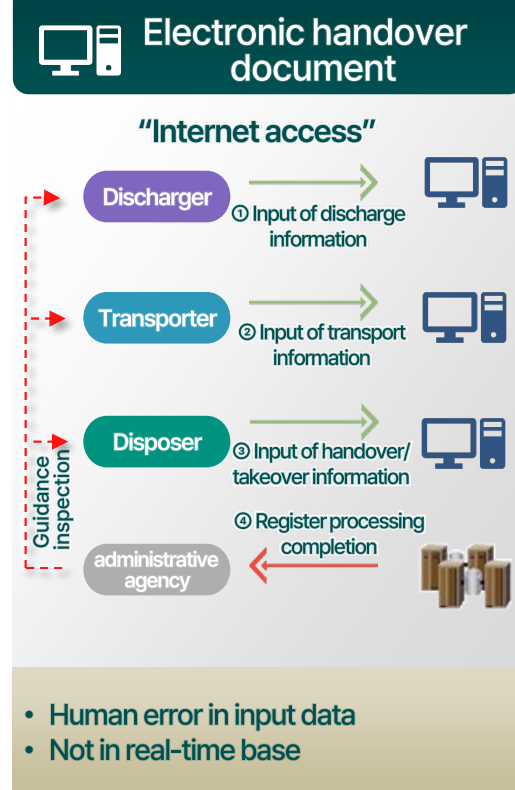
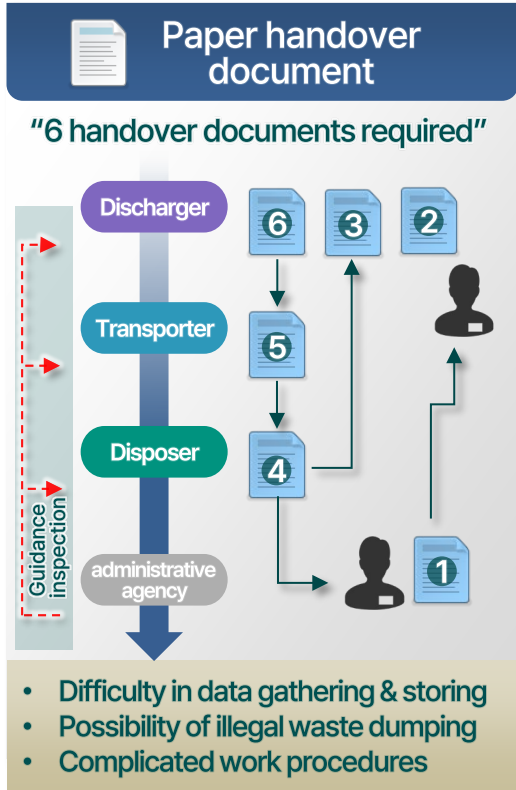
Electronic processing equipment



Jurisdiction supervisory office

2 Waste Data Generation and Collection Framework

Radio Frequency Identification (RFID) Introduction

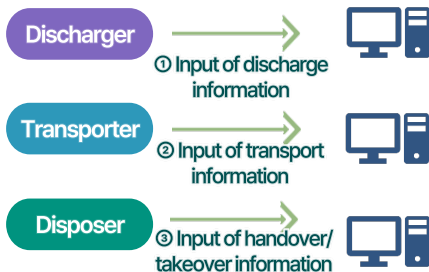


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Waste Data Generation and Collection Framework

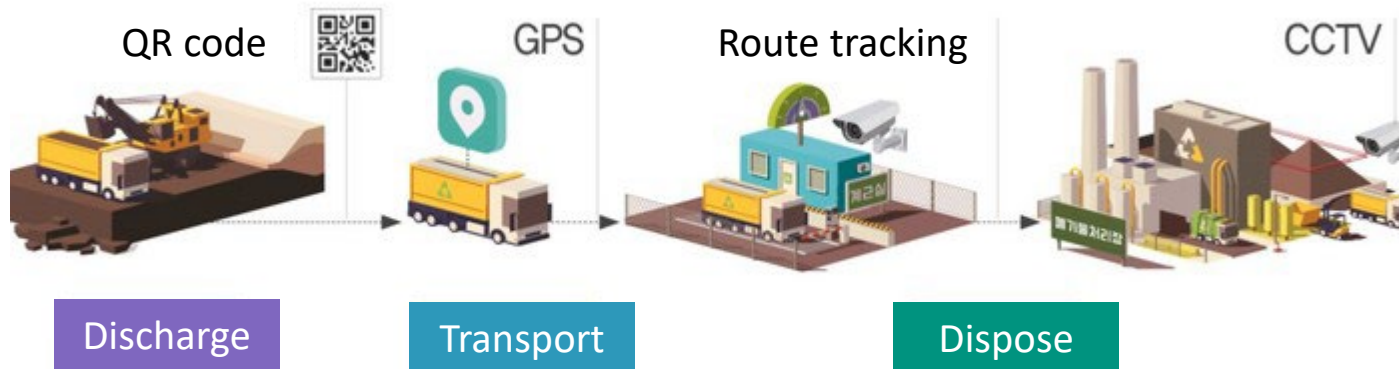
IoT Tech Introduction for Preventing Illegal Waste Dumping

All-baro
System
Data Input
Flow



✓ Illegal dumping can happen when tri-parties (discharger, transporter, disposer) agree with fake data input.

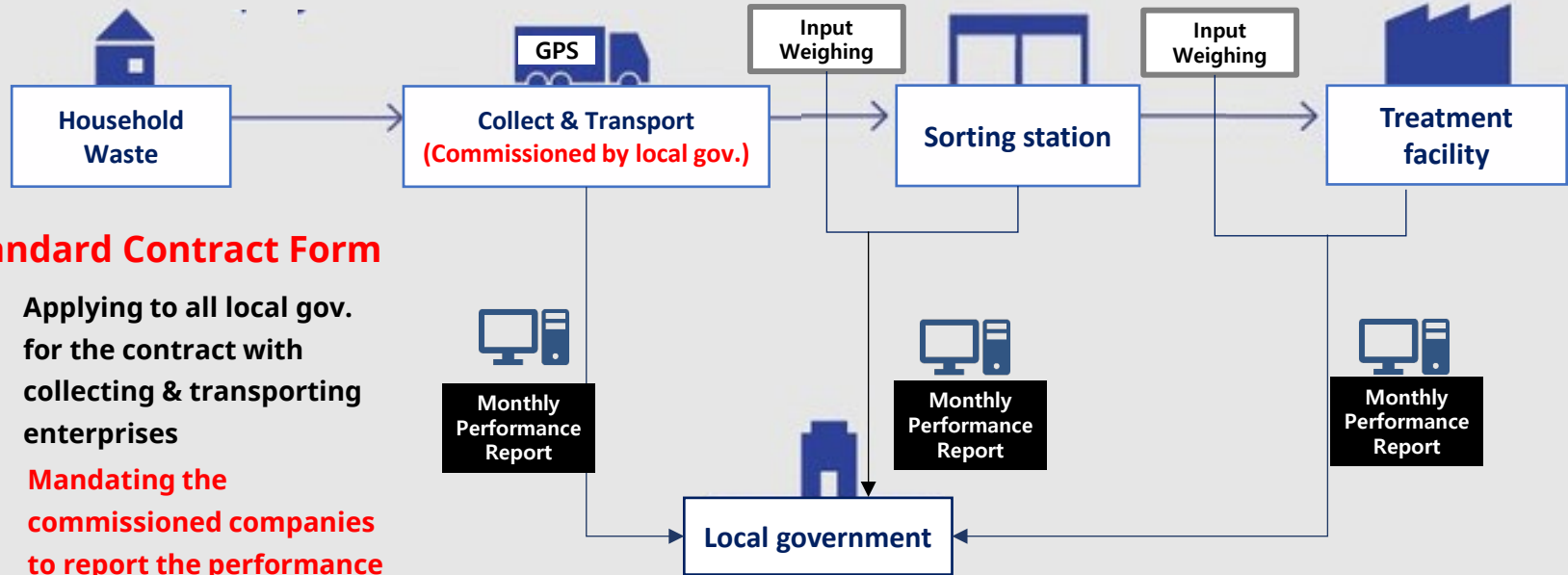
IoT
technology
introduction
for
monitoring



2

Waste Data Generation and Collection Framework

Municipal Data Gathering at the Local Government Level



Standard Contract Form



Applying to all local gov. for the contract with collecting & transporting enterprises



Mandating the commissioned companies to report the performance

Cross-checking system for data assurance

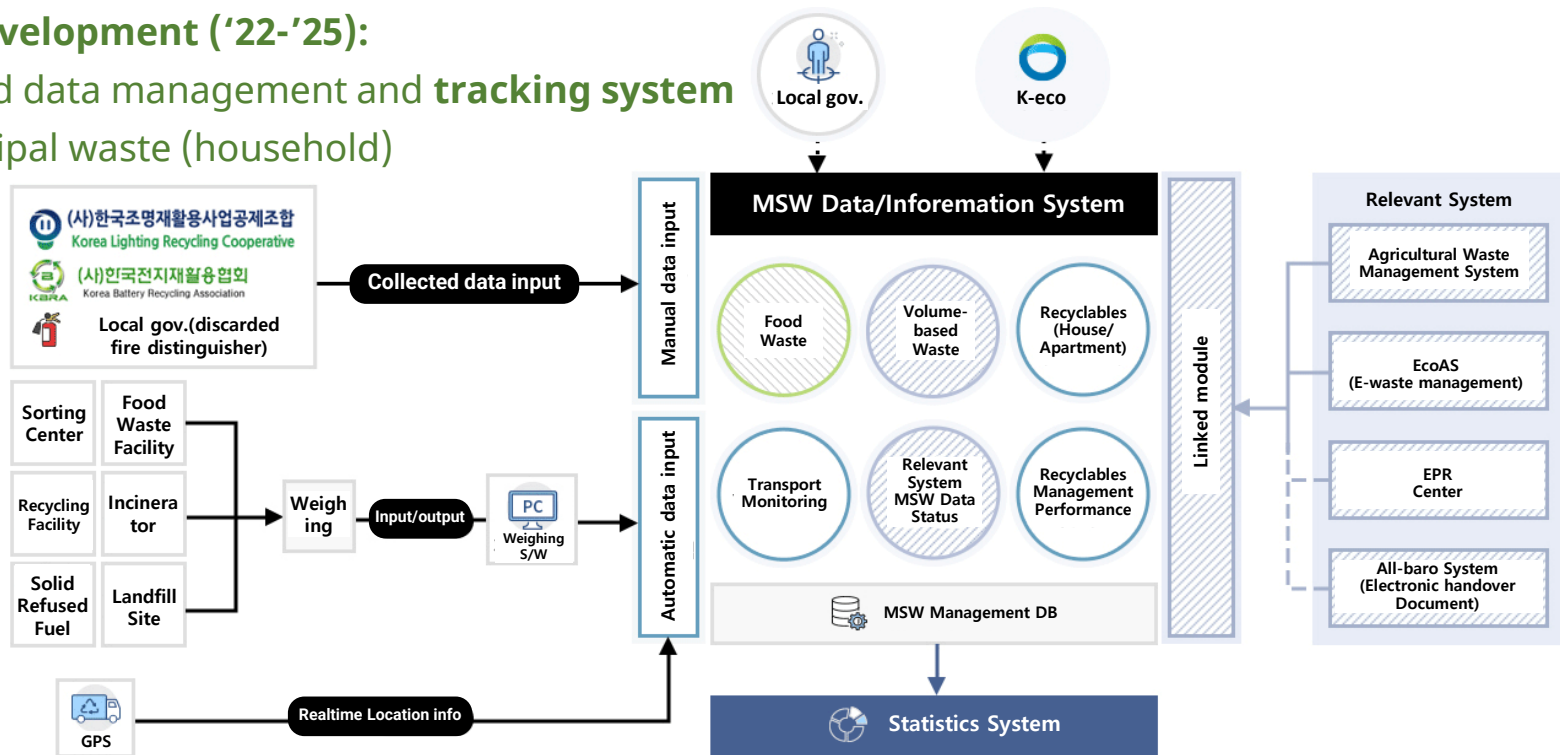
2

Waste Data Generation and Collection Framework

On-Progress: Integrated Data & Information System for MSW

Under development ('22-'25):

Integrated data management and **tracking system** for municipal waste (household)



2

Waste Data Generation and Collection Framework

Real-time Weighing Data transfer from Sudokwon Landfill Site

Real-time weighing transfer from Sudokwon Sanitary Landfill Site to local governments



64 cities and districts in the metropolitan region
(26 million people)

• Data items:

- 1) Total volumes of MSW input until the day before
- 2) Total waste input volume compared to the total allocated volume
- 3) Input ratio to the total amount
- 4) Additional fee status

Weighing scale:

Real-time info on type of waste, region, volume



III. National Waste Statistics Surveys



3

National Waste Statistics Surveys

Main National Waste Statistics Surveys

Title	National Waste Generation and Management Status	National Waste Statistics Survey
Legal framework	Act on promotion of transition to circular economy and society	
Starting year	1981	1996
Objective	Tracking the trend of waste	Cross-checking and in-depth research
Cycle	1 year	5 year
Methods	<ul style="list-style-type: none"> • Complete enumeration survey • Mandatory reporting 	<ul style="list-style-type: none"> • Sample survey • Field survey at source
Flow	Enterprises → Env. agency under MoE or local gov → K-ECO → MoE	Research survey → K-ECO → MoE

3 National Waste Statistics Surveys

Survey Items for 2 Main Waste Data Surveys

Survey items	National Waste Generation and Management Status (annual)	National Waste Statistics Survey (5-year)
Municipal Waste	MSW generation & management by administrative area, workforce, and budget details	Waste generation units: by source, seasons, and urban scale Characteristics and Physical Composition by Type Analysis of Moisture, Ash Content, and Combustible Fraction Calorific Value and Elemental Analysis
Industrial Waste	Industrial waste / construction waste / medical waste generation & management status by administrative area	Economic Data by Source Characteristics and Physical Composition by Type Analysis of Moisture, Ash Content, and Combustible Fraction
Waste treatment in industry	Status of public treatment facilities, self-processing facilities, collection and transportation companies, intermediate disposal facilities, final disposal facilities, and recycling processing facilities.	Waste Disposal Status by Type and Method Residue Status by Disposal Method
Others	Recognition status of circular resources by land use and type at the municipal level. Information on recognized circular resource companies	Waste Generation Units for Multi-Use Facilities, Sports and Leisure Facilities, Large-Scale, and Disaster Waste

3

National Waste Statistics Surveys

(1) “National Waste Generation and Management Status”

Statistics Status

- Approval No. : National Approval Statistics No. 106029 by the Korea Statistics Service
- **Statistics type: General data statistics (method), Listed statistics (nationally recognized classification)**
- **Publication cycle: 1 year**
- Publication due: End of December of the following year

Objectives

- Identify the **rises and falls of waste generation by region, changes in treatment methods and the number of waste treatment facilities, and circular resource utilization** by collecting **annual generation and treatment status of municipal and industrial waste** by local governments nationwide.
- Serve as a basis for **establishing resource circulation master plan** and **setting national resource circulation targets**

3

National Waste Statistics Surveys

(1) Legal Framework for National Waste Statistics Survey

ACT ON PROMOTION OF TRANSITION TO CIRCULAR ECONOMY AND SOCIETY

- Article 12 (Statistical Surveys on Circular Economy)

② If necessary to conduct a statistical survey pursuant to paragraph (1), the **Minister of Environment**, the head of the relevant central administrative agency, a Mayor/Do Governor, or the head of a Si/Gun/Gu **may request the heads of the relevant administrative agencies and related institutions or organizations to provide necessary materials or information**. In such cases, a person so requested shall comply with the request unless there is a compelling reason not to do so.

- Enforcement Rules Article 6 (Statistical Surveys on Circular Economy)

The Korea Environment Corporation, special mayors, metropolitan mayors, special autonomous mayors, governors, and governors of special autonomous regions (hereinafter referred to as “city and provincial governors”), or mayors, county and district heads may conduct statistical surveys on resource circulation pursuant to Article 12 of the Act according to the following categories.

3

National Waste Statistics Surveys

(1) Legal Framework for National Waste Statistics Surveys

Statistics Act

▪ Article 18 (Approval for Production of Statistics)

① Where the head of a statistics service agency intends to produce new statistics, he or she shall obtain prior approval from the Commissioner of Statistics Korea on the matters prescribed by the Presidential Decree, such as name, kind, purpose, subject of survey, method of survey, statistical chart form, distinction of sex, etc.

▪ Article 30 (Request, etc. for Report for Production of Statistics)

① Where it is necessary to facilitate the production of statistics that are produced based on various reports, among the statistics for which approval has been obtained or that have been consulted pursuant to Article 18 (1) or 20 (1) of the Act, **the head of a central administrative agency or the head of a local government may request the head of an affiliated agency or the head of a local government in the jurisdictional district to report on matters necessary for the production of statistics by a specified date.**

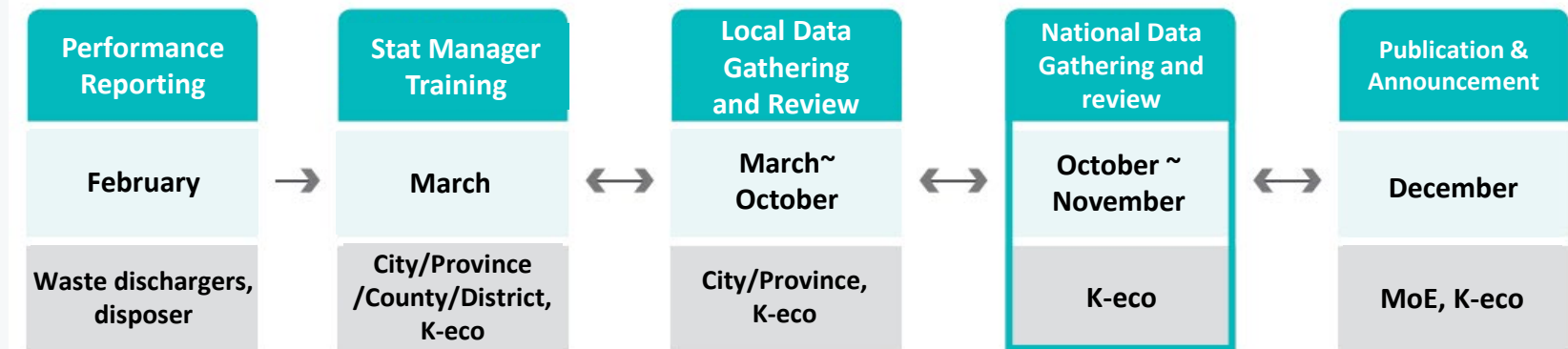
② If a report requested pursuant to paragraph (1) fails to arrive by the specified date, the head of a central administrative agency or the head of a local government may urge the head of a reporting agency twice to send a report by specifying a period of three days each. In such cases, the head of the reporting agency who is urged to report shall take necessary measures and notify the head of the requesting agency.

3

National Waste Statistics Surveys

(1) “National Waste Generation and Management Status”

Timeline

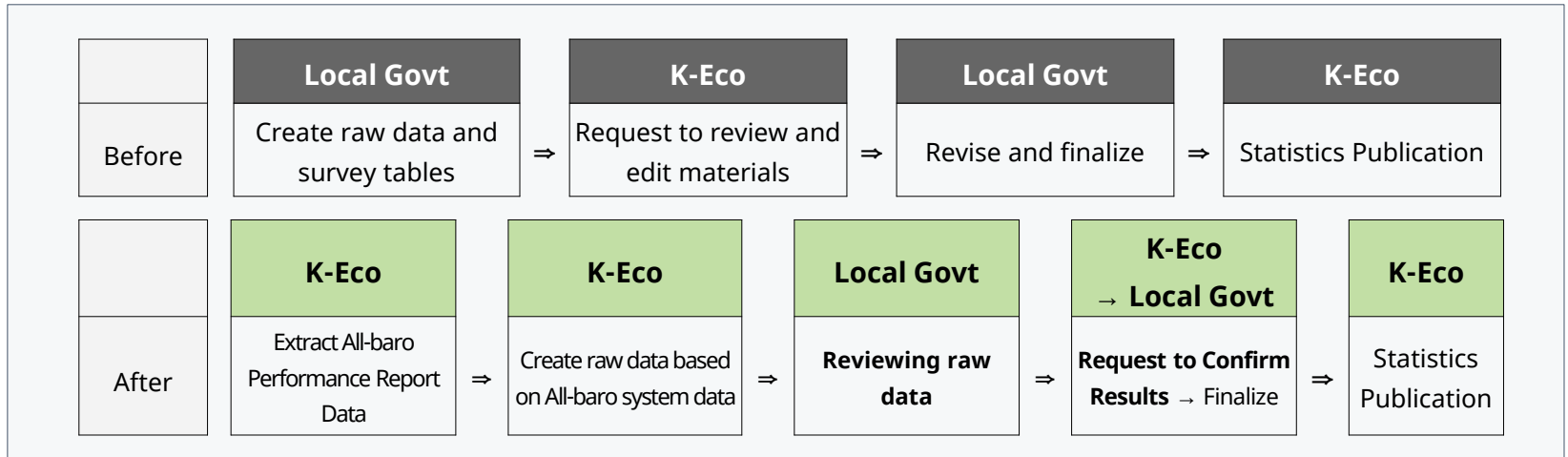


3 National Waste Statistics Survey

(1) Link with All-baro System: Increase Data Assurance

Benefits of strengthening linkage with 'All-baro System' ('21.6~)

- **Local governments create raw data tables on industrial wastes.**
- ✓ Frequent turnover of local government statisticians and lack of time to review data at K-eco raised questions about the reliability of the statistics.
 - **Link with All-baro system:** 1) Reduce the burden on local governments, 2) Improve data reliability, and 3) Strengthen linkages between policies by extracting performance data from the system.

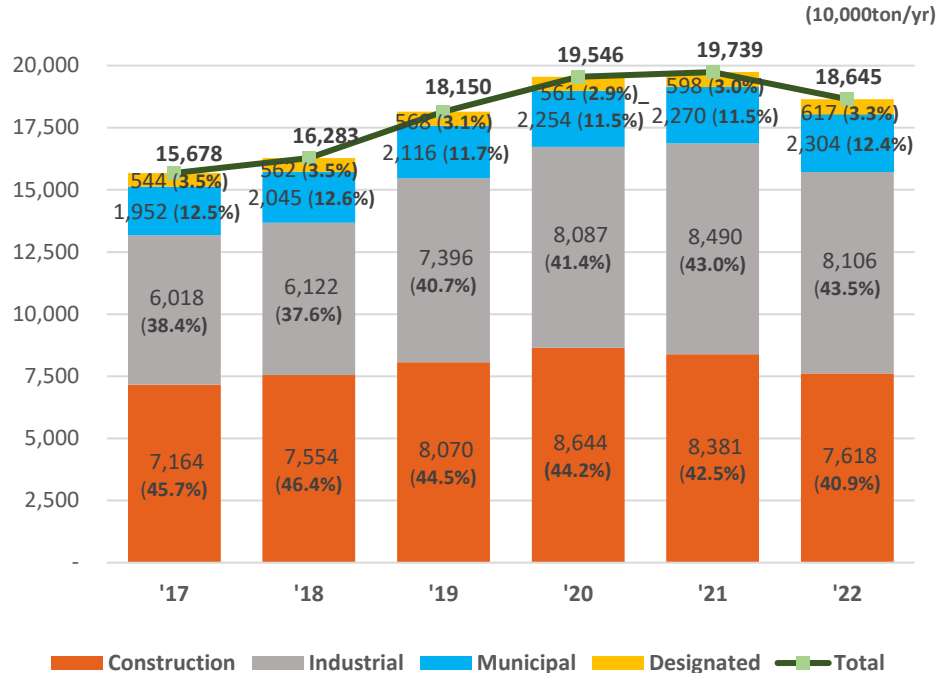


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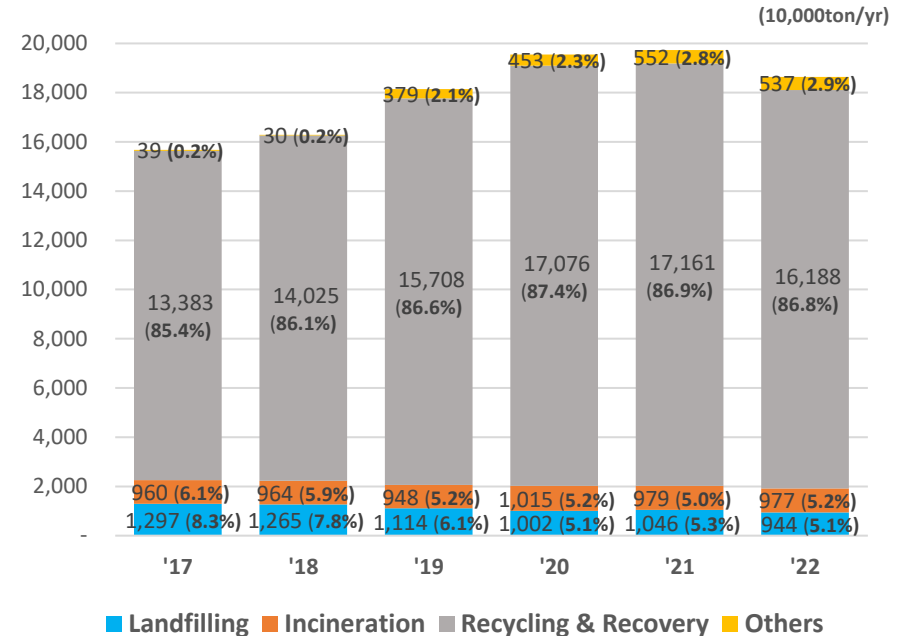
National Waste Statistics Survey

(1) Annual Waste Generation and Management Trends

Generation of Waste by Source



Waste Treatment/Disposal Methods



3

National Waste Statistics Survey

(2) “National Waste Statistics Survey”

Statistics Status

- Approval No. : National Approval Statistics No. 106009 by the Korea Statistics Service
- **Statistics type: Survey statistics (method), Listed statistics (nationally recognized classification)**
- **Publication cycle: 5 years**
- Publication due: end of March of the following year

Objectives

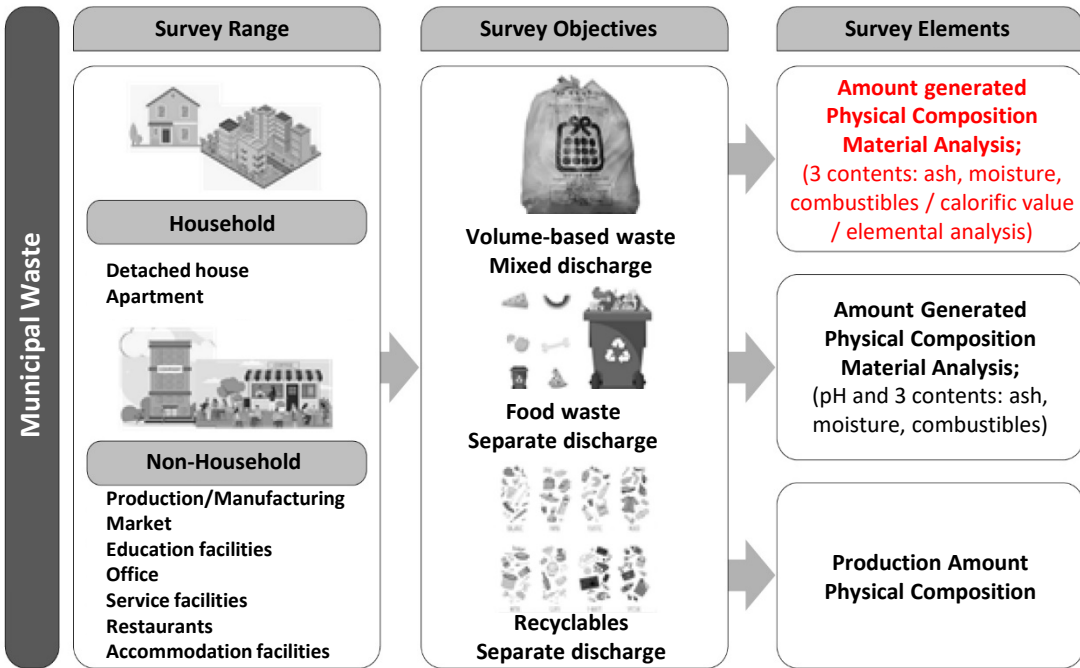
- **Securing basic data for policy formulation:** Utilizing source-level and multi-use facility waste generation data for policy and urban development
- **Developing appropriate treatment methods:** Developing appropriate treatment methods by analyzing changes in waste composition
- **Establishment of waste disposal plan:** Calculate the amount of waste generated by type, source, and composition and use it as basic data for planning by disposal method

3

National Waste Statistics Survey

(2) “National Waste Statistics Survey”: MSW Survey Scheme

Municipal Waste Survey Scheme

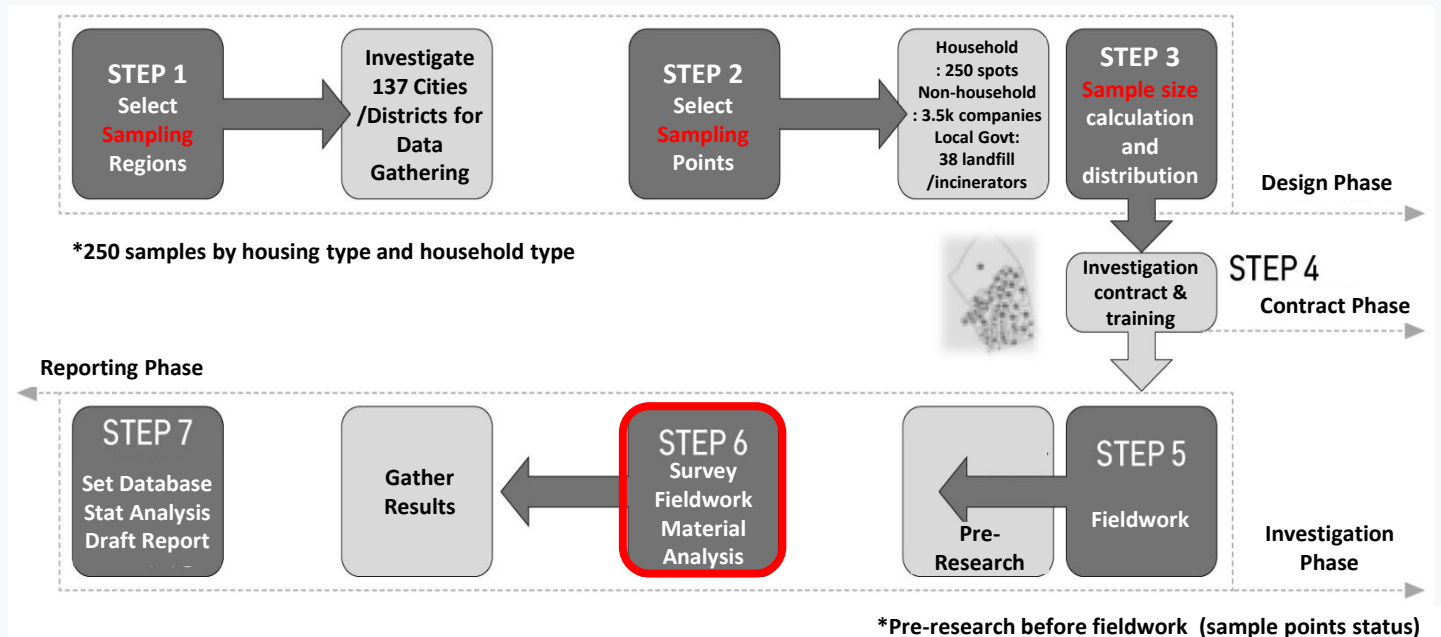


3

National Waste Statistics Survey

(2) “National Waste Statistics Survey”: MSW Survey Flow

Municipal Waste Survey Flow



3

National Waste Statistics Survey

(2) “National Waste Statistics Survey”: Fieldwork Step

Municipal Waste Survey Field Work



Volume-based waste samples
(Mixed discharge)

- 3 contents analysis (moisture, ash, combustibles)
- High/Low/Dry heating value
- Elemental analysis (C, H, O, N, S, Cl)



Weighing



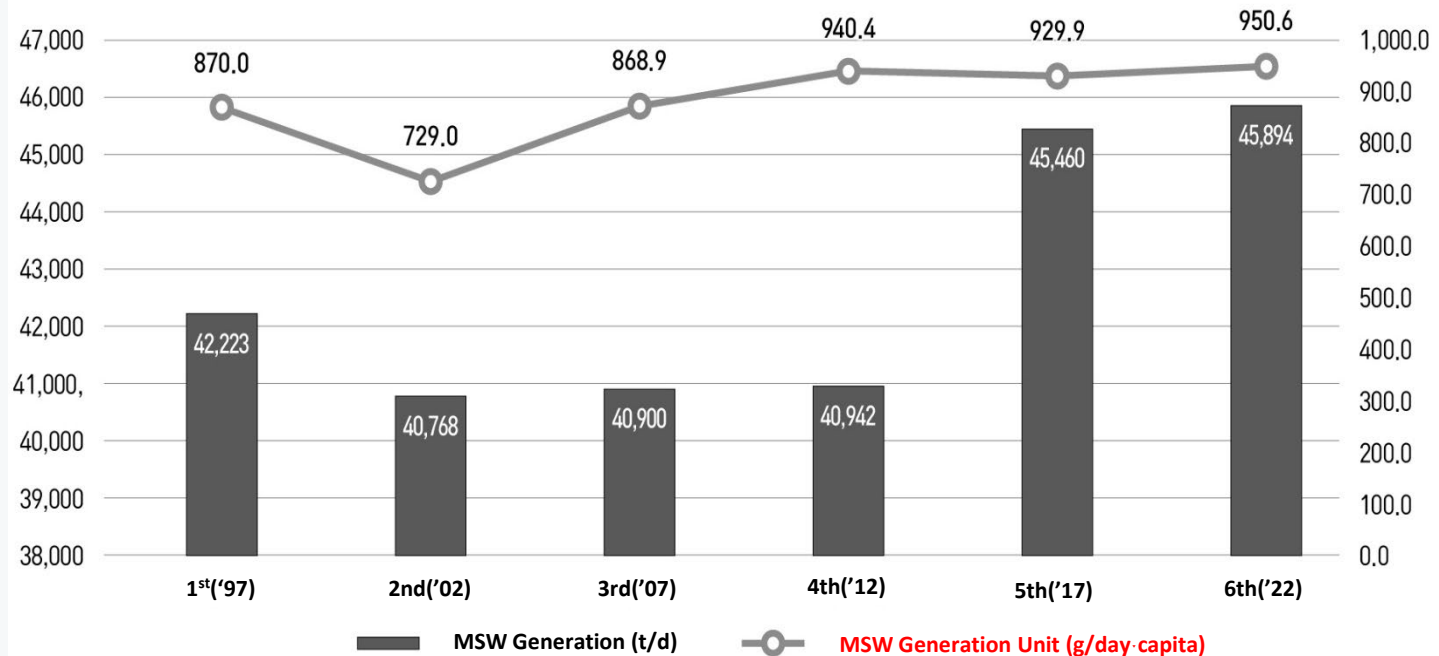
Unpacking

3

National Waste Statistics Survey

(2) “National Waste Statistics Survey”: MSW Data Outcome

Municipal Waste: Generation Unit Trend

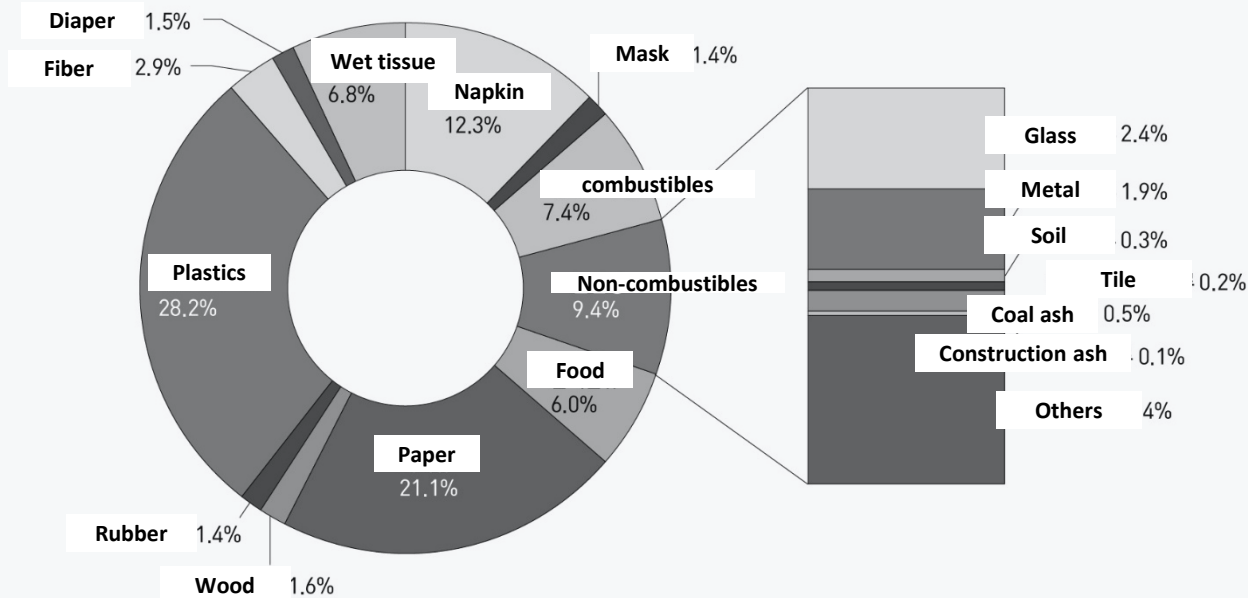


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National Waste Statistics Survey

(2) “National Waste Statistics Survey”: MSW Data Outcome

Municipal Waste: Physical composition



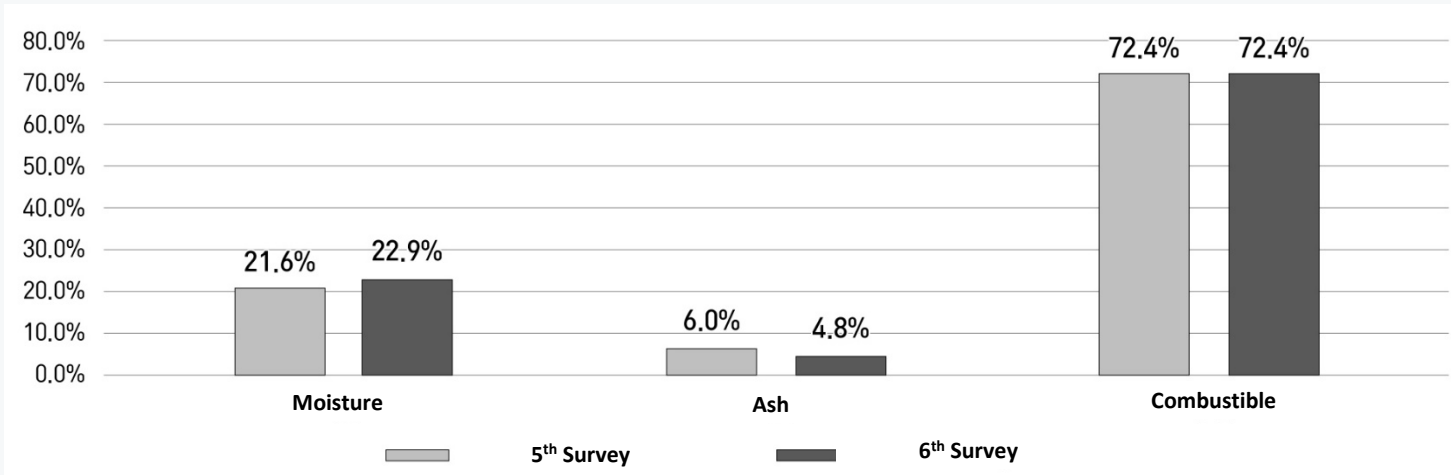
Volume-based Waste Composition

3

National Waste Statistics Survey

(2) “National Waste Statistics Survey”: MSW Data Outcome

Municipal Waste: Material Analysis



Volume-based Waste Composition

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National Waste Statistics Survey

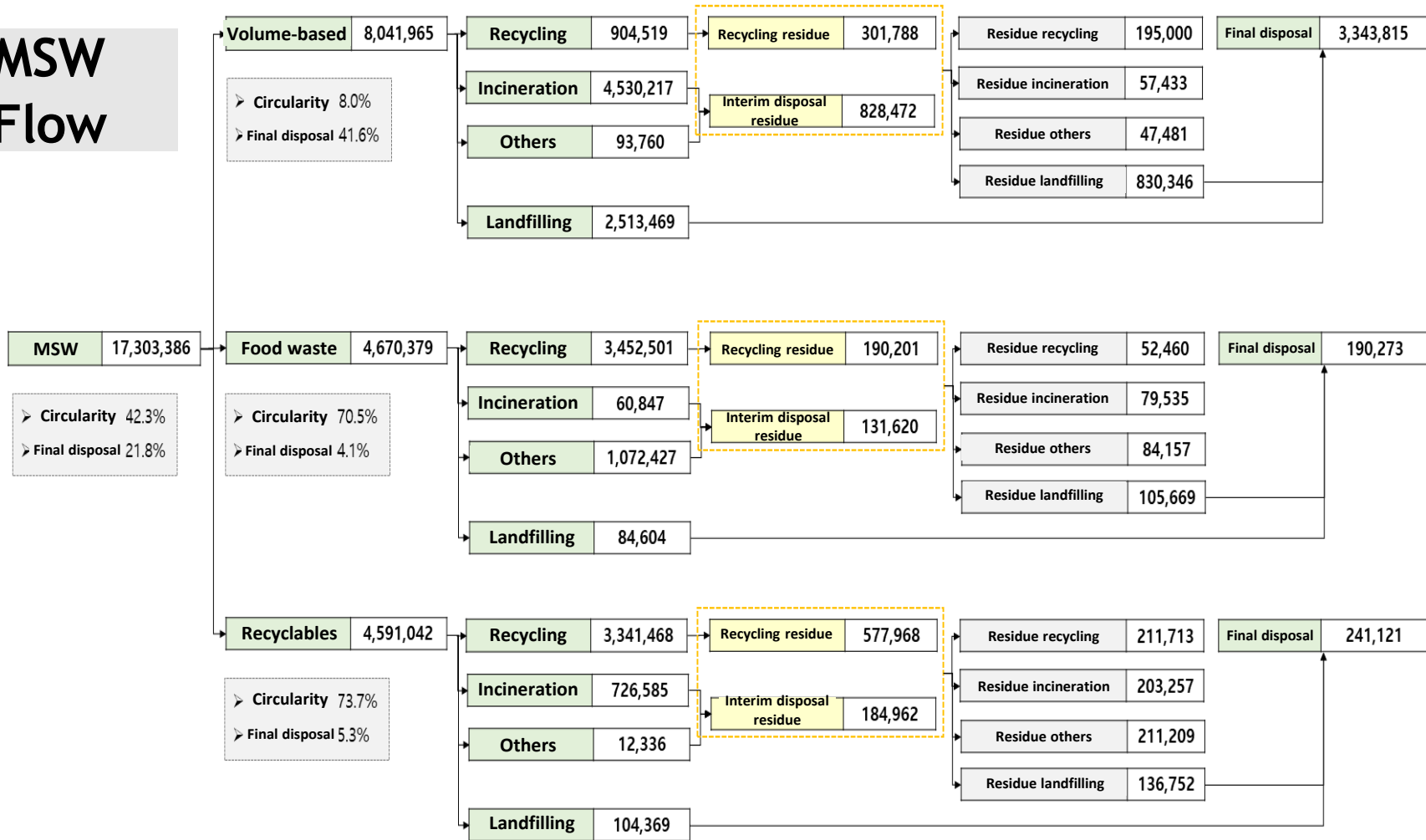
(2) “National Waste Statistics Survey”: MSW Data Outcome

Municipal Waste: Treatment/Disposal Status

Type	Recycling	Interim disposal		Landfilling
		Incineration	Others	
		(Unit :t/yr. %)		
Volume-based Waste (Mixed discharge)	904,519	4,530,217	93,760	2,513,469
	<i>11.25%</i>	<i>56.33%</i>	<i>1.17%</i>	<i>31.25%</i>
Food Waste (Separate discharge)	3,452,501	60,847	1,072,427	84,604
	<i>73.92%</i>	<i>1.30%</i>	<i>22.96%</i>	<i>1.81%</i>
Recyclables Waste (Separate discharge)	3,341,468	726,585	12,336	104,369
	<i>79.85%</i>	<i>17.36%</i>	<i>0.29%</i>	<i>2.49%</i>
Total	7,698,489	5,317,648	1,178,524	2,702,441
	<i>45.56%</i>	<i>31.47%</i>	<i>6.97%</i>	<i>15.99%</i>

(단위: 톤/년)

MSW Flow



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National Waste Statistics Survey

(2) “National Waste Statistics Survey”: IW Survey Scheme

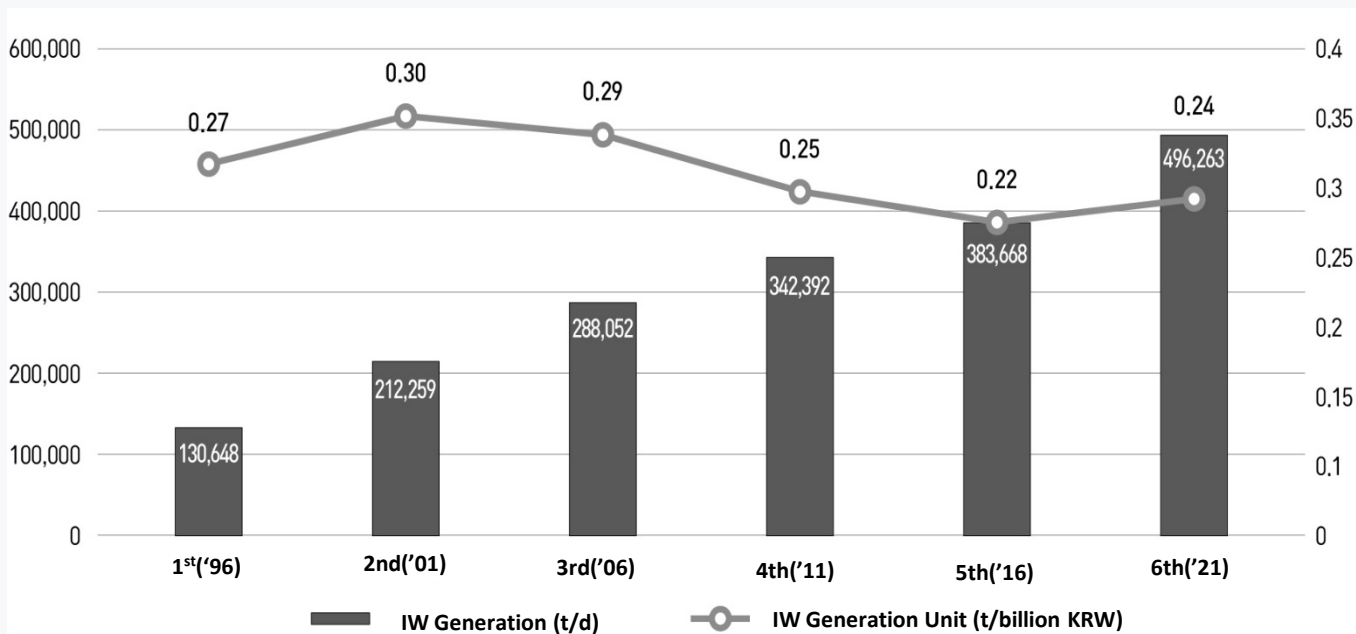
Industrial Waste

Type	Survey items	Survey methods
Waste from emission facility	Amount generated and treated of waste from emission facility by type ('21)	All-baro system reporting
Waste from non-emission facility	Amount generated and treated of waste from non-emission facility by type ('21)	
Designated waste	Amount generated and treated of designated waste by type ('21)	
Medical waste	Amount generated and treated of medical waste by type ('21)	
Construction waste	Amount generated ('19-'21) and treated of construction waste ('21) by type	

3 National Waste Statistics Survey

(2) “National Waste Statistics Survey”: Data Outcome

Industrial Waste: Generation Unit Trend



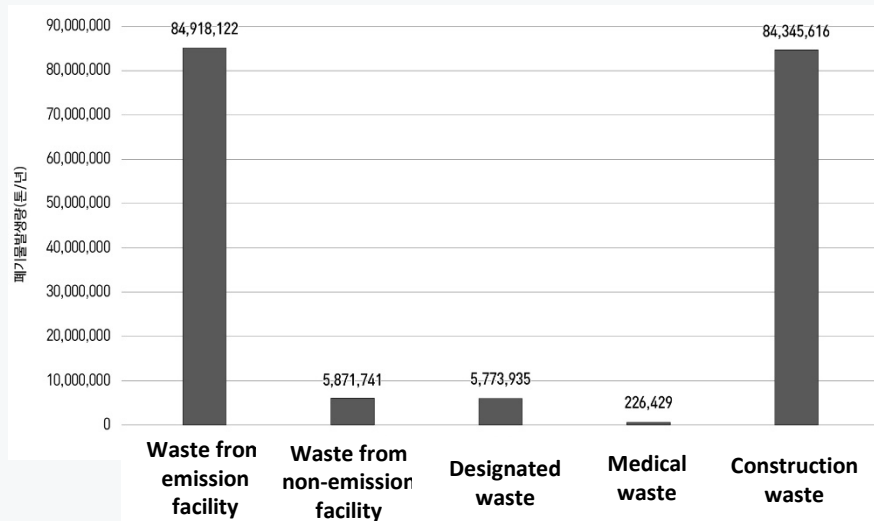
3 National Waste Statistics Survey

(2) “National Waste Statistics Survey”: Data Outcome

Industrial Waste: Disposal methods by type

(Unit :t/yr, %)

Type	Generation	Recycling	Interim disposal		Landfill	Export
			Incineration	Others		
Waste from emission facility	84,918,122	73,824,131	3,134,996	1,713,300	6,215,150	30,545
	46.9	86.9	3.7	2.0	7.3	0.0
Waste from non-emission facility	5,871,741	4,092,082	556,986	613,485	581,320	27,868
	3.2	69.7	9.5	10.4	9.9	0.5
Designated waste	5,773,935	3,905,960	591,835	393,135	882,789	217
	3.2	67.6	10.3	6.8	15.3	0.0
Medical waste	226,429	27	220,431	5,971	0	0
	0.1	0.0	97.4	2.6	0.0	0.0
Construction waste	84,345,616	83,569,775	141,173	145,796	488,872	0
	46.6	99.1	0.2	0.2	0.6	0.0
Total	181,135,842	165,391,976	4,645,421	2,871,687	8,168,131	58,630
	2	6	1	7	1	



Generation	
Amount	Ton/yr
Untreated	8.0%
Export	30,545.0
Duplicated generation	5,731,310.7
Net generation	79,186,811.4
Circularity	85.73%
Final disposal	8.706%

Recycling and treatment		Residue treatment		Residue ratio		
Input to recycling companies	73,824,131.2	R-1	616,111.7	Residue	34,405.4	5.58%
		R-2	27,072.9	Residue	1,468.2	5.42%
		R-3	33,593,410.0	Residue	196,154.3	0.58%
		R-4	13,849,109.9	Residue	294,246.4	2.12%
		R-5	2,274,730.4	Residue	133,696.7	5.88%
		R-6	1,959,192.9	Residue	8,724.1	0.45%
		R-7	9,833,045.5	Residue	10,355.4	0.11%
		R-8	2,437,145.3	Residue	198,597.2	8.15%
		R-9	3,483,981.8	Residue	245,103.3	7.04%
		R-10	5,750,330.7	Residue	264,695.0	4.60%

Final disposal	
Landfilling	6,894,313.1

Total residue	Treatment methods ratio	
2,100,086.6	Recycling	57.31%
	Incineration	5.95%
	Other interims	4.40%
	Final disposal	32.34%

Interim disposal	General incineration	Residue	인재물 비율	
4,848,296.1	3,041,124.7	671,827.8	22.09%	
	High-temp incineration	93,871.7	0.00%	
	Pyrolysis	1,461.0	278.7	19.08%
	High-temp melting	2,392.1	0.0	0.00%
	Press	8,478.3	0.0	0.00%
	Shredding	585,770.7	0.0	0.00%
	Cutting	799.0	0.0	0.00%
	Melting	4,168.8	0.0	0.00%
	Evaporation concentration	3,305.3	0.0	0.00%
	Oil water separation	23.7	0.0	0.00%
	Drying	46,436.4	0.0	0.00%
	Sterilization	0.0	0.0	0.00%
	Solidification	341,174.9	2,951.7	0.87%
	Stabilization	839.5	0.0	0.00%
	Reduction	4,589.2	26.1	0.57%
	Neutralization	315.4	0.0	0.00%
	Local incineration	213,069.9	0.0	0.00%
	National incineration	4.8	0.0	0.00%
	Others	500,470.9	37,557.2	7.50%
Landfilling	6,215,149.7			

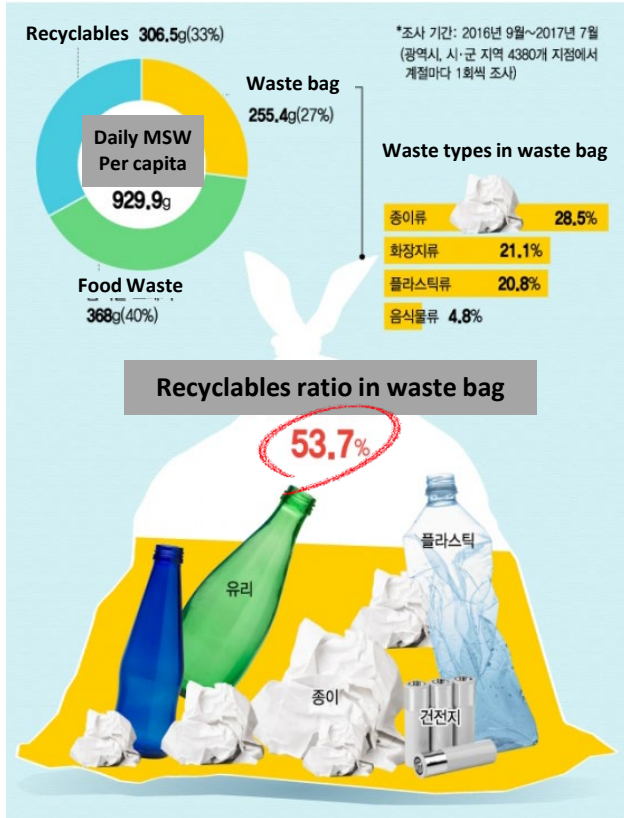
IW Flow

IV. Implications for Policy-making and Ongoing Actions



4 Implications for Policy-making and Ongoing Actions

Data and Policy: Enhance Recyclability from Product



54% out of volume-based waste is recyclables. However, when they are discharged with waste bag, the net recycling ratio is just 8%.

Unit: t/yr, %

Type	Amount	Net recycling	Final Disposal	Net recycling(%)	Final Disposal(%)
Mixed waste	8,041,965	640,381	3,343,815	8.0%	41.6%
Food waste	4,670,379	3,292,774	190,273	70.5%	4.1%
Recyclables	4,591,042	3,381,498	241,121	73.7%	5.3%
Total	17,303,386	7,314,653	3,775,209	42.3%	21.8%

Policy actions: Enhance recyclability from the product →

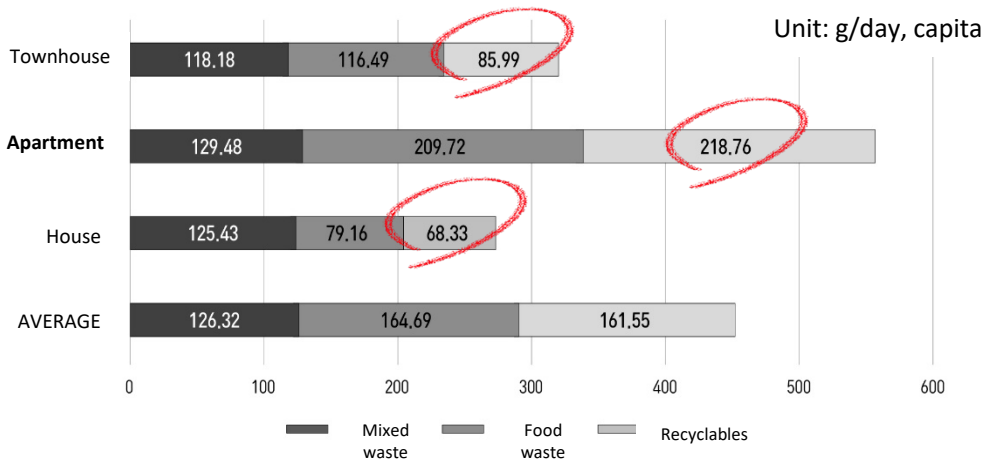
- 1) Set the standard of single-use product materials & colors
- 2) Lighten the weight of the single-use products
- 3) Limit the single-use products at stores
- 4) Encourage the campaign to raise the public awareness.

4

Implications for Policy-making and Ongoing Actions

Data and Policy: Enhance MSW Source Segregation Action

Apartment has the better conditions for source segregation than house.



Policy actions: Enhance source segregation action

→ Expand waste collection points for house and townhouse at both urban and rural areas

4

Implications for Policy-making and Ongoing Actions

Data and Policy: Enhance Recycling of Industrial Waste

Unit: g/day, capita

Type	Generation	Net generation	Net recycling	Final Disposal	Net recycling (%)	Final Disposal (%)
Waste from emission facility	84,918,122	79,186,811	67,889,901	6,894,313	85.7%	8.7%
Waste from non-emission facility	5,871,741	4,674,029	2,870,355	715,843	61.4%	15.3%
Hazardous waste	5,773,935	5,512,009	3,489,793	1,074,488	63.3%	19.5%
Medical	226,429	226,429	1,020	22,507	0.5%	9.9%
Construction	84,345,616	84,345,616	82,738,103	626,617	98.8%	0.7%
Total	181,135,842	173,944,893	156,989,173	9,333,768	90.3%	5.4%

Lower net recycling rate of “waste from non-emission facility”

→ **Policy actions:** Enhance sorting process of the non-emission facility waste

Need to expand recycling rate of “hazardous waste” → **Policy actions:** Tech R&D support

4 Implications for Policy-making and Ongoing Actions

Action Plans On-Progress for Statistics Advancement

Background

- **Increasing need for waste and its recycling statistics for policy formulation**
- **Lack of online statistics system** → still excel based data gathering

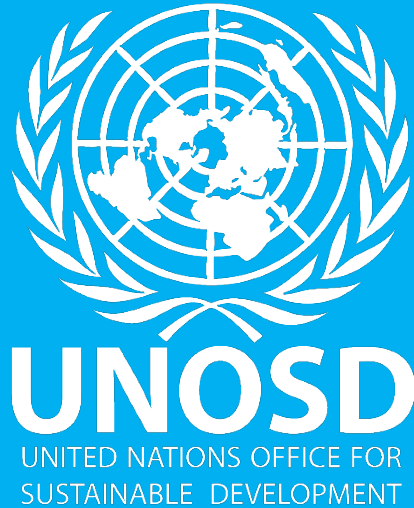
Action plans on-progress

- **Establish 7 statistics systems and connect them with other relevant data**
 - Main (2): National waste generation and management status, National waste statistics survey
 - General (5): Volume-based waste collection status, waste recycling rate and industry status, recycling industry performance, recyclables market price, agricultural waste survey
- **Review the standards of the national recycling data**
 - Segregate recycling data into material recycling and energy recovery
- **Generate the waste flow data by waste type**



Key Take-aways

- **Reliable waste data is the key to advancing the WM system and transforming into resource circularity.**
- **Korea has implemented the national waste statistics survey under the legal framework since 1981 and gradually transitioned towards a digital data-gathering platform.**
- **As one of the main digital data-gathering platforms, the “All-baro system” made remarkable progress in monitoring industrial waste flow and preventing illegal waste dumping.**
 - Moving forward, Korea has planned to **develop an integrated and comprehensive online data and information system for municipal waste** for more effective and correct data and statistics generation.
- **Data presents meaningful implications in policy-making as a strong evidence.** Korea has reviewed and updated its waste management and resource circularity policies based on the national waste statistics.



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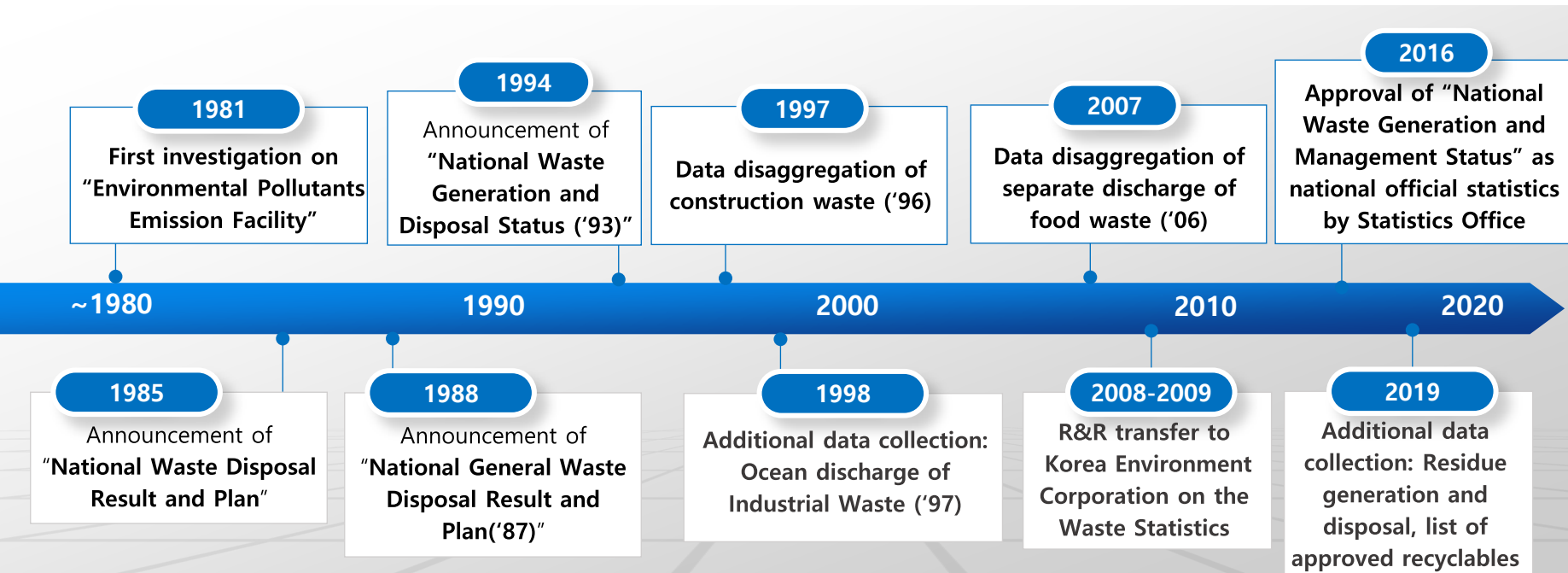


DEPARTMENT OF
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2

Waste Data Generation and Collection

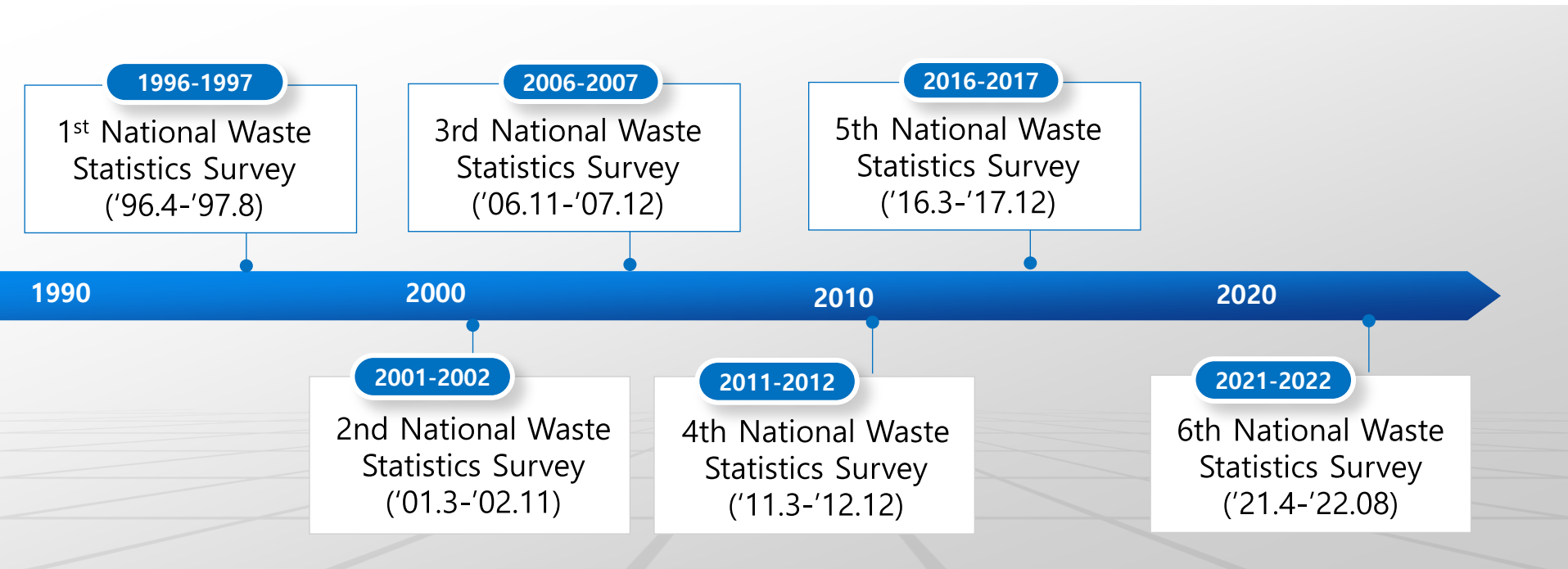
History of Data Collection on “National Waste Generation and Management Status”



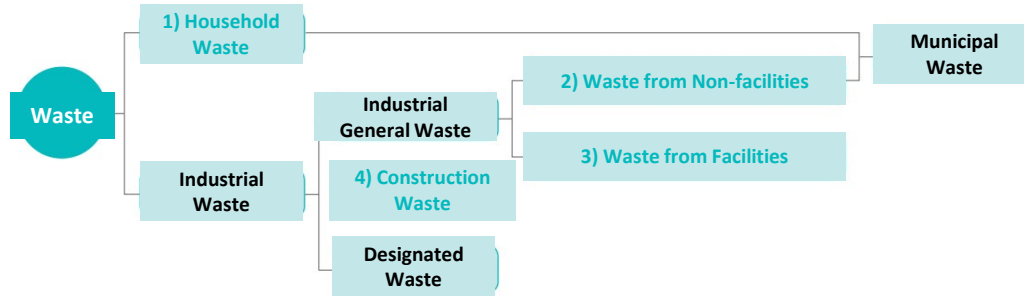
2

Waste Data Generation and Collection

History of Data Collection on “National Waste Statistics Survey”



[Reference] Waste Classification according to the Wastes Control Act



HouseholdWastes	The term "household wastes" means any wastes other than industrial wastes	Article2:2
IndustrialWastes	The term "industrial wastes" means any wastes generated from places of business with discharge or emission facilities installed and managed in accordance with the Clean Air Conservation Act, the Water Environment Conservation Act, or the Noise and Vibration Control Act, or any other places of business specified by Presidential Decree	Article2:3
IndustrialGeneralWastes	Industrial waste excluding designated waste and construction waste.	EnforcementRulesArticle 13:2
WastesfromNon-facilities	Wastes other than wastes from the facility system discharged from the facility and wastes discharged from the facility under Article 2(7) and (9) of the Act	EnforcementRules
WastesfromFacilities	Waste discharged from a discharge facility under Article 2 (3) of the Waste Control Act or from the operation of a facility under the provisions of Article 2 (1) through (5) of the Act	EnforcementRules
ConstructionWastes	「A place of business which discharges wastes from construction works under subparagraph 4 of Article 2 of the Framework Act on the Construction Industry in an amount of at least five tons (which refer to the quantity of wastes discharged therefrom during a period from the commencement to the completion of the works)	EnforcementDecreeArticle 2:8
DesignatedWastes	The term "designated wastes" means the industrial wastes specifically enumerated by Presidential Decree as harmful substances, such as waste oil and waste acid which may contaminate the surrounding environment, or medical wastes which may cause harm to human bodies	Article2:4

2

Waste Data Generation and Collection

Main Waste Data Generation Scheme

Title	National Waste Generation and Management Status	National Waste Statistics Survey	
Survey items	Waste generation by type by municipality	Waste source units by season for household and non-household sectors	
	Status of waste by type and recycling/disposal method by municipality (including residue generation and disposal)	Seasonal waste composition ratios for household and non-household sectors	
	Waste disposal facilities, waste recycling facilities, and companies by municipality	Analysis of moisture, combustible fraction, ash fraction, calorific value, and elements of waste by source and season	
	Waste management status such as household waste management area and management budget	Analysis of elements such as carbon, hydrogen, and nitrogen in waste by source and season	
	Recycling Recognition Performance and Usage by Province, City, County, and District	Recycling status by type of waste and recycling method and use	
	Other considerations for creating a resource circularity policy		Disposal status by waste type and disposal method
			Residuals generated and disposed of by waste recycling and disposal methods

Municipal Waste (Household) Flow in Korea

